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Monday October 14, 2024

MoWMT1 Room 1

Foundations of Interaction Control for Contact Robots (part I): Interaction Control in Humans and with Robots (Tutorial)

09:00-13:00 MoWMT1.1

*Foundations of Interaction Control for Contact Robots (part I): Interaction Control in Humans and with Robots**.

Burdet, Etienne	imperial college london
Haddadin, Sami	Technical University of Munich
Swikir, Abdalla	Technical University of Munich
Shahriari, Erfan	Technical University of Munich

MoWMT2 Room 2

Real-World Challenges in Multi-Robot Cooperation (Workshop)

09:00-13:00 MoWMT2.1

*Real-World Challenges in Multi-Robot Cooperation**. N/A

Marino, Antonio	University of Rennes
Restrepo, Esteban	CNRS, INRIA Rennes – Bretagne Atlantique
Robuffo Giordano, Paolo	IRISA CNRS UMR6074
Kim, H. Jin	Seoul National University

MoWMT3 Room 3

Multi-Robot Path Planning: Heuristic Search Meets Reinforcement Learning (Tutorial) (Tutorial)

09:00-13:00 MoWMT3.1

*Multi-Robot Path Planning: Heuristic Search Meets Reinforcement Learning (Tutorial)**. N/A

Yakovlev, Konstantin	Federal Research Center for Computer Science and Control of Russian Academy of Sciences
Panov, Aleksandr	AIRI

MoWMT4 Room 4

ML in Autonomous Systems and Mobile Robots: Security and Privacy Issues for ML (Tutorial)

09:00-13:00 MoWMT4.1

*ML in Autonomous Systems and Mobile Robots: Security and Privacy Issues for ML**. N/A

Shafique, Muhammad	New York University Abu Dhabi
Ouni, Bassem	Technology Innovation Institute

MoWMT5 Room 5

From Hover to Horizon: Mastering Drone Control in MATLAB (Tutorial)

09:00-13:00 MoWMT5.1

*From Hover to Horizon: Mastering Drone Control in MATLAB**. N/A

Lim, YJ (Yi-Je)	MathWorks

MoWMT6 Room 6

Maritime Heterogeneous Unmanned Robotic Systems (Workshop)

09:00-13:00 MoWMT6.1

*Maritime Heterogeneous Unmanned Robotic Systems**. N/A

Seneviratne, Lakmal	Khalifa University
Lin, Defu	Beijing Institute of Technology
Shim, David Hyunchul	KAIST
He, Shaoming	Beijing Institute of Technology
Hussain, Irfan	Khalifa University

MoWMT7 Room 7

Agricultural Robotics for a Sustainable Future (Workshop)

09:00-13:00 MoWMT7.1

*Agricultural Robotics for a Sustainable Future**. N/A

Sivakumar, Arun Narenthiran	University of Illinois at Urbana Champaign
Uppalapati, Naveen Kumar	University of Illinois at Urbana-Champaign
Mishra, Anand Kumar	Cornell University
Popovic, Marija	TU Delft
Chowdhary, Girish	University of Illinois at Urbana Champaign
Krishnan, Girish	University of Illinois Urbana Champaign
Shepherd, Robert	Cornell University

MoWMT8 Room 8

XR-ROB 2024 - Horizons of an Extended Robotics Reality - a Converging Future of XR and Robotics (Workshop)

09:00-13:00 MoWMT8.1

*XR-ROB 2024 - Horizons of an Extended Robotics Reality - a Converging Future of XR and Robotics**. N/A

Deshpande, Nikhil	University of Nottingham
Delmerico, Jeffrey	Microsoft
Ben Amor, Heni	Arizona State University
Kato, Fumihiro	Waseda university
Kucukyilmaz, Ayse	University of Nottingham
Hedayati, Hooman	Kyoto University
Al-Sada, Mohammed	Waseda University, Qatar University

MoWMT9 Room 9

The Grand Challenge of Cybernetic Avatars: Dreams and Facts (Workshop)

09:00-13:00 MoWMT9.1

*The Grand Challenge of Cybernetic Avatars: Dreams and Facts**. N/A

Hagita, Norihiro	ATR
AlQama, Khalifa	Dubai Future Labs
Doi, Miwako	NAIST/NICT
Ishiguro, Hiroshi	Osaka University
Menciassi, Arianna	Scuola Superiore Sant'Anna - SSSA
Dario, Paolo	Scuola Superiore Sant'Anna

MoWMT10 Room 10

3rd Workshop on Mobile Manipulation and Embodied Intelligence: Generalization Challenges for Real-World Deployment (Workshop)

09:00-13:00 MoWMT10.1

*3rd Workshop on Mobile Manipulation and Embodied Intelligence: Generalization Challenges for Real-World Deployment**. N/A

Muthusamy, Rajkumar	Dubai Future Foundation
Taha, Tarek	Dubai Future Labs
Dario, Paolo	Scuola Superiore Sant'Anna
Chalvatzaki, Georgia	Technische Universität Darmstadt
Harada, Kensuke	Osaka University
Jiang, Yuqian	University of Texas at Austin
Martín-Martín, Roberto	University of Texas at Austin
Wan, Weiwei	Osaka University

MoWMT11 Room 11

Nonverbal Cues for Human-Robot Cooperative Intelligence (Workshop)

09:00-13:00 MoWMT11.1

*Nonverbal Cues for Human-Robot Cooperative Intelligence**. N/A

Chew, Jouh Yeong	Honda Research Institute Japan
Bulling, Andreas	University of Stuttgart
Kurabayashi, Daisuke	Tokyo Institute of Technology
Yoshida, Eiichi	Faculty of Advanced Engineering, Tokyo University of Science
Leite, Iolanda	KTH Royal Institute of Technology
Tang, Siyu	ETH Zürich

Zhang, Xucong — Delft University of Technology

MoWMT12 — Room 12
3D/4D Printing and Smart Materials for Sustainable Soft Robotics (Workshop)

09:00-13:00 — MoWMT12.1

*3D/4D Printing and Smart Materials for Sustainable Soft Robotics**. N/A

Wang, Zhongkui — Ritsumeikan University
Qi, Qiukai — University of Bristol
Zhang, Hongying — National University of Singapore

MoWMT13 — Room 13
Interactive Robots and AI for Healthcare (Workshop)

09:00-13:00 — MoWMT13.1

*Interactive Robots and AI for Healthcare**. N/A

Schneider, Sebastian — University of Twente
Vollmer, Anna-Lisa — Bielefeld University
Cifuentes, Carlos A. — University of the West of England, Bristol
Munera, Marcela — University of West England

MoWMT14 — Room 14
Advanced Robotics and Visualization for micrO Surgery. (ARVOS-IROS 2024) (Workshop)

09:00-13:00 — MoWMT14.1

*Advanced Robotics and Visualization for micrO Surgery. (ARVOS-IROS 2024)**. N/A

Nasseri, M. Ali — Technische Universitaet Muenchen
Mathis-Ullrich, Franziska — Friedrich-Alexander-University Erlangen-Nurnberg (FAU)
Bergeles, Christos — King's College London
Kwok, Ka-Wai — The Chinese University of Hong Kong
Faridpooya, Kourosh — Rotterdam Eye Hospital
Iordachita, Ioan Iulian — Johns Hopkins University

MoWMT15 — Room 15
Brain Over Brawn: Workshop on Label Efficient Learning Paradigms for Autonomy at Scale (Workshop)

09:00-13:00 — MoWMT15.1

*Brain Over Brawn: Workshop on Label Efficient Learning Paradigms for Autonomy at Scale**. N/A

Autio Mitchell, Nicholas — University of Freiburg
Bursuc, Andrei — Valeo
Cattaneo, Daniele — University of Freiburg
Doughty, Hazel — Leiden University
Gosala, Nikhil — University of Freiburg
Petek, Kürsat — University of Freiburg
Skinner, Katherine — University of Michigan
Tulbure, Andreea Roxana — ETH
Valada, Abhinav — University of Freiburg

MoWMT16 — Room 16
The Evolving Landscape of Haptic Technologies: Research Challenges and Industry Needs (Workshop)

09:00-13:00 — MoWMT16.1

*The Evolving Landscape of Haptic Technologies: Research Challenges and Industry Needs**. N/A

Afzal, Hafiz Malik Naqash — UNSW Sydney
Hussain, Irfan — Khalifa University
Seneviratne, Lakmal — Khalifa University
Wang, Dangxiao — Beihang University
Prattichizzo, Domenico — Università di Siena
Khatib, Oussama — Stanford University

MoWMT17 Room 17

AI Meets Autonomy: Vision, Language, and Autonomous Systems (Workshop)

09:00-13:00 MoWMT17.1

*AI Meets Autonomy: Vision, Language, and Autonomous Systems**. N/A

Wang, Wenshan	Carnegie Mellon University
Zhang, Ji	Carnegie Mellon University
Zhang, Haochen	Carnegie Mellon University
Zhao, Shibo	Carnegie Mellon University
Gupta, Abhinav	Carnegie Mellon University
Ramanan, Deva	Carnegie Mellon University
Zeng, Andy	Google DeepMind
Kim, Ayoung	Seoul National University
Nieto-Granda, Carlos	DEVCOM U.S. Army Research Laboratory

MoWMT18 Room 18

Collecting, Managing and Utilizing Data through Embodied Robots (Workshop)

09:00-13:00 MoWMT18.1

*Collecting, Managing and Utilizing Data through Embodied Robots**. N/A

Saito, Namiko	the University of Edinburgh
Al-Sada, Mohammed	Waseda University, Qatar University
Shigemune, Hiroki	Shibaura Institute of Technology
Tsumura, Ryosuke	National Institute of Advanced Industrial Science and Technology (AIST)
Funabashi, Satoshi	Waseda University
Miyake, Tamon	Waseda University
Ogata, Tetsuya	Waseda University

MoWPT1 Room 1

Foundations of Interaction Control for Contact Robots (part II): Energy-Based Methods and Interactive Learning (Tutorial)

14:00-18:00 MoWPT1.1

*Foundations of Interaction Control for Contact Robots (part II): Energy-Based Methods and Interactive Learning**. N/A

Haddadin, Sami	Technical University of Munich
Burdet, Etienne	imperial college london
Swikir, Abdalla	Technical University of Munich
Shahriari, Erfan	Technical University of Munich

MoWPT2 Room 2

Long-Term Perception for Autonomy in Dynamic Human-Centric Environments: What Do Robots Need? (Workshop)

14:00-18:00 MoWPT2.1

*Long-Term Perception for Autonomy in Dynamic Human-Centric Environments: What Do Robots Need?**. N/A

Schmid, Lukas M.	Massachusetts Institute of Technology (MIT)
Talak, Rajat	MIT
Zheng, Jianhao	Stanford University
Andersson, Olov	KTH Royal Institute
Oleynikova, Helen	ETH Zurich
Park, Jong Jin	Amazon Lab126
Wald, Johanna	Google
Siegwart, Roland	ETH Zurich
Tombari, Federico	Technische Universität München
Carlone, Luca	Massachusetts Institute of Technology

MoWPT3 Room 3

Low-Code Design and Simulation of Robotics Capabilities (Tutorial)

14:00-18:00 MoWPT3.1

*Low-Code Design and Simulation of Robotics Capabilities**. N/A

Gadaleta, Francesco	Intrepid AI

Kocharin, Alexander — Intrepid AI

MoWPT4 — Room 4
Case Studies of Reproducibility and Benchmarking in Robotic Research (Workshop)

14:00-18:00 — MoWPT4.1

*R-, R-, Reply Articles, What Are They? Case Studies of Reproducibility and Benchmarking in Robotic Research**. N/A

Bonsignorio, Fabio	FER, University of Zagreb
Faragasso, Angela	Finger Vision Inc.
Zereik, Enrica	CNR - National Research Council
Cervera, Enric	Jaume-I University
Krovi, Venkat	Clemson University
Mangharam, Rahul	University of Pennsylvania
Yamamoto, Tomoyuki	ROBOCIP
Redfield, Signe	Naval Research Laboratory
del Pobil, Angel P.	Jaume-I University

MoWPT5 — Room 5
Unlocking the Potential: Innovations in Drone-Assisted Infrastructure Inspection and Maintenance (Workshop)

14:00-18:00 — MoWPT5.1

*Unlocking the Potential: Innovations in Drone-Assisted Infrastructure Inspection and Maintenance**. N/A

Ebeid, Emad	University of Southern Denmark

MoWPT6 — Room 6
Autonomous Robotic Systems in Aquaculture: Research Challenges and Industry Needs (Workshop)

14:00-18:00 — MoWPT6.1

*Autonomous Robotic Systems in Aquaculture: Research Challenges and Industry Needs**. N/A

Kelasidi, Eleni	SINTEF Ocean
Triantafyllou, Michael	MIT
Føre, Martin	NTNU
Sapsis, Themistoklis	MIT

MoWPT7 — Room 7
AI and Robotics for Future Farming (Workshop)

14:00-18:00 — MoWPT7.1

*AI and Robotics for Future Farming**. N/A

Qiao, Yongliang	University of Adelaide
Karkee, Manoj	Washington State University
Alempijevic, Alen	University of Technology Sydney
Elssawy, Wessam Essam	Agricultural Engineering Research Institute

MoWPT8 — Room 8
Multisensory Transparency-Augmented Teleoperation in Extreme Environments (Workshop)

14:00-18:00 — MoWPT8.1

*Multisensory Transparency-Augmented Teleoperation in Extreme Environments**. N/A

Wang, Ziwei	Lancaster University
Faragasso, Angela	Finger Vision Inc.
Xiao, Bo	Imperial College London
Seneviratne, Lakmal	Khalifa University
Asama, Hajime	The University of Tokyo

MoWPT9 — Room 9
The Grand Challenge of Cybernetic Avatars: Ethical and Social Sustainability (Workshop)

14:00-18:00 — MoWPT9.1

*The Grand Challenge of Cybernetic Avatars: Ethical and Social Sustainability**. N/A

Dario, Paolo	Scuola Superiore Sant'Anna

AlQama, Khalifa	Dubai Future Labs
Horikawa, Yukiko	Advanced Telecommunications Research Institute International
Pirni, Alberto	Sant'Anna School of Advanced Studies
Takahashi, Toshie	Waseda University

MoWPT10 Room 10

ROMADO: 4th Workshop on RObotic MAnipulation of Deformable Objects: Beyond Traditional Approaches (Workshop)

14:00-18:00 MoWPT10.1

*ROMADO: 4th Workshop on RObotic MAnipulation of Deformable Objects: Beyond Traditional Approaches**. N/A

Alkhatib, Mohammad	Université Clermont Auvergne
Seita, Daniel	University of Southern California
Awad, Mohammad I.	Khalifa University
Mezouar, Youcef	Clermont Auvergne INP - SIGMA Clermont
Dune, Claire	Université de Toulon
Zhu, Jihong	University of York
Borràs Sol, Júlia	Institut de Robòtica i Informàtica Industrial (CSIC-UPC)
Koessler, Adrien	University of Lorraine
Nguyen Le, Tran	Aalto University
Blanco-Mulero, David	Institut de Robòtica i Informàtica Industrial, CSIC-UPC

MoWPT11 Room 11

Trustworthy Human-Swarm Interaction (Workshop)

14:00-18:00 MoWPT11.1

*Trustworthy Human-Swarm Interaction**. N/A

Soorati, Mohammad D.	University of Southampton
Maior, Horia Alexandru	University of Lincoln
Abioye, Ayodeji Opeyemi	University of Southampton
Hunt, William	University of Southampton
Agunloye, Ayomide Oluwaseyi	University of Southampton
Landowska, Aleksandra	University of Nottingham

MoWPT12 Room 12

Self-Healing and Damage Resilient Soft Robots (Workshop)

14:00-18:00 MoWPT12.1

*Self-Healing and Damage Resilient Soft Robots**. N/A

Terryn, Seppe	Vrije Universiteit Brussel (VUB)
Monje, Concepción A.	University Carlos III of Madrid
Vanderborght, Bram	Vrije Universiteit Brussel
Mena López, Lisbeth Karina	Universidad Carlos III de Madrid
Kashef Tabrizian, Seyedreza	Brubotics, Vrije Universiteit Brussel (VUB) and Imec

MoWPT13 Room 13

2nd Workshop on Machine Learning in Medical Robotics: Bridging ML Theory and Clinical Frontiers (Workshop)

14:00-18:00 MoWPT13.1

*2nd Workshop on Machine Learning in Medical Robotics: Bridging ML Theory and Clinical Frontiers**. N/A

Wu, Di	KU Leuven
Guo, Jing	Guangdong University of Technology
Fichera, Loris	Worcester Polytechnic Institute
Alambeigi, Farshid	University of Texas at Austin
Zhang, Yao	KU Leuven
Yip, Michael C.	University of California, San Diego

MoWPT14 Room 14

Embodied Neuromorphic AI for Robotic Perception and Control (Workshop)

14:00-18:00 MoWPT14.1

*Embodied Neuromorphic AI for Robotic Perception and Control**. N/A

Zayer, Fakhreddine	khalifa University
Shafique, Muhammad	New York University Abu Dhabi
Dias, Jorge	Khalifa University
Marchisio, Alberto	New York University Abu Dhabi
De Masi, Giulia	Khalifa University

MoWPT15 Room 15

Equivariant Robotics: The Role of Symmetry; across Perception, Estimation, and Control (Workshop)

14:00-18:00 MoWPT15.1

*Equivariant Robotics: The Role of Symmetry Across Perception, Estimation, and Control**. N/A

Kumar, Vijay	University of Pennsylvania
Daniilidis, Kostas	University of Pennsylvania
Allen-Blanchette, Christine	Princeton University
van Goor, Pieter	University of Twente
Wang, Rui	Massachusetts Institute of Technology
Welde, Jake	University of Pennsylvania
Chatzipantazis, Evangelos	University of Pennsylvania
Xu, Yinshuang	University of Pennsylvania

MoWPT16 Room 16

The Workshop and Competition on Multi-Robot Perception and Navigation Challenges in Logistics and Inspection Tasks (Workshop)

14:00-18:00 MoWPT16.1

*The Workshop and Competition on Multi-Robot Perception and Navigation Challenges in Logistics and Inspection Tasks**. N/A

Nguyen, Thien-Minh	Nanyang Technological University
Cao, Muqing	Nanyang Technological University
Yuan, Shenghai	NANYANG TECHNOLOGICAL UNIVERSITY
Chen, Ben M.	Chinese University of Hong Kong
Xie, Lihua	NanyangTechnological University

MoWPT17 Room 17

Standing the Test of Time: Retrospective and Future of World Representations for Lifelong Robotics (Workshop)

14:00-18:00 MoWPT17.1

*Standing the Test of Time: Retrospective and Future of World Representations for Lifelong Robotics**. N/A

Saavedra, Miguel	Université de Montréal
Lajoie, Pierre-Yves	École Polytechnique de Montréal
Nashed, Samer	University of Massachusetts Amherst
Romero-Cano, Victor	Cardiff University
Paull, Liam	Université de Montréal
Meghjani, Malika	Singapore University of Technology and Design
Leonard, John	MIT

MoWPT18 Room 18

Environment Dynamics Matters: Embodied Navigation to Movable Objects (Workshop)

14:00-18:00 MoWPT18.1

*Environment Dynamics Matters: Embodied Navigation to Movable Objects**. N/A

Liu, Huaping	Tsinghua University
Hsu, David	National University of Singapore
Guo, Di	Beijing University of Posts and Telecommunications
Gupta, Abhishek	University of Washington
Kong, Tao	ByteDance

MoWPT19 Room 19

KOMPASS: An Event-Driven Advanced Navigation Stack for Autonomous Mobile Robots (Tutorial)

14:00-18:00 MoWPT19.1

*KOMPASS: An Event-Driven Advanced Navigation Stack for Autonomous Mobile Robots**. N/A

Spalanzani, Anne — INRIA / Univ. Grenoble Alpes
Kabtoul, Maria — Univ. Grenoble Alpes, Inria
Rasheed, Abdullah Haroon — Inria, Automatika Robotics

Tuesday October 15, 2024

TuWAT1 Room 1

Workshop on 14th Planning, Perception and Navigation for Intelligent Vehicles (Workshop)

08:00-12:00 TuWAT1.1

*Workshop on 14th Planning, Perception and Navigation for Intelligent Vehicles**. N/A

Zhao, Huijing	Peking University
Ang Jr, Marcelo H	National University of Singapore
Yue, Yufeng	Beijing Institute of Technology
Betz, Johannes	Technical University of Munich

TuWAT2 Room 2

Workshop on Interaction-Aware Autonomous Systems (Workshop)

08:00-12:00 TuWAT2.1

*Workshop on Interaction-Aware Autonomous Systems**. N/A

Hallgarten, Marcel	University of Tübingen, Robert Bosch GmbH
Stoll, Martin	Robert Bosch GmbH
Janjoš, Faris	Robert Bosch GmbH
Ruppel, Felicia	Bosch Research and Ulm University
Valada, Abhinav	University of Freiburg
Zell, Andreas	University of Tübingen
Pavone, Marco	Stanford University
Gilitschenski, Igor	University of Toronto

TuWAT3 Room 3

State-Of-The-Art Simulation in Autonomous Robotic Systems (Tutorial)

08:00-12:00 TuWAT3.1

*State-Of-The-Art Simulation in Autonomous Robotic Systems**. N/A

Sadeghnejad, Soroush	Amirkabir University of Technology
Zarif Shahsavan Nejad, Amirmohammad	Amirkabir University of Technology
Baltes, Jacky (Hansjoerg)	National Taiwan Normal University
Setayeshi, Amirali	Amirkabir University of Technology
Zarif Shahsavan Nejad, Amirmahdi	Amirkabir University of Technology

TuWAT4 Room 4

Edge AI for Aerial Robots: Enhancing Drone Operations with AI (Tutorial)

08:00-12:00 TuWAT4.1

*Edge AI for Aerial Robots: Enhancing Drone Operations with AI**. N/A

Yousaf, Muhammad Haroon	University of Engineering and Technology Taxila
Saeed, Saad	Swarm Robotics Lab, UET Taxila

TuWAT5 Room 5

Humanoid Hybrid Sprint (Tutorial)

08:00-12:00 TuWAT5.1

*Humanoid Hybrid Sprint**. N/A

Osokin, Ilya	Moscow Institute of Physics and Technology

TuWAT6 Room 6

Safety of Intelligent and Autonomous Vehicles: Formal Methods vs. Machine Learning Approaches for Reliable Navigation (SIAV-FM2L) (Workshop)

08:00-12:00 TuWAT6.1

*Safety of Intelligent and Autonomous Vehicles: Formal Methods vs. Machine Learning Approaches for Reliable Navigation (SIAV-FM2L)**. N/A

Adouane, Lounis	Université de Technologie de Compiègne (France)
Martinet, Philippe	INRIA

Betz, Johannes	Technical University of Munich
Tsourdos, Antonios	Cranfield University
Zhang, Xuebo	Nankai University,

TuWAT7 Room 7

The 2nd Workshop on Formal Methods Techniques in Robotics Systems: Design and Control (Workshop)

08:00-12:00 TuWAT7.1

*The 2nd Workshop on Formal Methods Techniques in Robotics Systems: Design and Control**. N/A

Swikir, Abdalla	Technical University of Munich
Abu-Dakka, Fares	New York University Abu Dhabi
Jagtap, Pushpak	Indian Institute of Science
Ozay, Necmiye	Univ. of Michigan
Leung, Karen	University of Washington
Haddadin, Sami	Technical University of Munich

TuWAT8 Room 8

Benchmarking Autonomous Service Robotics in Real Life (Workshop)

08:00-12:00 TuWAT8.1

*Benchmarking Autonomous Service Robotics in Real Life**. N/A

Pasternak, Katarzyna	University of Miami
Hart, Justin	University of Texas at Austin
Sugiura, Komei	Keio University
Leonetti, Matteo	King's College London
Visser, Ubbo	University of Miami
Wachsmuth, Sven	Bielefeld University

TuWAT9 Room 9

3rd Workshop Toward Robot Avatars (Workshop)

08:00-12:00 TuWAT9.1

*3rd Workshop Toward Robot Avatars**. N/A

Behnke, Sven	University of Bonn
Ryu, Jee-Hwan	Korea Advanced Institute of Science and Technology
Pucci, Daniele	Italian Institute of Technology
Santos, Veronica J.	University of California, Los Angeles

TuWAT10 Room 10

Benchmarking Via Competitions in Robotic Grasping and Manipulation (Workshop)

08:00-12:00 TuWAT10.1

*Benchmarking Via Competitions in Robotic Grasping and Manipulation**. N/A

D'Avella, Salvatore	Sant'Anna School of Advanced Studies
Sun, Yu	University of South Florida
Calli, Berk	Worcester Polytechnic Institute
Hang, Kaiyu	Rice University
Cavallaro, Andrea	Queen Mary University of London
Xompero, Alessio	Queen Mary University of London

TuWAT11 Room 11

Robot Safety in Times of AI: Data, Decision, and Multimodal Interaction (Workshop)

08:00-12:00 TuWAT11.1

*Robot Safety in Times of AI: Data, Decision, and Multimodal Interaction**. N/A

Rajaei, Nader	Technical University of Munich
Lilienthal, Achim J.	Orebro University
Secchi, Cristian	Univ. of Modena & Reggio Emilia
Hoffmann, Matej	Czech Technical University in Prague, Faculty of Electrical Engineering
Abdolshah, Saeed	KUKA Deutschland GmbH

Mansfeld, Nico	Franka Robotics GmbH
Kirschner, Robin Jeanne	TU Munich, Institute for Robotics and Systems Intelligence

TuWAT12 Room 12

The SOFT Frontier: Adaptive Technologies in Soft Robotics (Workshop)

08:00-12:00 TuWAT12.1

*The SOFT Frontier: Adaptive Technologies in Soft Robotics**. N/A

Chen, Zixi	Scuola Superiore Sant'Anna
Renda, Federico	Khalifa University of Science and Technology
Hughes, Josie	EPFL
Stefanini, Cesare	Scuola Superiore Sant'Anna
Wu, Di	KU Leuven

TuWAT13 Room 13

Integrating Physical and Cognitive Perspectives in Assistive Robotics Design (Workshop)

08:00-12:00 TuWAT13.1

*Integrating Physical and Cognitive Perspectives in Assistive Robotics Design**. N/A

Inamura, Tetsunari	Tamagawa University
Shimoda, Shingo	Nagoya University
Alnajjar, Fady	United Arab Emirates University,
Ramirez-Amaro, Karinne	Chalmers University of Technology
Dean, Emmanuel	Chalmers University of Technology
Sandini, Giulio	Italian Institute of Technology - Center for Human Technologies

TuWAT14 Room 14

Bio-Inspired, Biomimetics, and Biohybrid (Cyborg) Systems (Workshop)

08:00-12:00 TuWAT14.1

*Bio-Inspired, Biomimetics, and Biohybrid (Cyborg) Systems**. N/A

Li, Yao	Harbin Institute of Technology, Shenzhen
Sato, Hirotaka	Nanyang Technological University
Raman, Ritu	Massachusetts Institute of Technology
Piazza, Cristina	Technical University Munich (TUM)
Li, Liang	Max-Planck Institute of Animal Behavior
Vo-Doan, T. Thang	The University of Queensland
Do, Thanh Nho	University of New South Wales
Umezu, Shinjiro	Waseda University
Raman, Barani	Washington University in St. Louis
Fukuda, Toshio	Nagoya University
Valdivia y Alvarado, Pablo	Singapore University of Technology and Design, MIT
Latif, Tahmid	Wentworth Institute of Technology
Shoji, Kan	Nagaoka University of Technology
Milana, Edoardo	University of Freiburg
Xu, Nicole	University of Colorado Boulder
Zhang, Hongying	National University of Singapore
Zarrouk, David	Ben Gurion University
Mouthuy, Pierre-Alexis	University of Oxford
Shi, Qing	Beijing Institute of Technology
Nenggan, Zheng	Zhejiang University

TuWAT15 Room 15

From Geometry to General Autonomy of Robotic Systems (Workshop)

08:00-12:00 TuWAT15.1

*From Geometry to General Autonomy of Robotic Systems**. N/A

Chhabra, Robin	Carleton University
Mueller, Andreas	Johannes Kepler University Linz

TuWAT16 Room 16

Variable Impedance Learning and Control: Navigating Challenges, Exploring Opportunities, and Shaping the Future (Workshop)

08:00-12:00 TuWAT16.1

*Variable Impedance Learning and Control: Navigating Challenges, Exploring Opportunities, and Shaping the Future**. N/A

Lamon, Edoardo — University of Trento
Faragasso, Angela — Finger Vision Inc.
Saveriano, Matteo — University of Trento
Abu-Dakka, Fares — New York University Abu Dhabi

TuWAT17 Room 17

From Learning-Based to Foundation Models for Mapping: Challenges and Opportunities (LFM) (Workshop)

08:00-12:00 TuWAT17.1

*From Learning-Based to Foundation Models for Mapping: Challenges and Opportunities (LFM)**. N/A

Luperto, Matteo — Università degli Studi di Milano
Verdoja, Francesco — Aalto University
Kucner, Tomasz Piotr — Aalto University
Vidal-Calleja, Teresa A. — University of Technology Sydney
Pragr, Milos — Czech Technical University in Prague, FEE
Le Gentil, Cedric — University of Toronto
Scardapane, Simone — Sapienza University of Rome

TuWAT18 Room 18

Workshop on Ethical, Legal and User Perspectives on Assisting Robots and Systems (WELUPARS) (Workshop)

08:00-12:00 TuWAT18.1

*Workshop on Ethical, Legal and User Perspectives on Assisting Robots and Systems (WELUPARS)**. N/A

Torresen, Jim — University of Oslo
Weng, Yueh-Hsuan — Tohoku University
Prestes, Edson — UFRGS
Caleb-Solly, Praminda — University of Nottingham

TuWAT19 Room 19

Building and Evaluating Ethical Robotic Systems (Workshop)

08:00-12:00 TuWAT19.1

*Building and Evaluating Ethical Robotic Systems**. N/A

Nashed, Samer — University of Massachusetts Amherst
Svegliato, Justin — University of California Berkeley
Dennis, Louise — University of Manchester
Meger, David Paul — McGill University
Kuipers, Benjamin — University of Michigan

TuPIT1 Room 1

Robotics and Automation I (Teaser Session)

Co-Chair: Song, Dezhen — Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI) and Texas A&M University (TAMU)

14:00-15:00 TuPIT1.1

FruitNeRF: A Unified Neural Radiance Field Based Fruit Counting Framework, pp. 1-8. Attachment

Meyer, Lukas — Friedrich-Alexander-Universität Erlangen-Nürnberg
Gilson, Andreas — Fraunhofer IIS
Schmid, Ute — University of Bamberg
Stamminger, Marc — Universität Erlangen-Nürnberg

14:00-15:00 TuPIT1.2

SPVSoAP3D: A Second-Order Average Pooling Approach to Enhance 3D Place Recognition in Horticultural Environments, pp. 9-15.

Barros, Tiago — Institute of Systems and Robotics - University of Coimbra
Premebida, Cristiano — University of Coimbra
Aravecchia, Stephanie — Georgia Tech Lorraine - IRL 2958 GT-CNRS

Pradalier, Cedric	GeorgiaTech Lorraine
Nunes, Urbano J.	Instituto De Sistemas E Robotica

14:00-15:00 TuPIT1.3

TriLoc-NetVLAD: Enhancing Long-Term Place Recognition in Orchards with a Novel LiDAR-Based Approach, pp. 16-22.

Sun, Na	Southwest University
Fan, Zhengqiang	Beijing University of Agriculture
Qiu, Quan	Beijing Institute of Petrochemical Technology
Li, Tao	Beijing Research Center of Intelligent Equipment for Agriculture
Feng, Qingchun	Beijing Research Centor of Intelligent Equepment for Agriculture
Ji, Chao	Xinjiang Academy of Agricultural and Reclamation Science
Zhao, Chunjiang	Beijing Research Center of Intelligent Equipment for Agriculture

14:00-15:00 TuPIT1.4

3D Branch Point Cloud Completion for Robotic Pruning in Apple Orchards, pp. 23-30. Attachment

Qiu, Tian	Cornell University
Zoubi, Alan	Cornell Unviersity
Spine, Nikolai	Cornell University
Cheng, Lailiang	Cornell University
Jiang, Yu	Cornell University

14:00-15:00 TuPIT1.5

HortiBot: An Adaptive Multi-Arm System for Robotic Horticulture of Sweet Peppers, pp. 31-38. Attachment

Lenz, Christian	University of Bonn
Menon, Rohit	University of Bonn
Schreiber, Michael	University of Bonn
Paul, Jacob, Melvin	Hochschule Bonn-Rhein-Sieg
Behnke, Sven	University of Bonn
Bennewitz, Maren	University of Bonn

14:00-15:00 TuPIT1.6

Markerless Aerial-Terrestrial Co-Registration of Forest Point Clouds Using a Deformable Pose Graph, pp. 39-46.

Casseau, Benoit	University of Oxford
Chebrolu, Nived	University of Oxford
Mattamala, Matias	University of Oxford
Freißmuth, Leonard	Technical University Munich
Fallon, Maurice	University of Oxford

14:00-15:00 TuPIT1.7

Optimal View Point and Kinematic Control for Grape Stem Detection and Cutting with an In-Hand Camera Robot, pp. 47-52. Attachment

Stavridis, Sotiris	Aristotle University of Thessaloniki
Doulgeri, Zoe	Aristotle University of Thessaloniki

14:00-15:00 TuPIT1.8

Real-Time Semantic Segmentation in Natural Environments with SAM-Assisted Sim-To-Real Domain Transfer, pp. 53-60. Attachment

Wang, Han	ETH Zurich
Mascaro, Ruben	ETH Zurich
Chli, Margarita	ETH Zurich & University of Cyprus
Teixeira, Lucas	ETH Zurich

14:00-15:00 TuPIT1.9

Temporal and Viewpoint-Invariant Registration for Under-Canopy Footage Using Deep-Learning-Based Bird's-Eye View Prediction, pp. 61-68. Attachment

Zhou, Jiawei	ETH Zurich
Mascaro, Ruben	ETH Zurich
Cadena Lerma, Cesar	ETH Zurich
Chli, Margarita	ETH Zurich & University of Cyprus
Teixeira, Lucas	ETH Zurich

14:00-15:00 TuPIT1.10

Design of Stickbug: A Six-Armed Precision Pollination Robot, pp. 69-75. Attachment

Smith, Trevor	West Virginia University
Rijal, Madhav	West Virginia University
Arend Tatsch, Christopher Alexander	West Virginia University

Butts, R. Michael	West Virginia University
Beard, Jared	West Virginia University
Robert Cook, Tyler	West Virginia University
Chu, Andy	West Virginia University
Gross, Jason	West Virginia University
Gu, Yu	West Virginia University

14:00-15:00 TuPIT1.11

Occlusion Handling by Pushing for Enhanced Fruit Detection, pp. 76-81. Attachment

Gursoy, Ege	LIRMM, University of Montpellier CNRS
Kulic, Dana	Monash University
Cherubini, Andrea	LIRMM - Universite De Montpellier CNRS

14:00-15:00 TuPIT1.12

Toward Precise Robotic Weed Flaming Using a Mobile Manipulator with a Blowtorch, pp. 82-89. Attachment

Wang, Di	Texas A&M University
Hu, Chengsong	Mohamed Bin Zayed University of Artificial Intelligence
Xie, Shuangyu	Texas A&M University
Johnson, Joe	Texas A&M University
Ji, Hojun	Boston Dynamics
Jiang, Yingtao	Texas A&M University
Bagavathiannan, Muthukumar	Texas A&M University
Song, Dezhen	Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI)

14:00-15:00 TuPIT1.13

Towards Human-Centered Construction Robotics: A Reinforcement Learning-Driven Companion Robot for Contextually Assisting Carpentry Workers, pp. 90-97.

Wu, Yuning	Carnegie Mellon University
Wei, Jiaying	Carnegie Mellon University
Oh, Jean	Carnegie Mellon University
Cardoso Llach, Daniel	Carnegie Mellon University

14:00-15:00 TuPIT1.14

Dynamic Throwing with Robotic Material Handling Machines, pp. 98-104. Attachment

Werner, Lennart	ETH Zürich
Nan, Fang	ETH Zurich
Eyschen, Pol	ETH Zurich
Spinelli, Filippo Alberto	ETH Zürich
Yang, Hongyi	ETH Zurich
Hutter, Marco	ETH Zurich

14:00-15:00 TuPIT1.15

Extensive, Long-Term Task and Motion Planning with Signal Temporal Logic Specification for Autonomous Construction, pp. 105-112. Attachment

Satoh, Mineto	NEC Corporation
Takano, Rin	NEC Corporation
Oyama, Hiroyuki	NEC Corporation

14:00-15:00 TuPIT1.16

BEV Image-Based Lane Tracking Control System for Autonomous Lane Repainting Robot, pp. 113-120. Attachment

Seo, Junghyun	DGIST
Jeon, Hyeonjae	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Choi, Joonyoung	Daegu Gyeongbuk Institute of Science and Technology
Kwangho, Woo	Robot for People
Lim, Yongseob	DGIST
Jin, Yongsik	Electronics and Telecommunications Research Institute

14:00-15:00 TuPIT1.17

*A Fast Heuristic Scheduling Search for Robotic Cellular Manufacturing Systems with Generalized and Timed Petri Nets**. N/A

Xiao, YuanZheng	Nanjing University of Science and Technology
Gao, YangQing	Nanjing university of science and technology
Wu, Haoran	Nanjing University of Science and Technology
Huang, Bo	Nanjing University of Science and Technology
Lv, Jianyong	Nanjing University of Science and Technology

TuPIT2 Room 2

Assistive Robotics (Teaser Session)

Chair: Campolo, Domenico — Nanyang Technological University

Co-Chair: Cifuentes, Carlos A. — University of the West of England, Bristol

14:00-15:00 TuPIT2.1

Kiri-Spoon: A Soft Shape-Changing Utensil for Robot-Assisted Feeding, pp. 121-128. Attachment

Keely, Maya — Virginia Tech

Nemlekar, Heramb — Virginia Tech

Losey, Dylan — Virginia Tech

14:00-15:00 TuPIT2.2

A Wearable Platform Based on the Multi-Modal Foundation Model to Augment Spatial Cognition for People with Blindness and Low Vision, pp. 129-134.

Hao, Yu — New York University

Magay, Alexey — New York University Abu Dhabi

Huang, Hao — New York University

Yuan, Shuaihang — New York University

Wen, Congcong — New York University Abu Dhabi

Fang, Yi — New York University

14:00-15:00 TuPIT2.3

Force-Triggered Control Design for User Intent-Driven Assistive Upper-Limb Robots, pp. 135-140. Attachment

Manzano, Maxime — IRISA UMR CNRS 6074 - INRIA - INSA Rennes

Guegan, Sylvain — INSA Rennes

Le Breton, Ronan — UNIV-RENNES - INSA Rennes

Devigne, Louise — IRISA UMR CNRS 6074 - INRIA - INSA Rennes - Rehabilitation Cente

Babel, Marie — IRISA UMR CNRS 6074 - INRIA - INSA Rennes

14:00-15:00 TuPIT2.4

Multimodal Haptic Interface for Walker-Assisted Navigation, pp. 141-146. Attachment

Wang, Yikun — Bristol Robotics Laboratory, University of the West of England,

Sierra M., Sergio D. — University of Bristol

Harris, Nigel — Bristol Robotics Laboratory, University of the West of England,

Munera, Marcela — University of West England

Cifuentes, Carlos A. — University of the West of England, Bristol

14:00-15:00 TuPIT2.5

Development and Functional Evaluation of the PrHand V3 Soft-Robotics Prosthetic Hand, pp. 147-153. Attachment

Ramos, Orion Yari Santiago — Universidad Del Rosario, School of Engineering, Science and Techn

De Arco, Laura — Federal University of Espírito Santo

Munera, Marcela — University of West England

Robledo, Jorge — Prótesis Avanzadas SAS

Moazen, Mehran — UCL

Wurdemann, Helge Arne — University College London

Cifuentes, Carlos A. — University of the West of England, Bristol

14:00-15:00 TuPIT2.6

Evaluating the Impact of a Semi-Autonomous Interface on Configuration Space Accessibility for Multi-DOF Upper Limb Prostheses, pp. 154-161. Attachment

Greene, Rebecca J. — Johns Hopkins University

Hunt, Christopher — Infinite Biomedical Technologies

Acosta, Brooklyn Paige — Dillard University

Huang, Zihan — Johns Hopkins University

Kaliki, Rahul — Infinite Biomedical Technologies

Thakor, Nitish V. — Johns Hopkins University, Baltimore, USA

14:00-15:00 TuPIT2.7

Data-Driven Predictive Control for Robust Exoskeleton Locomotion, pp. 162-169. Attachment

Li, Kejun — California Institute of Technology

Kim, Jeeseop — Caltech

Xiong, Xiaobin — University of Wisconsin Madison

Akbari Hamed, Kaveh — Virginia Tech

Yue, Yisong — California Institute of Technology

Ames, Aaron	Caltech

14:00-15:00 TuPIT2.8

An Adaptive Robotic Exoskeleton for Comprehensive Force-Controlled Hand Rehabilitation, pp. 170-177. Attachment

Wilhelm, Nikolas Jakob	Technical University of Munich
Schaack, Victor Gilles	Technical University Munich
Leisching, Annick	TUM, MRI, Orthopaedics and Sport Orthopaedics
Micheler, Carina M.	Technical University of Munich, TUM School of Medicine, Klinikum
Haddadin, Sami	Technical University of Munich
Burgkart, Rainer	Technische Universität München

14:00-15:00 TuPIT2.9

A Tactile Lightweight Exoskeleton for Teleoperation: Design and Control Performance, pp. 178-183. Attachment

Forouhar, Moein	Technische Universität München
Sadeghian, Hamid	Technical University of Munich
Pérez-Suay, Daniel	Technical University of Munich
Naceri, Abdeldjallil	Technical University of Munich
Haddadin, Sami	Technical University of Munich

14:00-15:00 TuPIT2.10

Design of Upper-Limb Exoskeleton with Distal Branching Link Mechanism for Bilateral Operation of Humanoid Robots, pp. 184-190. Attachment

Yoshioka, Hiroki	The University of Tokyo
Hiraoka, Naoki	The University of Tokyo
Kojima, Kunio	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

14:00-15:00 TuPIT2.11

Functional Kinematic and Kinetic Requirements of the Upper Limb During Activities of Daily Living: A Recommendation on Necessary Joint Capabilities for Prosthetic Arms, pp. 191-198. Attachment

Herneth, Christopher	Technical University Munich
Ganguly, Amartya	Technical University of Munich
Haddadin, Sami	Technical University of Munich

14:00-15:00 TuPIT2.12

Optimal Integration of Hybrid FES-Exoskeleton for Precise Knee Trajectory Control, pp. 199-205. Attachment

Jafaripour, Masoud	University of Alberta
Mushahwar, Vivian K.	University of Alberta
Tavakoli, Mahdi	University of Alberta

14:00-15:00 TuPIT2.13

Enhancing Prosthetic Safety and Environmental Adaptability: A Visual-Inertial Prosthesis Motion Estimation Approach on Uneven Terrains, pp. 206-213. Attachment

Chen, Chuheng	Southern University of Science and Technology
Chen, Xinxing	Southern University of Science and Technology
Yin, Shucong	Southern University of Science and Technology
Wang, Yuxuan	The Southern University of Science and Technology
Huang, Binxin	Southern University of Science and Technology
Leng, Yuquan	Southern University of Science and Technology
Fu, Chenglong	Southern University of Science and Technology (SUSTech)

14:00-15:00 TuPIT2.14

Using Hip Assisted Running Exoskeleton with Impact Isolation Mechanism to Improve Energy Efficiency, pp. 214-220.

Wang, Ziqi	Harbin Institute of Technology
Liu, Junchen	Harbin Institute of Technology
Li, Hongwu	Harbin Institute of Technology
Zhang, Qinghua	Harbin Institute of Technology
Li, Xianglong	Harbin Institute of Technology
Huang, Yi	Harbin Institute of Technology
Ju, Haotian	Harbin Institute of Technology
Zheng, Tianjiao	Harbin Institute of Technology
Zhao, Jie	Harbin Institute of Technology
Zhu, Yanhe	Harbin Institute of Technology

14:00-15:00 TuPIT2.15

A Large Vision-Language Model Based Environment Perception System for Visually Impaired People, pp. 221-228.

Chen, Zezhou	China Unicom
Liu, Zhaoxiang	China Unicom
Wang, Kai	China Unicom
Wang, Kohou	Chinaunicom
Lian, Shiguo	China Unicom

TuPIT3 Room 3

Bioinspired Robotics (Teaser Session)

Chair: Wurdemann, Helge Arne	University College London
Co-Chair: Ijspeert, Auke	EPFL

14:00-15:00 TuPIT3.1

Modeling of Hydraulic Soft Hand with Rubber Sheet Reservoir and Evaluation of Its Grasping Flexibility and Control, pp. 229-234. Attachment

Ishibashi, Kyosuke	The University of Tokyo
Ishikawa, Hiroki	The University of Tokyo
Azami, Osamu	Staff Service-Engineering
Yamamoto, Ko	University of Tokyo

14:00-15:00 TuPIT3.2

Manta Ray-Inspired Soft Robotic Swimmer for High-Speed and Multi-Modal Swimming, pp. 235-240. Attachment

Xu, Zefeng	South China University of Technology
Liang, Jiaqiao	South China University of Technology
Zhou, Yitong	South China University of Technology

14:00-15:00 TuPIT3.3

Harnessing Symmetry Breaking in Soft Robotics: A Novel Approach for Underactuated Fingers, pp. 241-246. Attachment

Hashem, Ryman	University of College London
Howison, Toby	University of Cambridge
Stilli, Agostino	University College London
Stoyanov, Danail	University College London
Xu, Peter	Auckland University
Iida, Fumiya	University of Cambridge

14:00-15:00 TuPIT3.4

PINN-Ray: A Physics-Informed Neural Network to Model Soft Robotic Fin-Ray Fingers, pp. 247-254.

Wang, Xing	CSIRO
Dabrowski, Joel Janek	CSIRO
Pinskier, Joshua	CSIRO
Liow, Lois	CSIRO
Viswanathan, VinothKumar	CSIRO
Scalzo, Richard	CSIRO
Howard, David	CSIRO

14:00-15:00 TuPIT3.5

Single Actuator Undulation Soft-Bodied Robots Using a Precompressed Variable Thickness Flexible Beam, pp. 255-261. Attachment

Ta, Tung D.	The University of Tokyo

14:00-15:00 TuPIT3.6

CompdVision: Combining Near-Field 3D Visual and Tactile Sensing Using a Compact Compound-Eye Imaging System, pp. 262-268. Attachment

Luo, Lifan	The Hong Kong University of Science and Technology
Zhang, Boyang	The Hong Kong University of Science and Technology
Peng, Zhijie	Hong Kong University of Science and Technology
Cheung, Yik Kin	The Hong Kong University of Science and Technology
Zhang, Guanlan	The Hong Kong University of Science and Technology
Li, Zhigang	Hong Kong Univ Sci Tech
Wang, Michael Yu	Mywang@gbu.edu.cn
Yu, Hongyu	The Hong Kong University of Science and Technology

14:00-15:00 TuPIT3.7

A Perceptive Pneumatic Artificial Muscle Empowered by Double Helix Fiber Reinforcement, pp. 269-274. Attachment

Wang, Yufeng	University of Science and Technology of China

Wu, Houping	University of Science and Technology of China
Li, Chenchen	University of Science and Technology of China
Peng, Yu Lian	University of Science and Technology of China
Wang, Hongbo	University of Science and Technology of China

14:00-15:00 TuPIT3.8

Climbing Gait for a Snake Robot by Adapting to a Flexible Net, pp. 275-280. Attachment

Yoshida, Kodai	The University of Electro-Communications
Tanaka, Motoyasu	The Univ. of Electro-Communications

14:00-15:00 TuPIT3.9

A Biomimetic Robot Crawling Upstream Using Adhesive Suckers Inspired by Net-Winged Midge Larvae, pp. 281-287. Attachment

Xu, Haoyuan	Beihang University of Mechanical Engineering and Automation
Zhao, Shuyong	Beihang University
Zhi, Jiale	Beihang University
Bi, Chongze	Beihang University
Wen, Li	Beihang University

14:00-15:00 TuPIT3.10

Tension Feedback Control for Musculoskeletal Quadrupedal Locomotion Over Uneven Terrain, pp. 288-294. Attachment

Tanaka, Hiroaki	Osaka University
Matsumoto, Ojiro	Osaka University
Kawasetsu, Takumi	Osaka University
Hosoda, Koh	Kyoto University

14:00-15:00 TuPIT3.11

An Active and Dexterous Bionic Torso for a Quadruped Robot, pp. 295-302. Attachment

Li, Ruyue	Chang'an University
Zhu, Yaguang	Chang'an University
Wang, Yuntong	Chang'an University
He, Zhimin	Chang'an University
Zhou, Mengnan	Chang'an University

14:00-15:00 TuPIT3.12

An Agile Robotic Penguin Driven by Submersible Geared Servomotors: Various Maneuvers by Active Feathering of the Wings, pp. 303-308. Attachment

Shimooka, Taiki	Institute of Science Tokyo
Kakogawa, Atsushi	Ritsumeikan University
Tanaka, Hiroto	Institute of Science Tokyo

14:00-15:00 TuPIT3.13

Loco-Manipulation with Nonimpulsive Contact-Implicit Planning in a Slithering Robot, pp. 309-314. Attachment

Salagame, Adarsh	Northeastern University
Gangaraju, Kruthika	Northeastern University
Nallaguntla, Harin Kumar	Northeastern University
Sihite, Eric	California Institute of Technology
Schirner, Gunar	Northeastern U., Dept. of Electrical and Computer Engineering
Ramezani, Alireza	Northeastern University

14:00-15:00 TuPIT3.14

An Ejecting System for Autonomous Takeoff of Flapping-Wing Robots, pp. 315-320. Attachment

Jiang, Xu	Southeast University
Zhang, Jun	Southeast University
Song, Aiguo	Southeast University

14:00-15:00 TuPIT3.15

A Robust Visual SLAM System for Small-Scale Quadruped Robots in Dynamic Environments, pp. 321-326.

Li, Chengyang	Beijing Institute of Technology
Zhang, Yulai	Beijing Institute of Technology
Yu, Zhiqiang	Beijing Institute of Technology
Liu, Xinming	Beijing Institute of Technology
Shi, Qing	Beijing Institute of Technology

14:00-15:00 TuPIT3.16

Construction of Musculoskeletal Simulation for Shoulder Complex with Ligaments and Its Validation Via Model Predictive Control, pp. 327-333. Attachment

Sahara, Yuta	The University of Tokyo
Miki, Akihiro	The University of Tokyo
Ribayashi, Yoshimoto	The University of Tokyo
Yoshimura, Shunnosuke	The University of Tokyo
Kawaharazuka, Kento	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

TuPIT4 Room 4

Visual Learning (Teaser Session)

Co-Chair: Shafique, Muhammad — New York University Abu Dhabi

14:00-15:00 TuPIT4.1

DECADE: Towards Designing Efficient-Yet-Accurate Distance Estimation Modules for Collision Avoidance in Mobile Advanced Driver Assistance Systems, pp. 334-340.

Shahzad, Muhammad Zaeem	New York University Abu Dhabi
Hanif, Muhammad Abdullah	New York University Abu Dhabi (NYUAD)
Shafique, Muhammad	New York University Abu Dhabi

14:00-15:00 TuPIT4.2

Masked Mutual Guidance Transformer Tracking, pp. 341-348.

Fan, Baojie	Nanjing University of Posts and Telecommunications
Wang, Zhiquan	Nanjing University of Posts and Telecommunications
Ai, Jiajun	Nanjing University of Posts and Telecommunications
Zhang, Caiyu	Nanjing University of Posts and Telecommunications

14:00-15:00 TuPIT4.3

BEV-ODOM: Reducing Scale Drift in Monocular Visual Odometry with BEV Representation, pp. 349-356. Attachment

Wei, Yufei	Zhejiang University
Lu, Sha	Zhejiang University
Han, Fuzhang	Zhejiang University
Xiong, Rong	Zhejiang University
Wang, Yue	Zhejiang University

14:00-15:00 TuPIT4.4

DailySTR: A Daily Human Activity Pattern Recognition Dataset for Spatio-Temporal Reasoning, pp. 357-363. Attachment

Qiu, Yue	National Institute of Advanced Industrial Science and Technology
Egami, Shusaku	National Institute of Advanced Industrial Science and Technology
Fukuda, Ken	National Institute of Advanced Industrial Science and Technology
Miyata, Natsuki	Inst. of Advanced Industrial Sci. & Tech
Yagi, Takuma	National Institute of Advanced Industrial Science and Technology
Hara, Kensho	National Institute of Advanced Industrial Science and Technology
Iwata, Kenji	AIST
Sagawa, Ryusuke	National Institute of Advanced Industrial Science AndTechnology

14:00-15:00 TuPIT4.5

Visual Imitation Learning of Task-Oriented Object Grasping and Rearrangement, pp. 364-371. Attachment

Cai, Yichen	Karlsruhe Institute of Technology
Gao, Jianfeng	Karlsruhe Institute of Technology (KIT)
Pohl, Christoph	Karlsruhe Institute of Technology (KIT)
Asfour, Tamim	Karlsruhe Institute of Technology (KIT)

14:00-15:00 TuPIT4.6

TD-NeRF: Novel Truncated Depth Prior for Joint Camera Pose and Neural Radiance Field Optimization, pp. 372-379. Attachment

Tan, Zhen	National University of Defense Technology
Zhou, Zongtan	National University of Defense Technology
Ge, Yangbing	National University of Defense Technology
Wang, Zi	National University of Defense Technology
Chen, Xieyuanli	National University of Defense Technology
Hu, Dewen	National University of Defense Technology

14:00-15:00 TuPIT4.7

Learning Concept-Based Causal Transition and Symbolic Reasoning for Visual Planning, pp. 380-387. Attachment

Qian, Yilue	Peking University

Yu, Peiyu	UCLA
Wu, Ying Nian	University of California, Los Angeles
Su, Yao	Beijing Institute for General Artificial Intelligence
Wang, Wei	Beijing Institute for General Artificial Intelligence
Fan, Lifeng	University of California, Los Angeles

14:00-15:00 TuPIT4.8

Sim-To-Real Domain Shift in Online Action Detection, pp. 388-394. Attachment

Patsch, Constantin	Technical University of Munich
Torjmene, Wael	Technical University of Munich
Zakour, Marsil	Technical University of Munich
Wu, Yuankai	TUM
Salihu, Driton	Technical University Munich
Steinbach, Eckehard	Technical University of Munich

14:00-15:00 TuPIT4.9

STAIR: Semantic-Targeted Active Implicit Reconstruction, pp. 395-402. Attachment

Jin, Liren	University of Bonn
Kuang, Haofei	University of Bonn
Pan, Yue	University of Bonn
Stachniss, Cyrill	University of Bonn
Popovic, Marija	TU Delft

14:00-15:00 TuPIT4.10

VIHE: Virtual In-Hand Eye Transformer for 3D Robotic Manipulation, pp. 403-410. Attachment

Wang, Weiyao	The Johns Hopkins University
Lei, Yutian	Baidu
Jin, Shiyu	Baidu
Hager, Gregory	Johns Hopkins University
Zhang, Liangjun	Baidu

14:00-15:00 TuPIT4.11

Simultaneous Super-Resolution and Depth Estimation for Satellite Images Based on Diffusion Model, pp. 411-418.

Zhou, Yuwei	Rochester Institute of Technology
Lee, Yangming	Rochester Institute of Technology

14:00-15:00 TuPIT4.12

Contrastive Mask Denoising Transformer for 3D Instance Segmentation, pp. 419-426. Attachment

Wang, He	Zhejiang University
Lin, Minshen	Zhejiang University
Zhang, Guofeng	Zhejiang University

14:00-15:00 TuPIT4.13

FlowTrack: Point-Level Flow Network for 3D Single Object Tracking, pp. 427-434. Attachment

Li, Shuo	Northeastern University
Cui, Yubo	Northeastern University
Li, Zhiheng	Northeastern University
Fang, Zheng	Northeastern University

14:00-15:00 TuPIT4.14

Reinforcement Learning with Generalizable Gaussian Splatting, pp. 435-441.

Wang, Jiaxu	Hong Kong University of Science and Technology (Guangzhou)
Zhang, Qiang	The Hong Kong University of Science and Technology (Guangzhou)
Sun, Jingkai	The Hong Kong University of Science and Technology(GZ)
Cao, Jiahang	The Hong Kong University of Science and Technology (Guangzhou)
Han, Gang	PND Robotics
Zhao, Wen	Nankai University
Zhang, Weining	Beijing Innovation Center of Humanoid Robotics
Shao, Yecheng	Zhejiang University
Guo, Yijie	UBTECH Robotics
Xu, Renjing	The Hong Kong University of Science and Technology (Guangzhou)

14:00-15:00 TuPIT4.15

Gaining the Sparse Rewards by Exploring Lottery Tickets in Spiking Neural Network, pp. 442-449. Attachment

Cheng, Hao	The Hong Kong University of Science and Technology (Guangzhou)
Cao, Jiahang	The Hong Kong University of Science and Technology (Guangzhou)
Xiao, Erjia	The Hong Kong University of Science and Technology (Guangzhou)
Sun, Mengshu	Beijing University of Technology
Xu, Renjing	The Hong Kong University of Science and Technology (Guangzhou)

14:00-15:00 TuPIT4.16

Uncertainty-Aware Semi-Supervised Semantic Key Point Detection Via Bundle Adjustment, pp. 450-457. Attachment

Li, Kai	Zhejiang University, Westlake University
Zhang, Yin	WestLake University
Zhao, Shiyu	Westlake University

TuPIT5 Room 5

Deep Learning I (Teaser Session)

Chair: Ogata, Tetsuya — Waseda University

14:00-15:00 TuPIT5.1

X-Neuron: Interpreting, Locating and Editing of Neurons in Reinforcement Learning Policy, pp. 458-465.

Ge, Yuhong	Tsinghua University, Shanghai Aritificial Intelligence Laborator
Zhao, Xun	Shanghai AI Laboratory
Pang, Jiangmiao	Shanghai AI Laboratory
Zhao, Mingguo	Tsinghua University
Lin, Dahua	The Chinese University of Hong Kong

14:00-15:00 TuPIT5.2

Binary Amplitude-Only Hologram Design for Acoustic End-Effector Construction by Physics-Based Deep Learning, pp. 466-471.

Liu, Qing	Shanghaitech University
Su, Hu	Institute of Automation, Chinese Academy of Science
Li, Jiaqi	ShanghaiTech University
Li, Y.F.	City University of Hong Kong
Zhang, Zhiyuan	Acoustic Robotics Systems Laboratory, Institute of Robotics And
Liu, Song	ShanghaiTech University

14:00-15:00 TuPIT5.3

Active Propulsion Noise Shaping for Multi-Rotor Aircraft Localization, pp. 472-479. Attachment

Serussi, Gabriele	Technion Institute of Technology
Shor, Tamir	Technion Institute of Technology
Hirshberg, Tom	Technion
Baskin, Chaim	Technion Institute of Technology
Bronstein, Alexander	TECHNION

14:00-15:00 TuPIT5.4

VoxelContrast: Voxel Contrast-Based Unsupervised Learning for 3D Point Clouds, pp. 480-487.

Qin, Yuxiang	Tongji University
Sun, Hao	National University of Singapore

14:00-15:00 TuPIT5.5

Improving Out-Of-Distribution Generalization of Trajectory Prediction for Autonomous Driving Via Polynomial Representations, pp. 488-495.

Yao, Yue	Freie Universität Berlin & Continental AG
Yan, Shengchao	University of Freiburg
Goehring, Daniel	Freie Universität Berlin
Burgard, Wolfram	University of Technology Nuremberg
Reichardt, Joerg	Continental AG

14:00-15:00 TuPIT5.6

Real-Time Coordinated Motion Generation: A Hierarchical Deep Predictive Learning Model for Bimanual Tasks, pp. 496-503. Attachment

Shikada, Genki	Waseda University
Armleder, Simon	Technische Universität München

Ito, Hiroshi	Hitachi, Ltd
Cheng, Gordon	Technical University of Munich
Ogata, Tetsuya	Waseda University

14:00-15:00 TuPIT5.7

An LSTM-Based Model to Recognize Driving Style and Predict Acceleration, pp. 504-510.

Lu, Jiaxing	Oklahoma State University
Hossain, Sanzida	Oklahoma State University
Sheng, Weihua	Oklahoma State University
Bai, He	Oklahoma State University

14:00-15:00 TuPIT5.8

Loss Distillation Via Gradient Matching for Point Cloud Completion with Weighted Chamfer Distance, pp. 511-518.

Lin, Fangzhou	Tohoku University
Liu, Haotian	Worcester Polytechnic Institute
Zhou, Haoying	Worcester Polytechnic Institute
Hou, Songlin	Dell Technologies
Yamada, Kazunori	Tohoku University
Fischer, Gregory Scott	Worcester Polytechnic Institute, WPI
Li, Yanhua	Worcester Polytechnic Institute
Zhang, Haichong	Worcester Polytechnic Institute
Zhang, Ziming	Worcester Polytechnic Institute

14:00-15:00 TuPIT5.9

Event-Based Few-Shot Fine-Grained Human Action Recognition, pp. 519-526. Attachment

Yang, Zonglin	Beijing Institute of Technology
Yang, Yan	The Australian National University
Shi, Yuheng	Beijing Institute of Technology
Yang, Hao	Beijing Institute of Technology
Zhang, Ruikun	Beijing Institute of Technology
Liu, Liu	Huawei
Wu, Xinxiao	Beijing Institute of Technology
Pan, Liyuan	Beijing Institute of Technology

14:00-15:00 TuPIT5.10

FI-SLAM: Feature Fusion and Instance Reconstruction for Neural Implicit SLAM, pp. 527-532. Attachment

Wang, Xingshuo	Northeastern University
Zhang, Yunzhou	Northeastern University
Zhang, Zhiyao	Northeastern University
Wang, Mengting	Northeastern University
Li, Zhiteng	Northeastern University
Chen, Xuanhua	Northeastern University

14:00-15:00 TuPIT5.11

PolyFit: A Peg-In-Hole Assembly Framework for Unseen Polygon Shapes Via Sim-To-Real Adaptation, pp. 533-540. Attachment

Lee, Geonhyup	Gwangju Institute of Science and Technology
Lee, Joosoon	Gwangju Institute of Science and Technology
Noh, Sangjun	Gwangju Institute of Science and Technology
Ko, Minhwan	Gwaungju Institute of Science and Technology(GIST)
Kim, Kangmin	Gwangju Institute of Science and Technology
Lee, Kyoobin	Gwangju Institute of Science and Technology

14:00-15:00 TuPIT5.12

Waypoint-Based Reinforcement Learning for Robot Manipulation Tasks, pp. 541-548. Attachment

Mehta, Shaunak	Virginia Tech
Habibian, Soheil	Virginia Tech
Losey, Dylan	Virginia Tech

14:00-15:00 TuPIT5.13

Reinforcement Learning of Dolly-In Filming Using a Ground-Based Robot, pp. 549-556. Attachment

Lorimer, Philip	University of Bath
Saunders, Jack	University of Bath
Hunter, Alan Joseph	University of Bath
Li, Wenbin	University of Bath

14:00-15:00 TuPIT5.14

Disentangled Acoustic Fields for Multimodal Physical Scene Understanding, pp. 557-564. Attachment

Yin, Jie	Shanghai Jiao Tong University
Luo, Andrew	Carnegie Mellon University
Du, Yilun	MIT
Cherian, Anoop	Mitsubishi Electric Research Labs
Marks, Tim K.	Mitsubishi Electric Research Laboratories (MERL)
Le Roux, Jonathan	MERL
Gan, Chuang	IBM

14:00-15:00 TuPIT5.15

Kinematics-Aware Trajectory Generation and Prediction with Latent Stochastic Differential Modeling, pp. 565-572.

Jiao, Ruochen	Northwestern University
Wang, Yixuan	Northwestern University
Liu, Xiangguo	Northwestern University
Zhan, Sinong	Northwestern University
Huang, Chao	University of Liverpool
Zhu, Qi	Northwestern University

14:00-15:00 TuPIT5.16

Ag2Manip: Learning Novel Manipulation Skills with Agent-Agnostic Visual and Action Representations, pp. 573-580. Attachment

Li, Puhao	Tsinghua University
Liu, Tengyu	Beijing Institute for General Artificial Intelligence
Li, Yuyang	Tsinghua University
Han, Muzhi	University of California, Los Angeles
Geng, Haoran	Peking University
Wang, Shu	UCLA
Zhu, Yixin	Peking University
Zhu, Song-Chun	UCLA
Huang, Siyuan	Beijing Institute for General Artificial Intelligence

TuPIT6 Room 6

Reinforcement Learning (Teaser Session)

Chair: Wu, I-Chen	National Chiao Tung University
Co-Chair: Panov, Aleksandr	AIRI

14:00-15:00 TuPIT6.1

Bi-CL: A Reinforcement Learning Framework for Robots Coordination through Bi-Level Optimization, pp. 581-586. Attachment

Hu, Zechen	George Mason University
Shishika, Daigo	George Mason University
Xiao, Xuesu	George Mason University
Wang, Xuan	George Mason University

14:00-15:00 TuPIT6.2

Image-Based Deep Reinforcement Learning with Intrinsically Motivated Stimuli: On the Execution of Complex Robotic Tasks, pp. 587-594.

Valencia Redrovan, David Patricio	The University of Auckland
Williams, Henry	University of Auckland
Xing, Yuning	The University of Auckland
Gee, Trevor	The University of Auckland
Liarokapis, Minas	The University of Auckland
MacDonald, Bruce	University of Auckland

14:00-15:00 TuPIT6.3

Mitigating Adversarial Perturbations for Deep Reinforcement Learning Via Vector Quantization, pp. 595-602.

Luu, Tung	Korea Advanced Institute of Science and Technology
Nguyen, Thanh	Korea Advanced Institute of Science and Technology (KAIST)
Tee, Joshua Tian Jin	KAIST
Kim, Sungwoong	Korea University
Yoo, Chang D.	KAIST

14:00-15:00 TuPIT6.4

Gradient-Based Regularization for Action Smoothness in Robotic Control with Reinforcement Learning, pp. 603-610. Attachment

Li, Yi	National Yang Ming Chiao Tung University
Cao, Hoang-Giang	National Yang Ming Chiao Tung University
Dao, Cong-Tinh	National Yang Ming Chiao Tung University
Chen, Yu-Cheng	National Yang Ming Chiao Tung University
Wu, I-Chen	National Chiao Tung University

14:00-15:00 TuPIT6.5

Towards Accurate and Robust Dynamics and Reward Modeling for Model-Based Offline Inverse Reinforcement Learning, pp. 611-618.

Zhang, Gengyu	University of Illinois at Chicago
Yan, Yan	Illinois Institute of Technology

14:00-15:00 TuPIT6.6

Meta SAC-Lag: Towards Deployable Safe Reinforcement Learning Via MetaGradient-Based Hyperparameter Tuning, pp. 619-626. Attachment

Honari, Homayoun	University of Victoria
Soufi Enayati, Amir Mehdi	University of Victoria
Ghafarian Tamizi, Mehran	University of Victoria
Najjaran, Homayoun	University of Victoria

14:00-15:00 TuPIT6.7

Benchmarking Smoothness and Reducing High-Frequency Oscillations in Continuous Control Policies, pp. 627-634. Attachment

Galelli Christmann, Guilherme Henrique	Inventec Corporation
Luo, Ying-Sheng	Inventec Corporation
Mandala, Hanjaya	Inventec Corporation
Chen, Wei-Chao	Inventec Inc

14:00-15:00 TuPIT6.8

Deeper Introspective SLAM: How to Avoid Tracking Failures Over Longer Routes?, pp. 635-641. Attachment

Naveed, Kanwal	NUST
Anjum, Muhammad Latif	National University of Sciences and Technology, Islamabad
Hussain, Wajahat	National University of Sciences and Technology (NUST)
Lee, Donghwan	KAIST

14:00-15:00 TuPIT6.9

Hierarchical Consensus-Based Multi-Agent Reinforcement Learning for Multi-Robot Cooperation Tasks, pp. 642-649. Attachment

Feng, Pu	Beihang University
Liang, Junkang	Beihang University
Wang, Size	Beihang University
Yu, Xin	Beihang University
Ji, Xin	Big Data Center, State Grid Corporation of China
Chen, Yiting	Big Data Center, State Grid Corporation of China
Zhang, Kui	Beihang University
Shi, Rongye	Beihang University
Wu, Wenjun	Beihang University

14:00-15:00 TuPIT6.10

DEAR: Disentangled Environment and Agent Representations for Reinforcement Learning without Reconstruction, pp. 650-655. Attachment

Pore, Ameya	University of Verona
Muradore, Riccardo	University of Verona
Dall'Alba, Diego	University of Verona

14:00-15:00 TuPIT6.11

Task and Domain Adaptive Reinforcement Learning for Robot Control, pp. 656-663. Attachment

Liu, Yu Tang	Max Planck Institute Intelligent System
Nilaksh, Nilaksh	Indian Institue of Technology, Kharagpur
Ahmad, Aamir	University of Stuttgart

14:00-15:00 TuPIT6.12

Model-Based Policy Optimization Using Symbolic World Model, pp. 664-669.

Gorodetsky, Andrey	Moscow Institute of Physics and Technology
Mironov, Konstantin	Ufa University of Science and Technology

Panov, Aleksandr	AIRI

14:00-15:00 TuPIT6.13

BayRnTune: Adaptive Bayesian Domain Randomization Via Strategic Fine-Tuning, pp. 670-676. Attachment

Huang, Tianle	Georgia Institute of Technology
Sontakke, Nitish Rajnish	Georgia Institute of Technology
Kannabiran, Niranjan Kumar	Georgia Institute of Technology
Essa, Irfan	Georgia Institute of Technology
Nikolaidis, Stefanos	University of Southern California
Hong, Dennis	UCLA
Ha, Sehoon	Georgia Institute of Technology

14:00-15:00 TuPIT6.14

Scalable Multi-Agent Reinforcement Learning for Warehouse Logistics with Robotic and Human Co-Workers, pp. 677-684. Attachment

Krnjaic, Aleksandar	Dematic
Steleac, Raul Dacian	University of Edinburgh
Thomas, Jonathan David	University of Bristol
Papoudakis, Georgios	University of Edinburgh
Schäfer, Lukas	University of Edinburgh
To, Andrew	Dematic
Lao, Kuan-Ho	Dematic
Cubuktepe, Murat	UTexas
Haley, Matthew	Dematic
Börsting, Peter	Dematic GmbH
Albrecht, Stefano V.	University of Edinburgh

14:00-15:00 TuPIT6.15

Learning When to Stop: Efficient Active Tactile Perception with Deep Reinforcement Learning, pp. 685-692. Attachment

Niemann, Christopher	Bielefeld University
Leins, David Philip	Bielefeld University
Lach, Luca	Bielefeld University
Haschke, Robert	Bielefeld University

14:00-15:00 TuPIT6.16

TopoNav: Topological Navigation for Efficient Exploration in Sparse Reward Environments, pp. 693-700. Attachment

Hossain, Jumman	University of Maryland Baltimore County
Faridee, Abu-Zaher	University of Maryland Baltimore County, USA
Roy, Nirmalya	University of Maryland Baltimore County, USA
Freeman, Jade	DEVCOM Army Research Lab, USA
Gregory, Timothy	DEVCOM Army Research Lab, USA
Trout, Theron T.	Stormfish Scientific Corp

14:00-15:00 TuPIT6.17

Learning-Based Adaptive Control of Quadruped Robots for Active Stabilization on Moving Platforms, pp. 701-708. Attachment

Yoon, Minsung	Korea Advanced Institute of Science and Technology (KAIST)
Shin, Heechan	KAIST
Jeong, Jeil	Korea Advanced Institute of Science and Technology
Yoon, Sung-eui	KAIST

TuPIT7 Room 7

Motion and Force Control (Teaser Session)

Chair: Sakai, Satoru	Shinshu Univ
Co-Chair: Meghjani, Malika	Singapore University of Technology and Design

14:00-15:00 TuPIT7.1

Koopman Dynamic Modeling for Global and Unified Representations of Rigid Body Systems Making and Breaking Contact, pp. 709-716. Attachment

O'Neill, Cormac	Massachusetts Institute of Technology
Asada, Harry	MIT

14:00-15:00 TuPIT7.2

Neuromorphic Force-Control in an Industrial Task: Validating Energy and Latency Benefits, pp. 717-724.

Amaya, Camilo	Fortiss - An-Institut Technische Universität München

Eames, Evan	Fortiss - an Institut Technische Universität München
Palinauskas, Gintautas	Fortiss - An-Institut Technische Universität München
Perzylo, Alexander Clifford	Fortiss - An-Institut Technische Universität München
Sandamirskaya, Yulia	ZHAW
von Arnim, Axel	Fortiss

14:00-15:00 TuPIT7.3

Zero-Shot Transfer of a Tactile-Based Continuous Force Control Policy from Simulation to Robot, pp. 725-732. Attachment

Lach, Luca	Bielefeld University
Haschke, Robert	Bielefeld University
Tateo, Davide	Technische Universität Darmstadt
Peters, Jan	Technische Universität Darmstadt
Ritter, Helge Joachim	Bielefeld University
Borràs Sol, Júlia	Institut De Robòtica I Informàtica Industrial (CSIC-UPC)
Torras, Carme	Csic - Upc

14:00-15:00 TuPIT7.4

A Proxy-Tactile Reactive Control for Robots Moving in Clutter, pp. 733-739. Attachment

Caroleo, Giammarco	University of Oxford
Giovinazzo, Francesco	University of Genoa
Albini, Alessandro	University of Oxford
Grella, Francesco	University of Genova
Cannata, Giorgio	University of Genova
Maiolino, Perla	University of Oxford

14:00-15:00 TuPIT7.5

Position Control of a Low-Energy C-Core Reluctance Actuator in a Motion System, pp. 740-745.

Al Saaideh, Mohammad	Memorial University of Newfoundland
Al-Rawashdeh, Yazan	Memorial University of Newfoundland
Alatawneh, Natheer	Cysca Technologies
Aljanaideh, Khaled	Jordan University of Science and Technology
Al Janaideh, Mohammad	University of Guelph

14:00-15:00 TuPIT7.6

Improved Contact Stability for Admittance Control of Industrial Robots with Inverse Model Compensation, pp. 746-752. Attachment

Samuel, Kangwagye	Technical University of Munich
Haninger, Kevin	Fraunhofer IPK
Haddadin, Sami	Technical University of Munich
Oh, Sehoon	DGIST

14:00-15:00 TuPIT7.7

Current-Based Impedance Control for Interacting with Mobile Manipulators, pp. 753-760. Attachment

de Wolde, Jelmer	Delft University of Technology
Knoedler, Luzia	Delft University of Technology
Garofalo, Gianluca	ABB AB
Alonso-Mora, Javier	Delft University of Technology

14:00-15:00 TuPIT7.8

*Understanding Strain Wave Gear Directional Efficiency in the Context of Robotic Actuation and Overcoming the Corresponding Performance Limitations through Direct Torque Control**. N/A

Georgiev, Nikola	Jet Propulsion Laboratory

14:00-15:00 TuPIT7.9

Response Improvement of Hydraulic Robotic Joints Via a Force Servo and Inverted Pendulum Demo, pp. 761-766. Attachment

Arai, Ryo	Shinshu University
Sakai, Satoru	Shinshu Univ
Ono, Kazuki	Shinshu University

14:00-15:00 TuPIT7.10

Development of a Spherical Wheel-Legged Composite Mobile Robot with Multimodal Motion Capabilities, pp. 767-772. Attachment

Du, Yuyang	Harbin Institute of Technology, Shenzhen
Ye, Ruihua	Harbin Institute of Technology, Shenzhen
Xu, Wenfu	Harbin Institute of Technology, Shenzhen

14:00-15:00 TuPIT7.11

Segmented Safety Docking Control for Mobile Self-Reconfigurable Robots, pp. 773-780.

Zheng, Zhi	Chongqing University
Jiang, Tao	Chongqing University
Tan, Senqi	China North Artificial Intelligence & Innovation Research Instit
Zhang, Hao	ChongQing University
Ye, Jianchuan	Tsinghua University

14:00-15:00 TuPIT7.12

Attitude Control of the Hydrobatic Intervention AUV Cuttlefish Using Incremental Nonlinear Dynamic Inversion, pp. 781-786. Attachment

Slawik, Tom	German Research Center for Artificial Intelligence (DFKI GmbH),
Vyas, Shubham	Robotics Innovation Center, DFKI GmbH
Christensen, Leif	DFKI
Kirchner, Frank	University of Bremen

14:00-15:00 TuPIT7.13

Robot Guided Evacuation with Viewpoint Constraints, pp. 787-794. Attachment

Gong, Chen	Singapore University of Technology and Design
Meghjani, Malika	Singapore University of Technology and Design
Prasetyo, Marcel Bartholomeus	Singapore University of Technology and Design

14:00-15:00 TuPIT7.14

Virtual Model Control for Compliant Reaching under Uncertainties, pp. 795-801. Attachment

Zhang, Yi	University of Cambridge
Larby, Daniel	University of Cambridge
Iida, Fumiya	University of Cambridge
Forni, Fulvio	University of Cambridge

TuPIT8 Room 8

Robot Calibration and Identification (Teaser Session)

Co-Chair: He, Yuesheng — Shanghai Jiao Tong University

14:00-15:00 TuPIT8.1

Online Adaptation of Learned Vehicle Dynamics Model with Meta-Learning Approach, pp. 802-809.

Tsuchiya, Yuki	Toyota Motor Corporation
Balch, Thomas	Toyota Research Institute
Drews, Paul	Toyota Research Institute
Rosman, Guy	Massachusetts Institute of Technology

14:00-15:00 TuPIT8.2

An Online Automatic Calibration Method for Infrastructure-Based LiDAR-Camera Via Cross-Modal Object Matching, pp. 810-815. Attachment

Wang, Tao	Shanghai Jiao Tong University
He, Yuesheng	Shanghai Jiao Tong University
Zhuang, Hanyang	Shanghai Jiao Tong University
Yang, Ming	Shanghai Jiao Tong University

14:00-15:00 TuPIT8.3

EasyHeC++: Fully Automatic Hand-Eye Calibration with Pretrained Image Models, pp. 816-823. Attachment

Hong, Zhengdong	Zhejiang University
Zheng, Kangfu	Tsinghua University
Chen, Linghao	Zhejiang University

14:00-15:00 TuPIT8.4

A Direct Algorithm for Multi-Gyroscope Infield Calibration, pp. 824-831.

Wang, Tianheng	Apple
Roumeliotis, Stergios	Apple Inc

14:00-15:00 TuPIT8.5

Sensor-Agnostic Visuo-Tactile Robot Calibration Exploiting Assembly-Precision Model Geometries, pp. 832-839. Attachment

Gomes, Manuel	University of Aveiro
Görner, Michael	University of Hamburg
Oliveira, Miguel	University of Aveiro

Zhang, Jianwei	University of Hamburg

14:00-15:00 TuPIT8.6

Extrinsic Calibration of Multiple LiDARs for a Mobile Robot Based on Floor Plane and Object Segmentation, pp. 840-847. Attachment

Niijima, Shun	Sony Group Corporation
Suzuki, Atsushi	Sony Group Corporation
Tsuzaki, Ryoichi	Sony Group Corporation
Kinoshita, Masaya	Sony Group Corporation

14:00-15:00 TuPIT8.7

Research of Calibration Method for Fusion of LDS Sensor and ToF Low-Cost Sensor, pp. 848-855.

Zhu, Jiahui	Ningbo University
Yu, Guitao	Healthy & Intelligent Kitchen Engineering Research Center of Z
He, Yang	Healthy & Intelligent Kitchen Engineering Research Center of Zhe
Yang, Kui	Ningbo University
Liang, Dongtai	Ningbo University

14:00-15:00 TuPIT8.8

Efficient Extrinsic Self-Calibration of Multiple IMUs Using Measurement Subset Selection, pp. 856-863.

Lee, Jongwon	University of Illinois Urbana-Champaign
Hanley, David	University of Edinburgh
Bretl, Timothy	University of Illinois at Urbana-Champaign

14:00-15:00 TuPIT8.9

MFCalib: Single-Shot and Automatic Extrinsic Calibration for LiDAR and Camera in Targetless Environments Based on Multi-Feature Edge, pp. 864-871. Attachment

Ye, Tianyong	Shenzhen University
Xu, Wei	Manifold Tech Limited
Zheng, Chunran	The University of Hong Kong
Cui, Yukang	Shenzhen University

14:00-15:00 TuPIT8.10

A Graph-Based Self-Calibration Technique for Cable-Driven Robots with Sagging Cable, pp. 872-877.

Dindarloo, Mohammadreza	K. N. Toosi University of Technology
Mirjalili, Amir Saman	K. N. Toosi University of Technology
Khalilpour, S. Ahmad	K. N. Toosi University of Technology
Khorrambakht, Rooholla	New York University
Weiss, Stephan	Universität Klagenfurt
Taghirad, Hamid D.	K.N.Toosi University of Technology

14:00-15:00 TuPIT8.11

Uncertainty-Aware Deployment of Pre-Trained Language-Conditioned Imitation Learning Policies, pp. 878-883.

Wu, Bo	University of Pennsylvania
Lee, Bruce	University of Pennsylvania
Daniilidis, Kostas	University of Pennsylvania
Bucher, Bernadette	University of Michigan
Matni, Nikolai	University of Pennsylvania

14:00-15:00 TuPIT8.12

MEMROC: Multi-Eye to Mobile RObot Calibration, pp. 884-891. Attachment

Allegro, Davide	University of Padova
Terreran, Matteo	University of Padova
Ghidoni, Stefano	University of Padova

14:00-15:00 TuPIT8.13

V2I-Calib: A Novel Calibration Approach for Collaborative Vehicle and Infrastructure LiDAR Systems, pp. 892-897. Attachment

Qu, Luca	School of Vehicle and Mobility, Tsinghua University
Xiong, Yijin	Tsinghua University
Zhang, Guipeng	Institute of Computing Technology of the Chinese Academy of Scie
Wu, Xin	Beijing Jiaotong University
Gao, Xiaohan	Tsinghua University
Gao, Xin	China University of Mining & Technology, Beijing
Li, Hanyu	Beijing Jiaotong University
Guo, Shichun	Tsinghua University

Zhang, Guoying	China University of Mining & Technology, Beijing

14:00-15:00 TuPIT8.14

A Piecewise-Weighted RANSAC Method Utilizing Abandoned Hypothesis Model Information with a New Application on Robot Self-Calibration, pp. 898-905. Attachment

He, Jianhui	Ningbo Institute of Materials Technology and Engineering, Chines
Feng, Yiyang	Ningbo Institute of Material Technology & Engineering, CAS
Yang, Guilin	Ningbo Institute of Material Technology and Engineering, Chines
Shen, Wenjun	Ningbo Institute of Material Technology and Engineering, Chinese
Chen, Silu	Ningbo Institute of Materials Technology and Engineering, CAS
Zheng, Tianjiang	Ningbo Industrial Technology Research Institute
Li, Junjie	Ningbo Institute of Material Technology and Engineering, Chinese

14:00-15:00 TuPIT8.15

A Hybrid Model and Learning-Based Force Estimation Framework for Surgical Robots, pp. 906-912.

Yang, Hao	Johns Hopkins University
Zhou, Haoying	Worcester Polytechnic Institute
Fischer, Gregory Scott	Worcester Polytechnic Institute, WPI
Wu, Jie Ying	Vanderbilt University

14:00-15:00 TuPIT8.16

Asynchronous Microphone Array Calibration Using Hybrid TDOA Information, pp. 913-918. Attachment

Zhang, Chengjie	Soutern University of Science and Technology
Wang, Jiang	Southern University of Science and Technology
Kong, He	Southern University of Science and Technology

TuPIT9 Room 9

Intelligent Transportation (Teaser Session)

Chair: Lin, Ming C.	University of Maryland at College Park
Co-Chair: Walas, Krzysztof, Tadeusz	Poznan University of Technology

14:00-15:00 TuPIT9.1

NeSyMoF: A Neuro-Symbolic Model for Motion Forecasting, pp. 919-926.

Doula, Achref	Technical University of Darmstadt
Yin, Huijie	Technical University of Darmstadt
Mühlhäuser, Max	Technical University of Darmstadt
Sanchez Guinea, Alejandro	TU Darmstadt

14:00-15:00 TuPIT9.2

Improving Behavior Profile Discovery for Vehicles, pp. 927-934.

de Moura Martins Gomes, Nelson	ISIR
Garrido Carpio, Fernando José	Valeo
Nashashibi, Fawzi	INRIA

14:00-15:00 TuPIT9.3

Applying Neural Monte Carlo Tree Search to Unsignalized Multi-Intersection Scheduling for Autonomous Vehicles, pp. 935-942. Attachment

Shi, Yucheng	Trinity College Dublin
Wang, Wenlong	Trinity College Dublin
Tao, Xiaowen	Trinity College Dublin
Dusparic, Ivana	Trinity College Dublin
Cahill, Vinny	Trinity College Dublin

14:00-15:00 TuPIT9.4

Deep Stochastic Kinematic Models for Probabilistic Motion Forecasting in Traffic, pp. 943-950.

Zheng, Laura	University of Maryland, College Park
Son, Sanghyun	University of Maryland
Liang, Jing	University of Maryland
Wang, Xijun	University of Maryland, College Park
Clipp, Brian	Kitware Inc
Lin, Ming C.	University of Maryland at College Park

14:00-15:00 TuPIT9.5

Realistic Rainy Weather Simulation for LiDARs in CARLA Simulator, pp. 951-957. Attachment

Yang, Donglin	BUAA

Cai, Xinyu	Shanghai AI Laboratory
Liu, Zhenfeng	Nankai University
Jiang, Wentao	Beihang University
Zhang, Bo	Shanghai Artificial Intelligence Laboratory
Yan, Guohang	Shanghai AI Laboratory
Gao, Xing	Shanghai AI Lab
Liu, Si	Beihang University
Shi, Botian	Shanghai AI Laboratory

14:00-15:00 TuPIT9.6

Multi-Agent Path Finding for Mixed Autonomy Traffic Coordination, pp. 958-965. Attachment

Zheng, Han	Massachusetts Institute of Technology
Yan, Zhongxia	Massachusetts Institute of Technology
Wu, Cathy	MIT

14:00-15:00 TuPIT9.7

SurrealDriver: Designing LLM-Powered Generative Driver Agent Framework Based on Human Drivers' Driving-Thinking Data, pp. 966-971. Attachment

Jin, Ye	Tsinghua University
Yang, Ruoxuan	Tsinghua University
Yi, Zhijie	Beijing Normal University
Shen, Xiaoxi	City University of Hong Kong
Huiling, Peng	Nankai University
Liu, Xiaoan	New York University
Qin, Jingli	Institute for AI Industry Research, Tsinghua University, Beijing
Jiayang, Li	Tongji University
Xie, Jintao	The Institute for AI Industry Research, Tsinghua University, Bei
Gao, Peizhong	Tsinghua University
Zhou, Guyue	Tsinghua University
Gong, Jiangtao	Tsinghua University

14:00-15:00 TuPIT9.8

Learning Dynamics Models for Velocity Estimation in Autonomous Racing, pp. 972-979. Attachment

Węgrzynowski, Jan	IDEAS NCBR, Poznan University of Technology
Czechmanowski, Grzegorz	IDEAS NCBR, Poznan University of Technology
Kicki, Piotr	Poznan University of Technology
Walas, Krzysztof, Tadeusz	Poznan University of Technology

14:00-15:00 TuPIT9.9

Large Language Models Powered Context-Aware Motion Prediction, pp. 980-985. Attachment

Zheng, Xiaoji	Southeast University
Wu, Lixiu	Minzu University of China
Yan, Zhijie	Beihang University
Tang, Yuanrong	Tsinghua University
Zhao, Hao	Tsinghua University
Zhong, Chen	Tsinghua University
Chen, Bokui	Tsinghua University
Gong, Jiangtao	Tsinghua University

14:00-15:00 TuPIT9.10

A Data-Informed Analysis of Scalable Supervision for Safety in Autonomous Vehicle Fleets, pp. 986-993.

Hickert, Cameron	Massachusetts Institute of Technology
Yan, Zhongxia	Massachusetts Institute of Technology
Wu, Cathy	MIT

14:00-15:00 TuPIT9.11

SmartPathfinder: Pushing the Limits of Heuristic Solutions for Vehicle Routing Problem with Drones Using Reinforcement Learning, pp. 994-1001.

Imran, Navid Mohammad	University of Memphis
Won, Myounggyu	University of Memphis

14:00-15:00 TuPIT9.12

Agent-Agnostic Centralized Training for Decentralized Multi-Agent Cooperative Driving, pp. 1002-1009. Attachment

Yan, Shengchao	University of Freiburg
König, Lukas Maximilian	Ruhr Universität Bochum

Burgard, Wolfram	University of Technology Nuremberg

14:00-15:00 TuPIT9.13

HeteroLight: A General and Efficient Learning Approach for Heterogeneous Traffic Signal Control, pp. 1010-1017.

Zhang, Yifeng	National University of Singapore
Li, Peizhuo	National University of Singapore
Fan, Mingfeng	Central South University
Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

14:00-15:00 TuPIT9.14

Multi-Uncertainty Aware Autonomous Cooperative Planning, pp. 1018-1025. Attachment

Zhang, Shiyao	Southern University of Science and Technology
Li, He	University of Macau
Zhang, Shengyu	Singapore University of Technology and Design
Wang, Shuai	Shenzhen Institute of Advanced Technology, Chinese Academy of Sc
Ng, Derrick Wing Kwan	University of New South Wales
Xu, Chengzhong	University of Macau

14:00-15:00 TuPIT9.15

Adversarial Attack on Trajectory Prediction for Autonomous Vehicles with Generative Adversarial Networks, pp. 1026-1031. Attachment

Fan, Jiping	Beijing Institute of Technology
Wang, Zhenpo	Beijing Institute of Technology
Li, Guoqiang	Beijing Institute of Technology

14:00-15:00 TuPIT9.16

Active Vehicle Re-Localization Based on Non-Repetitive Lidar with Gimbal Motion Strategy, pp. 1032-1037. Attachment

Wu, Xin'ao	Shanghai Jiaotong University
Yang, Chenxi	Shanghai Jiao Tong University
Guo, Yiyang	Los Altos High School
Zhuang, Hanyang	Shanghai Jiao Tong University
Wang, Chunxiang	Shanghai Jiaotong University
Yang, Ming	Shanghai Jiao Tong University

TuPIT10 Room 10

Simultaneous Localization and Mapping (SLAM) I (Teaser Session)

Chair: Arzberger, Fabian	Julius-Maximilians-University of Würzburg
Co-Chair: Nuechter, Andreas	University of Würzburg

14:00-15:00 TuPIT10.1

Geometry-Aided Underwater 3D Mapping Using Side-Scan Sonar, pp. 1038-1045. Attachment

Yang, Yiqiao	Northeastern University
Pang, Chenglin	Northeastern University
Wu, Chengdong	Northeastern University
Fang, Zheng	Northeastern University

14:00-15:00 TuPIT10.2

Thermal-NeRF: Neural Radiance Fields from an Infrared Camera, pp. 1046-1053.

Ye, Tianxiang	Shanghai Jiaotong University
Wu, Qi	Shanghai Jiao Tong University
Deng, Junyuan	Shanghai Jiao Tong University
Liu, Guoqing	Shanghai Jiao Tong University
Liu, Liu	Hefei University of Technology
Xia, Songpengcheng	Shanghai Jiao Tong University
Pang, Liang	Shanghai Slamtec Co., Ltd
Yu, Wenxian	Shanghai Jiao Tong University
Pei, Ling	Shanghai Jiao Tong University

14:00-15:00 TuPIT10.3

CSR: A Lightweight Crowdsourced Road Structure Reconstruction System for Autonomous Driving, pp. 1054-1061.

Wang, Huayou	Huawei Technologies
Liu, Qingyao	Li Auto
Wu, Jiazheng	Tianjin University
Liu, Kun	Li Auto Inc

Ding, Chao	LiAuto
Lang, Xianpeng	LiAuto
Xue, Changliang	Huawei Technologies

14:00-15:00 TuPIT10.4

Neural Semantic Map-Learning for Autonomous Vehicles, pp. 1062-1069. Attachment

Herb, Markus	Technische Universität München
Navab, Nassir	TU Munich
Tombari, Federico	Technische Universität München

14:00-15:00 TuPIT10.5

On the 3D Trochoidal Motion Model of LiDAR Sensors Placed Off-Centered Inside Spherical Mobile Mapping Systems, pp. 1070-1077.

Arzberger, Fabian	Julius-Maximilians-University of Würzburg
Nuechter, Andreas	University of Würzburg

14:00-15:00 TuPIT10.6

V-PRISM: Probabilistic Mapping of Unknown Tabletop Scenes, pp. 1078-1085.

Wright, Herbert	University of Utah
Zhi, Weiming	Carnegie Mellon University
Johnson-Roberson, Matthew	Carnegie Mellon University
Hermans, Tucker	University of Utah

14:00-15:00 TuPIT10.7

Enhancing Online Road Network Perception and Reasoning with Standard Definition Maps, pp. 1086-1093. Attachment

Zhang, Hengyuan	University of California, San Diego
Paz, David	University of California, San Diego
Guo, Yuliang	Bosch Research North America
Das, Arun	Robert Bosch LLC
Huang, Xinyu	Robert Bosch LLC
Haug, Karsten	Robert Bosch GmbH
Christensen, Henrik Iskov	UC San Diego
Ren, Liu	Robert Bosch North America Research Technology Center

14:00-15:00 TuPIT10.8

Teaching Robots Where to Go and How to Act with Human Sketches Via Spatial Diagrammatic Instructions, pp. 1094-1100.

Sun, Qilin	Carnegie Mellon University
Zhi, Weiming	Carnegie Mellon University
Zhang, Tianyi	Carnegie Mellon University
Johnson-Roberson, Matthew	Carnegie Mellon University

14:00-15:00 TuPIT10.9

DHP-Mapping: A Dense Panoptic Mapping System with Hierarchical World Representation and Label Optimization Techniques, pp. 1101-1107. Attachment

Hu, Tianshuai	The Hong Kong University of Science and Technology
Jiao, Jianhao	University College London
Xu, Yucheng	University of Edinburgh
Liu, Hongji	The Hong Kong University of Science and Technology
Wang, Sheng	Hong Kong University of Science and Technology
Liu, Ming	Hong Kong University of Science and Technology (Guangzhou)

14:00-15:00 TuPIT10.10

RMap: Millimeter-Wave Radar Mapping through Volumetric UpSampling, pp. 1108-1115. Attachment

Mopidevi, Ajay Narasimha	University of Colorado Boulder
Harlow, Kyle	University of Colorado Boulder
Heckman, Christoffer	University of Colorado at Boulder

14:00-15:00 TuPIT10.11

A Novel Framework for Structure Descriptors-Guided Hand-Drawn Floor Plan Reconstruction, pp. 1116-1123. Attachment

Zhang, Zhentong	Southeast University
Liu, Juan	Samsung Electronics（China）R&D Center
Li, Xinde	Southeast University
Hu, Chuanfei	University of Shanghai for Science and Technology
Dunkin, Fir	Southeast University

Zhang, Shaokun	Southeast University

14:00-15:00 TuPIT10.12

PSS-BA: LiDAR Bundle Adjustment with Progressive Spatial Smoothing, pp. 1124-1129. Attachment

Li, Jianping	Nanyang Technological University
Nguyen, Thien-Minh	Nanyang Technological University
Yuan, Shenghai	Nanyang Technological University
Xie, Lihua	NanyangTechnological University

14:00-15:00 TuPIT10.13

nu-DBA: Neural Implicit Dense Bundle Adjustment Enables Image-Only Driving Scene Reconstruction, pp. 1130-1137. Attachment

Mao, Yunxuan	Zhejiang University
Shen, Bingqi	Zhejiang University
Yang, Yifei	Zhejiang University
Wang, Kai	HuaWei
Xiong, Rong	Zhejiang University
Liao, Yiyi	Zhejiang University
Wang, Yue	Zhejiang University

14:00-15:00 TuPIT10.14

FRAGG-Map: Frustum Accelerated GPU-Based Grid Map, pp. 1138-1144. Attachment

Grimaldi, Michele	University of Girona
Palomeras, Narcis	Universitat De Girona
Carlucho, Ignacio	University of Edinburgh
Petillot, Yvan R.	Heriot-Watt University
Ridao, Pere	University of Girona

14:00-15:00 TuPIT10.15

OpenOcc: Open Vocabulary 3D Scene Reconstruction Via Occupancy Representation, pp. 1145-1152. Attachment

Jiang, Haochen	Fudan University
Xu, Yueming	Fudan University
Zeng, Yihan	Shanghai Jiao Tong University
Xu, Hang	Noah's Ark Lab
Zhang, Wei	HUAWEI
Feng, Jianfeng	Fudan University
Zhang, Li	Fudan University

14:00-15:00 TuPIT10.16

Text2Map: From Navigational Instructions to Graph-Based Indoor Map Representations Using LLMs, pp. 1153-1160.

Karkour, Ammar	Carnegie Mellon University
Harras, Khaled	Carnegie Mellon University
Feo, Eduardo	Carnegie Mellon University

TuPIT11 Room 11

Marine Robotic Systems (Teaser Session)

Chair: Yetkin, Harun	Bartin University
Co-Chair: De Masi, Giulia	Khalifa University

14:00-15:00 TuPIT11.1

Decentralized Linear Convoying for Underactuated Surface Craft with Partial State Coupling, pp. 1161-1168.

Turrisi, Raymond	Massachusetts Institute of Technology
Benjamin, Michael	Massachusetts Institute of Technology

14:00-15:00 TuPIT11.2

Opti-Acoustic Semantic SLAM with Unknown Objects in Underwater Environments, pp. 1169-1176. Attachment

Singh, Kurran	Massachusetts Institute of Technology
Hong, Jungseok	MIT
Rypkema, Nicholas Rahardiyan	Woods Hole Oceanographic Institution
Leonard, John	MIT

14:00-15:00 TuPIT11.3

Development of Contextual Collision Risk Framework for Operational Envelope of Autonomous Navigation System, pp. 1177-1184.

Kim, Inbeom	Avikus

Ko, Kwangsung	Avikus
Park, Jinmo	Avikus

14:00-15:00 TuPIT11.4

IMU-Based Monitoring of Buoy-Ballast System through Cable Dynamics Simulation, pp. 1185-1190.

Peraud, Charly	COSMER Laboratory, Université De Toulon
Filliung, Martin	CNRS LIS, COSMER Laboratory, Université De Toulon
Anthierens, Cedric	Universite De Toulon
Dune, Claire	Université De Toulon
Boizot, Nicolas	Université De Toulon
Hugel, Vincent	University of Toulon

14:00-15:00 TuPIT11.5

TURTLMap: Real-Time Localization and Dense Mapping of Low-Texture Underwater Environments with a Low-Cost Unmanned Underwater Vehicle, pp. 1191-1198. Attachment

Song, Jingyu	University of Michigan
Bagoren, Onur	University of Michigan
Andigani, Razan	University of Michigan - Ann Arbor
Venkatramanan Sethuraman, Advaith	University of Michigan
Skinner, Katherine	University of Michigan

14:00-15:00 TuPIT11.6

Towards a Factor Graph-Based Method Using Angular Rates for Full Magnetometer Calibration and Gyroscope Bias Estimation, pp. 1199-1205.

Rodríguez-Martínez, Sebastián	Monterey Bay Aquarium Research Institute
Troni, Giancarlo	Monterey Bay Aquarium Research Institute

14:00-15:00 TuPIT11.7

Efficient Feature Mapping Using a Collaborative Team of AUVs, pp. 1206-1213.

Biggs, Benjamin	Virginia Polytechnic Institute and State University
Stilwell, Daniel	Virginia Tech
Yetkin, Harun	Bartin University
McMahon, James	The Naval Research Laboratory

14:00-15:00 TuPIT11.8

Real-Time Horizon Locking on Unmanned Surface Vehicles, pp. 1214-1221. Attachment

Kiefer, Benjamin	University of Tuebingen
Zell, Andreas	University of Tübingen

14:00-15:00 TuPIT11.9

Adaptive Control Barrier Functions for Near-Structure ROV Operations, pp. 1222-1227.

von Benzon, Malte	Aalborg University
Marley, Mathias	NTNU
Sørensen, Fredrik Fogh	Aalborg University
Liniger, Jesper	Aalborg University
Pedersen, Simon	Aalborg University

14:00-15:00 TuPIT11.10

Integrated 3DOF Trajectory Tracking Control for Under-Actuated Marine Surface Vehicles by Trajectory Linearization, pp. 1228-1235.

Sempertegui, Miguel	Ohio University
Zhu, J. Jim	Ohio University

14:00-15:00 TuPIT11.11

SAVOR: Sonar-Aided Visual Odometry and Reconstruction for Autonomous Underwater Vehicles, pp. 1236-1243. Attachment

Coffelt, Jeremy Paul	Rosenxt
Kampmann, Peter	ROSEN Technology and Research Center GmbH
Wehbe, Bilal	German Research Center for Artificial Intelligence

14:00-15:00 TuPIT11.12

Prediction of Acoustic Communication Performance for AUVs Using Gaussian Process Classification, pp. 1244-1251.

Gao, Yifei	Virginia Tech
Yetkin, Harun	Bartin University
Stilwell, Daniel	Virginia Tech
McMahon, James	The Naval Research Laboratory

14:00-15:00 TuPIT11.13

This Is the Way: Mitigating the Roll of an Autonomous Uncrewed Surface Vessel in Wavy Conditions Using Model Predictive Control, pp. 1252-1257.

Jenkins, Daniel	Queen's University
Marshall, Joshua A.	Queen's University

14:00-15:00 TuPIT11.14

A Deep Reinforcement Learning Framework and Methodology for Reducing the Sim-To-Real Gap in ASV Navigation, pp. 1258-1264. Attachment

Batista, Luis F. W.	Georgia Instutue of Technology and Universite De Lorraine
Ro, Junghwan	Georgia Institute of Technology
Richard, Antoine	University of Luxembourg
Schroepfer, Pete	Cnrs Irl 2958
Hutchinson, Seth	Georgia Institute of Technology
Pradalier, Cedric	GeorgiaTech Lorraine

14:00-15:00 TuPIT11.15

OAS-GPUCB: On-The-Way Adaptive Sampling Using GPUCB for Bathymetry Mapping, pp. 1265-1270. Attachment

Agrawal, Rajat	Indian Institute of Science Education and Research Bhopal
Nambiar, Karthik	IISER Bhopal
Chhaglani, Bhawana	Bharati Vidyapeeth's College of Engineering
Chitre, Mandar	National University of Singapore
Pb, Sujit	IISER Bhopal

14:00-15:00 TuPIT11.16

Interpretation of Legged Locomotion in Underwater Robots Based on Rimless Wheel Model, pp. 1271-1276. Attachment

He, Yuetong	Japan Advanced Institute of Science and Technology
Asano, Fumihiko	Japan Advanced Institute of Science and Technology

14:00-15:00 TuPIT11.17

Risk-Averse Planning and Plan Assessment for Marine Robots, pp. 1277-1282. Attachment

Mohammadi Kashani, Mahya	IT-University of Copenhagen
John, Tobias	University of Oslo
Coffelt, Jeremy Paul	Rosenxt
Johnsen, Einar Broch	University of Oslo
Wasowski, Andrzej	IT University of Copenhagen

TuPIT12 Room 12

Design of Robotics Systems (Teaser Session)

Chair: Ren, Hongliang	Chinese Univ Hong Kong (CUHK) & National Univ Singapore(NUS)
Co-Chair: El-Khasawneh, Bashar	Khalifa University

14:00-15:00 TuPIT12.1

MANIP: A Modular Architecture for Integrating Interactive Perception for Robot Manipulation, pp. 1283-1289. Attachment

Yu, Justin	University of California Berkeley
Sadjadpour, Tara	University of California, Berkeley
O'Neill, Abigail	UC Berkeley BAIR
Khfifi, Mehdi	University of California Berkeley
Chen, Lawrence Yunliang	UC Berkeley
Cheng, Richard	California Institute of Technology
Irshad, Muhammad Zubair	Georgia Institute of Technology
Balakrishna, Ashwin	Toyota Research Institute
Kollar, Thomas	Toyota Research Institute
Goldberg, Ken	UC Berkeley

14:00-15:00 TuPIT12.2

Kinematic Modeling of Twisted String Actuator Based on Invertible Neural Networks, pp. 1290-1295.

Liu, Zekun	University of Electronic Science and Technology of China
Wei, Dunwen	University of Electronic Science and Technology of China
Gao, Tao	University of Electronic Science and Technology of China
Gong, Jumin	University of Electronic Science and Technology of China

14:00-15:00 TuPIT12.3

CubiX: Portable Wire-Driven Parallel Robot Connecting to and Utilizing the Environment, pp. 1296-1301. Attachment

Inoue, Shintaro	The University of Tokyo
Kawaharazuka, Kento	The University of Tokyo
Suzuki, Temma	The University of Tokyo
Yuzaki, Sota	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

14:00-15:00 TuPIT12.4

Formalization of Temporal and Spatial Constraints of Bimanual Manipulation Categories, pp. 1302-1309. Attachment

Krebs, Franziska	Karlsruhe Institute of Technology (KIT)
Asfour, Tamim	Karlsruhe Institute of Technology (KIT)

14:00-15:00 TuPIT12.5

Design and Implementation of a Novel Wheel-Based Cable Inspection Robot, pp. 1310-1315. Attachment

Hou, Mengqi	Nanjing University of Posts and Telecommunications
Li, Jie	Nanjing University of Posts and Telecommunications
Xu, Fengyu	Southeast University
Hu, LeZhi	Nanjing University of Posts and Telecommunications

14:00-15:00 TuPIT12.6

Towards Electricity-Free Pneumatic Miniature Rotation Actuator for Optical Coherence Tomography Endoscopy, pp. 1316-1321.

Zhang, Tinghua	The Chinese University of Hong Kong
Yuan, Sishen	The Chinese University of Hong Kong
Xu, Chao	The Chinese University of Hong Kong
Liu, Peng	Harbin Institute of Technology, Shenzhen
Ren, Hongliang	Chinese Univ Hong Kong (CUHK) & National Univ Singapore(NUS)
Yuan, Wu	The Chinese University of Hong Kong

14:00-15:00 TuPIT12.7

ICR-Based Kinematics for Wheeled Skid-Steer Vehicles on Firm Slopes, pp. 1322-1328.

Martinez, Jorge L.	University of Malaga
Morales, Jesús	Universidad De Málaga
Sánchez-Montero, Manuel	University of Malaga
García-Cerezo, Alfonso	University of Malaga

14:00-15:00 TuPIT12.8

Enhancing Robustness in Manipulability Assessment: The Pseudo-Ellipsoid Approach, pp. 1329-1336.

Shahriari, Erfan	Technical University of Munich
Peper, Kim Kristin	Technical University of Munich
Hoffmann, Matej	Czech Technical University in Prague, Faculty of Electrical Engi
Haddadin, Sami	Technical University of Munich

14:00-15:00 TuPIT12.9

Navigated Locomotion and Controllable Splitting of a Microswarm in a Complex Environment, pp. 1337-1342. Attachment

Liu, Yuezhen	The Chinese University of Hong Kong, Shenzhen
Zeng, Guangjun	The Chinese University of Hong Kong, Shenzhen
Du, Xingzhou	Shenzhen Institute of Artificial Intelligence and Robotics for S
Fang, Kaiwen	The Chinese University of Hong Kong, Shenzhen
Yu, Jiangfan	Chinese University of Hong Kong, Shenzhen

14:00-15:00 TuPIT12.10

NanoNeRF: Robot-Assisted Nanoscale 360° Reconstruction with Neural Radiance Field under Scanning Electron Microscope, pp. 1343-1348. Attachment

Fu, Xiang	ShanghaiTech University
Xu, Yifan	ShanghaiTech University
Wang, Shudong	Xi'an Jiaotong University
Lu, Haojian	Zhejiang University
Li, Jiaqi	ShanghaiTech University
Li, Y.F.	City University of Hong Kong
Su, Hu	Institute of Automation, Chinese Academy of Science
Liu, Song	ShanghaiTech University

14:00-15:00 TuPIT12.11

A New 10-Mg SMA-Based Fast Bimorph Actuator for Microrobotics, pp. 1349-1356. Attachment

Trygstad, Conor	Washington State University
Blankenship, Elijah	Washington State University
Perez-Arancibia, Nestor O	Washington State University (WSU)

14:00-15:00 TuPIT12.12

On a Magnetically Driven Array System with Autonomous Motion and Object Delivery for Biomedical Microrobots, pp. 1357-1362. Attachment

Liu, Yueyue	Jiangnan University
Hou, Zhe	Jiangnan University
Fan, Qigao	Jiangnan University

14:00-15:00 TuPIT12.13

Analysis of Lockable Passive Prismatic and Revolute Joints, pp. 1363-1369. Attachment

Rosyid, Abdur	Khalifa University
El-Khasawneh, Bashar	Khalifa University

14:00-15:00 TuPIT12.14

Development of a Novel Redundant Parallel Mechanism with Enlarged Workspace and Enhanced Dexterity for Fracture Reduction Surgery, pp. 1370-1375.

Yuan, Quan	ShanghaiTech University
Liang, Xu	Beijing Jiaotong University
Su, Tingting	Beijing University of Technology
Bai, Weibang	ShanghaiTech University

14:00-15:00 TuPIT12.15

Embedded Sensing-Enabled External Interaction Estimation of 6-PSS Parallel Robots, pp. 1376-1381. Attachment

Xia, Jingyuan	Shanghai Jiao Tong University
Lin, Zecai	Shanghai Jiao Tong University
Ai, Xiaojie	Shanghai Jiao Tong University
Yu, Guangjun	The Second Affiliated Hospital, the Chinese University of Hong K
Gao, Anzhu	Shanghai Jiao Tong University

14:00-15:00 TuPIT12.16

Abstraction of the Body Ability of the Transformer Robot System for the Transportation and Installation of Heavy Objects in Land and Underwater Environments, pp. 1382-1389. Attachment

Makabe, Tasuku	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

TuAT1 Room 1

Best Conference Papers (Regular session)

Co-Chair: Mathis-Ullrich, Franziska — Friedrich-Alexander-University Erlangen-Nurnberg (FAU)

15:00-15:15 TuAT1.1

FogROS2-FT: Fault Tolerant Cloud Robotics, pp. 1390-1397. Attachment

Chen, Kaiyuan	University of California, Berkeley
Hari, Kush	UC Berkeley
Chung, Trinity	UC Berkeley
Wang, Michael	Bosch
Tian, Nan	University of California, Berkeley
Juette, Christian	Bosch Research
Ichnowski, Jeffrey	Carnegie Mellon University
Ren, Liu	Robert Bosch North America Research Technology Center
Kubiatowicz, John	UC Berkeley
Stoica, Ion	UC Berkeley
Goldberg, Ken	UC Berkeley

15:15-15:30 TuAT1.2

On the Modularity of Elementary Dynamic Actions, pp. 1398-1405. Attachment

Nah, Moses	MIT
Lachner, Johannes	Massachusetts Institute of Technology
Tessari, Federico	Massachusetts Institute of Technology
Hogan, Neville	Massachusetts Institute of Technology

15:30-15:45 TuAT1.3

Millipede-Inspired Multi-Legged Magnetic Soft Robots for Targeted Locomotion in Tortuous Environments, pp. 1406-1411. Attachment

Wang, Yibin	The Chinese University of HongKong, Shenzhen
Xiong, Yiting	The Chinese University of Hong Kong, Shenzhen
Fang, Kaiwen	The Chinese University of Hong Kong, Shenzhen
Yu, Jiangfan	Chinese University of Hong Kong, Shenzhen

15:45-16:00 TuAT1.4

DiMSam: Diffusion Models As Samplers for Task and Motion Planning under Partial Observability, pp. 1412-1419. Attachment

Fang, Xiaolin	MIT
Garrett, Caelan	NVIDIA
Eppner, Clemens	NVIDIA
Lozano-Perez, Tomas	MIT
Kaelbling, Leslie	MIT
Fox, Dieter	University of Washington

TuAT2 Room 2

Best Cognitive Robotics Papers (KROS) (Regular session)

Chair: Valada, Abhinav	University of Freiburg
Co-Chair: Choi, Hyun-Taek	Korea Research Institute of Ships and Oceans Engineering

15:00-15:15 TuAT2.1

Evidential Semantic Mapping in Off-Road Environments with Uncertainty-Aware Bayesian Kernel Inference, pp. 1420-1427. Attachment

Kim, Junyoung	Agency for Defense Development
Seo, Junwon	Carnegie Mellon University
Min, Jihong	Agency for Defense Development

15:15-15:30 TuAT2.2

Spike-Based High Energy Efficiency and Accuracy Tracker for Robot, pp. 1428-1434. Attachment

Qu, Jinye	Institute of Automation, Chinese Academy of Sciences
Gao, Zeyu	Institute of Automation, Chinese Academy of Sciences
Yi, Li	School of Information Engineering, Nanchang University
Lu, Yanfeng	Institute of Automation, Chinese Academy of Sciences
Qiao, Hong	Institute of Automation, Chinese Academy of Sciences

15:30-15:45 TuAT2.3

BEVCar: Camera-Radar Fusion for BEV Map and Object Segmentation, pp. 1435-1442. Attachment

Schramm, Jonas	University of Freiburg
Vödisch, Niclas	University of Freiburg
Petek, Kürsat	University of Freiburg
Ravi, Kiran	Qualcomm
Yogamani, Senthil	Valeo Vision Systems
Burgard, Wolfram	University of Technology Nuremberg
Valada, Abhinav	University of Freiburg

15:45-16:00 TuAT2.4

Multimodal Evolutionary Encoder for Continuous Vision-Language Navigation, pp. 1443-1450. Attachment

He, Zongtao	Tongji University
Wang, Liuyi	Tongji University
Chen, Lu	Tongji University
Li, Shu	Tongji University
Yan, Qingqing	Tongji University
Liu, Chengju	Tongji University
Chen, Qijun	Tongji University

TuAT3 Room 3

Active Perception I (Regular session)

Chair: Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

15:00-15:15 TuAT3.1

*EFP: Efficient Frontier-Based Autonomous UAV Exploration Strategy for Unknown Environments**. N/A

Zhang, Hong	Harbin Institute of Technology

Wang, SongYan	Harbin Institute of Technology
Liu, Yuanshuai	Harbin Institute of Technology
Ji, Pengtao	Harbin Institute of Technology
Yu, Runzhuo	Harbin Institute of Technology
Chao, Tao	Harbin Institute of Technology

15:15-15:30 TuAT3.2

Semantics-Aware Receding Horizon Planner for Object-Centric Active Mapping, N/A

Lu, Liang	University of Hong Kong
Zhang, Yinqiang	The University of Hong Kong
Zhou, Peng	The University of Hong Kong
Qi, Jiaming	Centre for Transformative Garment Production, HongKong
Pan, Yipeng	The University of Hong Kong
Fu, Changhong	Tongji University
Pan, Jia	University of Hong Kong

15:30-15:45 TuAT3.3

View Planning for Grape Harvesting Based on Active Vision Strategy under Occlusion, N/A

Yi, Tao	Xiangtan University
Zhang, Dongbo	Xiangtan University
Luo, Lufeng	Foshan University
Luo, Jiangtao	Xiangtan University

15:45-16:00 TuAT3.4

Deep Reinforcement Learning-Based Large-Scale Robot Exploration, N/A

Cao, Yuhong	National University of Singapore
Zhao, Rui	BYD Auto Industry Corporation LTD
Wang, Yizhuo	National University of Singapore
Xiang, Bairan	National University of Singapore
Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

TuAT4 Room 4

Compliance and Impedance Control (Regular session)

Co-Chair: Lippiello, Vincenzo — University of Naples FEDERICO II

15:00-15:15 TuAT4.1

Simple-Rotation Angle/Axis Representations Based Second-Order Impedance Control, N/A

Gong, Chenwei	Xi'an Jiaotong University
Zhao, Fei	Xi'an Jiaotong University
Liao, Zhiwei	Xi'an Jiaotong University
Tao, Tao	Xi'an Jiaotong University
Wang, Xiao	Xi'an Jiaotong University
Mei, Xuesong	Xi'an Jiaotong University

15:15-15:30 TuAT4.2

Robust Elastic Structure Preserving Control for High Impedance Rendering of Series Elastic Actuator, N/A
Attachment

Lee, Hyunwook	Gyeongsang National University
Lee, Jinoh	German Aerospace Center (DLR)
Keppler, Manuel	German Aerospace Center (DLR)
Oh, Sehoon	DGIST

15:30-15:45 TuAT4.3

Contact-Rich SE(3) Equivariant Robot Manipulation Task Learning Via Geometric Impedance Control, N/A

Seo, Joohwan	University of California, Berkeley
Potu Surya Prakash, Nikhil	University of California, Berkeley
Zhang, Xiang	University of California, Berkeley
Wang, Changhao	University of California, Berkeley
Choi, Jongeun	Yonsei University
Tomizuka, Masayoshi	University of California
Horowitz, Roberto	Berkeley

15:45-16:00 TuAT4.4

Lie Group-Based User Motion Refinement Control for Teleoperation of a Constrained Robot Arm, N/A
Attachment

Kim, Jonghyeok	POSTECH
Lee, Donghyeon	Pohang University of Science and Technology(POSTECH)
Choi, Youngjin	Hanyang University
Chung, Wan Kyun	POSTECH

TuAT5	Room 5
Additive Manufacturing (Regular session)	
Chair: El-Khasawneh, Bashar	Khalifa University
15:00-15:15	TuAT5.1
*Assessment of a Flow-Measurement Technique for the Printability of Extrusion-Based Bioprinting**. N/A	
Tseng, Wei-Chih	National Central University
Liao, Chao-Yaug	National Central University
Chassagne, Luc	University of Versailles
Cagneau, Barthélemy	Université De Versailles Saint-Quentin En Yvelines
15:15-15:30	TuAT5.2
Soft Printable Robots with Flexible Metal Endoskeleton (I), N/A	
Chen, Chao-Yu	National University of Singapore
Ang, Benjamin, Wee Keong	National University of Singapore
Li, Yangfan	Institute of High Performance Computing, A*Star
Liu, Jun	Institute of High Performance Computing
Liu, ZhuangJian	Institute of High Performance Computing
Yeow, Chen-Hua	National University of Singapore
15:30-15:45	TuAT5.3
Optimal Design of Linkage-Driven Underactuated Hand for Precise Pinching and Powerful Grasping, N/A	
Meng, Hailiang	Zhejiang University of Technology
Yang, Kaiyu	Zhejiang University of Technology
Zhou, Lingxuan	Zhejiang University of Technology
Shi, Yixiao	Zhejiang University of Technology
Cai, Shibo	Zhejiang University of Technology
Bao, Guanjun	Zhejiang University of Technology, China
15:45-16:00	TuAT5.4
SPONGE: Open-Source Designs of Modular Articulated Soft Robots, N/A	
Habich, Tim-Lukas	Leibniz University Hannover
Haack, Jonas	University of Bremen
Belhadj, Mehdi	Leibniz University Hannover
Lehmann, Dustin	TU Berlin
Seel, Thomas	Leibniz Universität Hannover
Schappler, Moritz	Institute of Mechatronic Systems, Leibniz Universitaet Hannover

TuAT6	Room 6
Tendon-Driven Robots (Regular session)	
Co-Chair: Stefanini, Cesare	Scuola Superiore Sant'Anna
15:00-15:15	TuAT6.1
Design Optimization of Wire Arrangement with Variable Relay Points in Numerical Simulation for Tendon-Driven Robots, N/A	
Kawaharazuka, Kento	The University of Tokyo
Yoshimura, Shunnosuke	The University of Tokyo
Suzuki, Temma	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo
15:15-15:30	TuAT6.2
A Tendon-Driven Continuum Manipulator with Robust Shape Estimation by Multiple IMUs, N/A	
Peng, Rui	The University of Hong Kong
Wang, Yu	The University of Hong Kong
Lu, Peng	The University of Hong Kong
15:30-15:45	TuAT6.3
SAQIEL: Ultra-Light and Safe Manipulator with Passive 3D Wire Alignment Mechanism, N/A	

Suzuki, Temma	The University of Tokyo
Bando, Masahiro	The University of Tokyo
Kawaharazuka, Kento	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

15:45-16:00 TuAT6.4

A Novel Friction Measuring Method and Its Application to Improve the Static Modeling Accuracy of Cable-Driven Continuum Manipulators, N/A

Dai, Yicheng	Harbin Institute of Technology (Shenzhen)
Wang, Sheng	Harbin Institute of Technology
Wang, Xin	Harbin Institute of Technology, Shenzhen
Yuan, Han	Harbin Institute of Technology

TuAT7 Room 7

Human-Robot Collaboration (Regular session)

Chair: Gan, Dongming	Purdue University
Co-Chair: Hussain, Irfan	Khalifa University

15:00-15:15 TuAT7.1

Human-Robot Collaboration through a Multi-Scale Graph Convolution Neural Network with Temporal Attention, N/A

Liu, Zhaowei	School of Computer and Control Engineering, Yantai University
Lu, Xilang	Yantai University
Liu, Wenzhe	Yantai University
Qi, Wen	Politecnico Di Milano
Su, Hang	Politecnico Di Milano

15:15-15:30 TuAT7.2

Safety Compliant, Ergonomic and Time-Optimal Trajectory Planning for Collaborative Robotics (I), N/A

Proia, Silvia	Università Di Modena E Reggio Emilia
Cavone, Graziana	University Roma Tre
Scarabaggio, Paolo	Politecnico Di Bari
Carli, Raffaele	Politecnico Di Bari
Dotoli, Mariagrazia	Politecnico Di Bari

15:30-15:45 TuAT7.3

Effects of Shared Control on Cognitive Load and Trust in Teleoperated Trajectory Tracking, N/A

Pan, Jiahe	ETH Zurich
Eden, Jonathan	University of Melborune
Oetomo, Denny	The University of Melbourne
Johal, Wafa	University of Melbourne

15:45-16:00 TuAT7.4

Reconciling Conflicting Intents: Bidirectional Trust-Based Variable Autonomy for Mobile Robots, N/A

Li, Yinglin	Northwestern Polytechnical University
Cui, Rongxin	Northwestern Polytechnical University
Yan, Weisheng	Northwestern Polytechnical University
Zhang, Shi	Northwestern Polytechnical University
Yang, Chenguang	University of Liverpool

TuAT8 Room 8

Autonomous Vehicle Navigation I (Regular session)

Chair: Kheddar, Abderrahmane	CNRS-AIST
Co-Chair: Wang, Shuai	Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences

15:00-15:15 TuAT8.1

Learning Vehicle Dynamics from Cropped Image Patches for Robot Navigation in Unpaved Outdoor Terrains, N/A

Lee, Jeong Hyun	Korea Advanced Institute of Science & Technology (KAIST)
Choi, Jinhyeok	Korea Advanced Institute of Science and Technology
Ryu, Simo	Korea Advanced Institute of Science & Technology

Oh, Hyunsik	Korea Advanced Institute of Science and Technology
Choi, Suyoung	KAIST
Hwangbo, Jemin	Korean Advanced Institute of Science and Technology

15:15-15:30 TuAT8.2

Planning Impact-Driven Logistic Tasks, N/A

Zermane, Ahmed	CNRS-LIRMM
Dehio, Niels	KUKA
Kheddar, Abderrahmane	CNRS-AIST

15:30-15:45 TuAT8.3

PRIEST: Projection Guided Sampling-Based Optimization for Autonomous Navigation, N/A

Rastgar, Fatemeh	University of Tartu
Masnavi, Houman	Toronto Metropolitan University
Sharma, Basant	University of Tartu
Aabloo, Alvo	Tartu University
Swevers, Jan	KU Leuven
Singh, Arun Kumar	University of Tartu

15:45-16:00 TuAT8.4

Seamless Virtual Reality with Integrated Synchronizer and Synthesizer for Autonomous Driving, N/A

Li, He	University of Macau
Han, Ruihua	University of Hong Kong
Zhao, Zirui	Southern University of Science and Technology
Xu, Wei	Manifold Tech Limited
Hao, Qi	Southern University of Science and Technology
Wang, Shuai	Shenzhen Institute of Advanced Technology, Chinese Academy of Sc
Xu, Chengzhong	University of Macau

TuAT9 Room 9

Visual Tracking (Regular session)

Chair: Khorrami, Farshad — New York University Tandon School of Engineering

15:00-15:15 TuAT9.1

DynaMeshSLAM: A Mesh-Based Dynamic Visual SLAMMOT Method, N/A

Liu, Yang	Wuhan University
Guo, Chi	Wuhan University
Luo, Yarong	Wuhan University
Wang, Yingli	Wuhan University

15:15-15:30 TuAT9.2

DiffOcclusion: Differentiable Optimization Based Control Barrier Functions for Occlusion-Free Visual Servoing, N/A

Wei, Shiqing	New York University
Dai, Bolun	New York University
Khorrambakht, Rooholla	New York University
Krishnamurthy, Prashanth	New York University Tandon School of Engineering
Khorrami, Farshad	New York University Tandon School of Engineering

15:30-15:45 TuAT9.3

S.T.A.R.-Track: Latent Motion Models for End-To-End 3D Object Tracking with Adaptive Spatio-Temporal Appearance Representations, N/A

Doll, Simon	Mercedes-Benz AG, University of Tübingen
Hanselmann, Niklas	Mercedes-Benz AG R&D, University of Tübingen
Schneider, Lukas	Mercedes Benz AG
Schulz, Richard	Mercedes-Benz AG
Enzweiler, Markus	Esslingen University of Applied Sciences
Lensch, Hendrik Peter Asmus	University of Tuebingen

15:45-16:00 TuAT9.4

D-VAT: End-To-End Visual Active Tracking for Micro Aerial Vehicles, N/A

Dionigi, Alberto	University of Perugia
Felicioni, Simone	University of Perugia - Department of Engineering

Leomanni, Mirko	University of Perugia
Costante, Gabriele	University of Perugia

TuAT10	Room 10
Computer Vision for Automation (Regular session)	
Co-Chair: Lim, Yongseob	DGIST

15:00-15:15 TuAT10.1

Lane Segmentation Data Augmentation for Heavy Rain Sensor Blockage Using Realistically Translated Raindrop Images and CARLA Simulator, N/A

Pahk, Jinu	Daegu Gyeongbuk Institute of Science and Technology
Park, Seongjeong	Daegu Gyeongbuk Institute of Science and Technology
Shim, Jungseok	DGIST
Son, Sungho	KATRI
Lee, Jungki	KATRI
An, Jinung	DGIST
Lim, Yongseob	DGIST
Choi, GyeungHo	Daegu Gyeongbuk Institute of Science and Technology

15:15-15:30 TuAT10.2

Street-View Image Generation from a Bird's-Eye View Layout, N/A

Swerdlow, Alexander	Carnegie Mellon University
Xu, Runsheng	UCLA
Zhou, Bolei	University of California, Los Angeles

15:30-15:45 TuAT10.3

Toward Reliable Human Pose Forecasting with Uncertainty, N/A

Saadatnejad, Saeed	EPFL
Mirmohammadi, Mehrshad	Sharif University of Technology
Daghyani, Matin	Sharif University of Technology
Saremi, Parham	Sharif University of Technology
Zoroofchi Benisi, Yashar	Sharif University of Technology
Alimohammadi, Amirhossein	Simon Fraser University
TehraniNasab, Zahra	McGill University
Mordan, Taylor	EPFL
Alahi, Alexandre	EPFL

15:45-16:00 TuAT10.4

GSDC Transformer: An Efficient and Effective Cue Fusion for Monocular Multi-Frame Depth Estimation, N/A

Naiyu, Fang	Zhejiang University
Lemiao, Qiu	Zhejiang University
Zhang, Shuyou	Zhejiang University
Zili, Wang	Zhejiang University
Zheyuan, Zhou	Zhejiang University
Kerui, Hu	Zhejiang University

TuAT11	Room 11
Human and Humanoid Motion Analysis and Synthesis (Regular session)	
Chair: Ayusawa, Ko	National Institute of Advanced Industrial Science and Technology (AIST)
Co-Chair: Loianno, Giuseppe	New York University

15:00-15:15 TuAT11.1

Keyframe Selection Via Deep Reinforcement Learning for Skeleton-Based Gesture Recognition, N/A

Gan, Minggang	Beijing Institute of Technology
Liu, Jinting	Beijing Institute of Technology
He, Yuxuan	Beijing Institute of Technology
Chen, Aobo	Beijing Institute of Technology
Ma, Qianzhao	Beijing Institute of Technology

15:15-15:30 TuAT11.2

GesGPT: Speech Gesture Synthesis with Text Parsing from ChatGPT, N/A

Gao, Nan	Institute of Automation, Chinese Academy of Sciences

Zhao, Zeyu	Institute of Automation, Chinese Academy of Sciences
Zeng, Zhi	Beijing University of Posts and Telecommunications
Zhang, Shuwu	Beijing University of Posts and Telecommunications
Weng, Dongdong	Beijing Institute of Technology
Bao, Yihua	Beijing Institute of Technology

15:30-15:45 TuAT11.3

Robust Upper Limb Kinematic Reconstruction Using a RGB-D Camera, N/A

Li Gioi, Salvatore Maria	Università Campus Bio-Medico
Loianno, Giuseppe	New York University
Cordella, Francesca	University Campus Biomedico of Rome

15:45-16:00 TuAT11.4

Fast Direct Optimal Control for Humanoids Based on Dynamics Representation in FPC Latent Space, N/A

Shimizu, Soya	Tokyo University of Agriculture and Technology
Ayusawa, Ko	National Institute of Advanced Industrial Science and Technology
Venture, Gentiane	The University of Tokyo

TuAT12 Room 12

Learning Categories and Concepts (Regular session)

Chair: Song, Sichao	CyberAgent Inc
Co-Chair: Chirikjian, Gregory	National University of Singapore

15:00-15:15 TuAT12.1

StROL: Stabilized and Robust Online Learning from Humans, N/A

Mehta, Shaunak	Virginia Tech
Meng, Forrest	Virginia Tech
Bajcsy, Andrea	Carnegie Mellon University
Losey, Dylan	Virginia Tech

15:15-15:30 TuAT12.2

Wingman-Leader Recommendation: An Empirical Study on Product Recommendation Strategy Using Two Robots, N/A

Song, Sichao	CyberAgent Inc
Baba, Jun	CyberAgent, Inc
Okafuji, Yuki	CyberAgent, Inc
Nakanishi, Junya	Osaka Univ
Yoshikawa, Yuichiro	Osaka University
Ishiguro, Hiroshi	Osaka University

15:30-15:45 TuAT12.3

Discovering Predictive Relational Object Symbols with Symbolic Attentive Layers, N/A

Ahmetoglu, Alper	Brown University
Çelik, Mehmet Batuhan	Boğaziçi University
Oztop, Erhan	Osaka University / Ozyegin University
Ugur, Emre	Bogazici University

15:45-16:00 TuAT12.4

PRIMP: PRobabilistically-Informed Motion Primitives for Efficient Affordance Learning from Demonstration (I), N/A

Ruan, Sipu	National University of Singapore
Liu, Weixiao	Johns Hopkins University
Wang, Xiaoli	National University of Singapore
Meng, Xin	National University of Singapore
Chirikjian, Gregory	National University of Singapore

TuAT13 Room 13

Agricultural Automation I (Regular session)

Co-Chair: Mintchev, Stefano	ETH Zurich

15:00-15:15 TuAT13.1

Design, Localization, Perception, and Control for GPS-Denied Autonomous Aerial Grasping and Harvesting, N/A

Kumar, Ashish	Indian Institute of Technology, Kanpur

Behera, Laxmidhar	IIT Kanpur

15:15-15:30 TuAT13.2

Vision-Based Cow Tracking and Feeding Monitoring for Autonomous Livestock Farming (I), N/A

Guo, Yangyang	School of Internet, Anhui University, Hefei, Anhui 230039, China
Wenhao, Hong	Anhui University
Wu, Jiaxin	Anhui University
Huang, Xiaoping	Anhui University
Qiao, Yongliang	University of Adelaide
Kong, He	Southern University of Science and Technology

15:30-15:45 TuAT13.3

Learning Occluded Branch Depth Maps in Forest Environments Using RGB-D Images, N/A

Geckeler, Christian	ETH Zürich
Aucone, Emanuele	ETH Zürich
Schnider, Yannick	ETH Zurich
Simeon, Andri	ETHZ
von Bassewitz, Jan-Philipp	ETH Zurich
Zhu, Yunying	ETHZ
Mintchev, Stefano	ETH Zurich

15:45-16:00 TuAT13.4

Robotic Volatile Sampling for Early Detection of Plant Stress (I), N/A

Geckeler, Christian	ETH Zürich
Ramos, Sergio	University of Zürich
Schuman, Meredith C.	University of Zurich
Mintchev, Stefano	ETH Zurich

TuBT1 Room 1

Best Agri-Robotics Papers (YANMAR) (Regular session)

Chair: Stachniss, Cyrill	University of Bonn
Co-Chair: Papadopoulos, Evangelos	National Technical University of Athens

16:00-16:15 TuBT1.1

BonnBeetClouds3D: A Dataset towards Point Cloud-Based Organ-Level Phenotyping of Sugar Beet Plants under Real Field Conditions, pp. 1804-1811.

Marks, Elias Ariel	University of Bonn
Bömer, Jonas	Institute of Sugar Beet Rearch Goettingen
Magistri, Federico	University of Bonn
Sah, Anurag	University of Bonn
Behley, Jens	University of Bonn
Stachniss, Cyrill	University of Bonn

16:15-16:30 TuBT1.2

Vinymap: A Vineyard Inspection and 3D Reconstruction Framework for Agricultural Robots, pp. 1812-1817. Attachment

Zarras, Ioannis	National Technical University of Athens
Mastrogeorgiou, Athanasios	National Technical University of Athens
Machairas, Konstantinos	National Technical University of Athens
Koutsoukis, Konstantinos	National Technical University of Athens
Papadopoulos, Evangelos	National Technical University of Athens

16:30-16:45 TuBT1.3

Sim2real Cattle Joint Estimation in 3D Pointclouds, pp. 1818-1823.

Okour, Mohammad	University of Technology Sydney
Alempijevic, Alen	University of Technology Sydney
Falque, Raphael	University of Technology Sydney

16:45-17:00 TuBT1.4

Ground-Density Clustering for Approximate Agricultural Field Segmentation, pp. 1824-1830. Attachment

Nelson, Henry J.	University of Minnesota
Papanikolopoulos, Nikos	University of Minnesota

TuBT2 Room 2

Best RoboCup Papers (Regular session)

Co-Chair: Fang, Hao-Shu — Massachusetts Institute of Technology

16:00-16:15 — TuBT2.1

A Convex Formulation of Frictional Contact for the Material Point Method and Rigid Bodies, pp. 1831-1838. Attachment

Zong, Zeshun — University of California, Los Angeles
Han, Xuchen — Toyota Research Institute
Jiang, Chenfanfu — University of California, Los Angeles

16:15-16:30 — TuBT2.2

Differentiable Collision-Free Parametric Corridors, pp. 1839-1846. Attachment

Arrizabalaga, Jon — Technical University of Munich (TUM)
Manchester, Zachary — Carnegie Mellon University
Ryll, Markus — Technical University Munich

16:30-16:45 — TuBT2.3

IMU Based Pose Reconstruction and Closed-Loop Control for Soft Robotic Arms, pp. 1847-1852. Attachment

Pei, Guanran — École Polytechnique Fédérale De Lausanne
Stella, Francesco — EPFL
Meebed, Omar Hani Mokhtar Ahmed — EPFL
Bing, Zhenshan — Technical University of Munich
Della Santina, Cosimo — TU Delft
Hughes, Josie — EPFL

16:45-17:00 — TuBT2.4

EyeSight Hand: Design of a Fully-Actuated Dexterous Robot Hand with Integrated Vision-Based Tactile Sensors and Compliant Actuation, pp. 1853-1860. Attachment

Romero, Branden — Massachusetts Institute of Technology
Fang, Hao-Shu — Shanghai Jiao Tong University
Agrawal, Pulkit — MIT
Adelson, Edward — MIT

TuBT3 — Room 3

Active Perception II (Regular session)

Chair: Pb, Sujit — IISER Bhopal
Co-Chair: Campolo, Domenico — Nanyang Technological University

16:00-16:15 — TuBT3.1

Learning Hierarchical Graph-Based Policy for Goal-Reaching in Unknown Environments, N/A

Cui, Yuxiang — Zhejiang University
Ye, Shuhao — Zhejiang University
Xu, Xuecheng — Zhejiang University
Sha, Hao — Zhejiang University
Wang, Cheng — Zhejiang University
Lin, Longzhong — Zhejiang University
Yang, Yifei — Zhejiang University
Yu, Jiyu — Zhejiang University
Liu, Zhe — University of Cambridge
Xiong, Rong — Zhejiang University
Wang, Yue — Zhejiang University

16:15-16:30 — TuBT3.2

Multi-Agent Deep Reinforcement Learning for Persistent Monitoring with Sensing, Communication, and Localization Constraints (I), N/A

Mishra, Manav — IISER Bhopal
Poddar, Prithvi — University at Buffalo
Agrawal, Rajat — Indian Institute of Science Education and Research Bhopal
Chen, Jingxi — University of Maryland
Tokekar, Pratap — University of Maryland
Pb, Sujit — IISER Bhopal

16:30-16:45 — TuBT3.3

Contingency Games for Multi-Agent Interaction, N/A

Peters, Lasse — Delft University of Technology
Bajcsy, Andrea — Carnegie Mellon University
Chiu, Chih-Yuan — University of California, Berkeley

Fridovich-Keil, David	The University of Texas at Austin
Laine, Forrest	Vanderbilt University
Ferranti, Laura	Delft University of Technology
Alonso-Mora, Javier	Delft University of Technology

TuBT4	Room 4
Modeling, Control, and Learning for Soft Robots (Regular session)	
Co-Chair: George Thuruthel, Thomas	University College London

16:00-16:15 TuBT4.1

Hyperboloidal Pneumatic Artificial Muscle with Braided Straight Fibers, N/A

Watanabe, Masahiro	Osaka University
Tadakuma, Kenjiro	Osaka University
Tadokoro, Satoshi	Tohoku University

16:15-16:30 TuBT4.2

A Hybrid Adaptive Controller for Soft Robot Interchangeability, N/A

Chen, Zixi	Scuola Superiore Sant'Anna
Ren, Xuyang	Scuola Superiore Sant'Anna
Bernabei, Matteo	Scuola Superiore Sant'Anna
Mainardi, Vanessa	Scuola Superiore Sant'Anna
Ciuti, Gastone	Scuola Superiore Sant'Anna
Stefanini, Cesare	Scuola Superiore Sant'Anna

16:30-16:45 TuBT4.3

DisMech: A Discrete Differential Geometry-Based Physical Simulator for Soft Robots and Structures, N/A

Choi, Andrew	University of California, Los Angeles
Jing, Ran	Boston University
Sabelhaus, Andrew	Boston University
Khalid Jawed, Mohammad	University of California, Los Angeles

16:45-17:00 TuBT4.4

RL-Based Adaptive Controller for High Precision Reaching in a Soft Robot Arm (I), N/A

Nazeer, Muhammad Sunny	College of Design Engineering, National University of Singapore
Laschi, Cecilia	National University of Singapore
Falotico, Egidio	Scuola Superiore Sant'Anna

TuBT5	Room 5
Calibration and Identification I (Regular session)	
Chair: Ganguly, Amartya	Technical University of Munich
Co-Chair: Campolo, Domenico	Nanyang Technological University

16:00-16:15 TuBT5.1

Spatio-Temporal Calibration for Omni-Directional Vehicle-Mounted Event Cameras, N/A

Li, Xiao	National University of Defense Technology
Zhou, Yi	Hunan University
Guo, Ruibin	National University of Defense Technology
Peng, Xin	ShanghaiTech University
Zhou, Zongtan	National University of Defense Technology
Lu, Huimin	National University of Defense Technology

16:15-16:30 TuBT5.2

Calibration System and Algorithm Design for a Soft Hinged Micro Scanning Mirror with a Triaxial Hall Effect Sensor, N/A

Wang, Di	Texas A&M University
Duan, Xiaoyu	Texas A&M University
Yeh, Shu-Hao	Texas A&M University
Zou, Jun	Texas A&M University
Song, Dezhen	Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI)

16:30-16:45 TuBT5.3

LiDAR-Link: Observability-Aware Probabilistic Plane-Based Extrinsic Calibration for Non-Overlapping Solid-State LiDARs, N/A

Xu, Jie	Harbin Institute of Technology
Huang, Song	Anhui Normal University
Qiu, Shuxin	NanChang Institute of Technology
Zhao, Lijun	Harbin Institute of Technology
Yu, Wenlu	Harbin Institute of Technology
Fang, Mingxing	Anhui Normal University
Wang, Minhang	HAOMO.AI Technology Co., Ltd
Li, Ruifeng	Harbin Institute of Technology

16:45-17:00 TuBT5.4

I Get the Hang of It! a Learning-Free Method to Predict Hanging Poses for Previously Unseen Objects, N/A
Attachment

Li, Wanze	Nation University of Singapore
Pan, Lexin	National University of Singapore
Jiang, Boren	National University of Singapore
Wu, Yuwei	National University of Singapore
Liu, Weixiao	Johns Hopkins University
Chirikjian, Gregory	National University of Singapore

TuBT6 Room 6

Parallel Robots (Regular session)

Chair: Mueller, Andreas	Johannes Kepler University
Co-Chair: Keshavan, Jishnu	Indian Institute of Science

16:00-16:15 TuBT6.1

Graph-Propagation-Based Kinematic Algorithm for In-Pipe Truss Structure Robots, N/A

Chen, Yu	Carnegie Mellon University
Xu, Jinyun	Carnegie Mellon University
Cai, Yilin	Georgia Institute of Technology
Yang, Shuo	Carnegie Mellon University
Brown, H. Ben	Carnegie Mellon University
Ruan, Fujun	Carnegie Mellon University
Gu, Yizhu	Carnegie Mellon University
Choset, Howie	Carnegie Mellon University
Li, Lu	Carnegie Mellon University

16:15-16:30 TuBT6.2

Dedicated Dynamic Parameter Identification for Delta-Like Robots, N/A

Gnad, Daniel	Johannes Kepler University Linz
Gattringer, Hubert	Johannes Kepler University Linz
Mueller, Andreas	Johannes Kepler University
Hoebarth, Wolfgang	B&R Industrie-Elektronik GmbH
Riepl, Roland	B&R Industrial Automation GmbH
Messner, Lukas	B&R Industrie-Elektronik GmbH

16:30-16:45 TuBT6.3

Real-Time Constrained Tracking Control of Redundant Manipulators Using a Koopman - Zeroing Neural Network Framework, N/A

Sah, Chandan Kumar	Indian Institute of Science
Singh, Rajpal	Indian Institute of Science
Keshavan, Jishnu	Indian Institute of Science

16:45-17:00 TuBT6.4

Bio-Inspired Rigid-Soft Hybrid Origami Actuator with Controllable Versatile Motion and Variable Stiffness (I), N/A

Zhang, Zhuang	Westlake University
Chen, Genliang	Shanghai Jiao Tong University
Xun, Yuanhao	Shanghai Jiao Tong University
Long, Yongzhou	Shanghai Jiaotong University
Wang, Jue	Purdue University
Wang, Hao	Shanghai Jiao Tong University
Angeles, Jorge	McGill University

TuBT7 Room 7

Human-Robot Interaction I (Regular session)

Chair: Ryu, Jee-Hwan — Korea Advanced Institute of Science and Technology

16:00-16:15 TuBT7.1

Shared Autonomy of a Robotic Manipulator for Grasping under Human Intent Uncertainty Using POMDPs (I), N/A

Yow, J-Anne	Nanyang Technological University
Garg, Neha Priyadarshini	NUS
Ang, Wei Tech	Nanyang Technological University

16:15-16:30 TuBT7.2

*An Evaluation Framework of Human-Robot Teaming for Navigation among Movable Obstacles Via Virtual Reality-Based Interactions**. N/A

Huang, Ching-I	National Yang Ming Chiao Tung University
Chou, Sun-Fu	National Yang Ming Chiao Tung University
Liou, Li-Wei	National Yang Ming Chiao Tung University
Moy, Nathan	George Mason University
Wang, Chu-Ruei	National Yang Ming Chiao Tung University
Wang, Hsueh-Cheng	National Yang Ming Chiao Tung University, Taiwan
Ahn, Charles	George Mason University
Huang, Chun-Ting	Qualcomm
Yu, Lap-Fai	George Mason University

16:30-16:45 TuBT7.3

Optimizing Setup Configuration of a Collaborative Robot Arm-Based Bimanual Haptic Display for Enhanced Performance, N/A

Lee, Joong-Ku	Korea Advanced Institute of Science and Technology (KAIST)
Ryu, Jee-Hwan	Korea Advanced Institute of Science and Technology

16:45-17:00 TuBT7.4

A Smooth Velocity Transition Framework Based on Hierarchical Proximity Sensing for Safe Human-Robot Interaction, N/A

Wang, Ruohan	Zhejiang University, Hangzhou, China
Li, Chen	Zhejiang University
Lyu, Honghao	Zhejiang University
Pang, Gaoyang	The University of Sydney
Wu, Haiteng	Hangzhou Shenhao Technology Co, Ltd
Yang, Geng	Zhejiang University

TuBT8 Room 8

Intelligent Transportation Systems I (Regular session)

Chair: Zhao, Ding — Carnegie Mellon University

16:00-16:15 TuBT8.1

SIMPL: A Simple and Efficient Multi-Agent Motion Prediction Baseline for Autonomous Driving, N/A

Zhang, Lu	Hong Kong University of Science and Technology
Li, Peiliang	HKUST, Robotics Institute
Liu, Sikang	DJI
Shen, Shaojie	Hong Kong University of Science and Technology

16:15-16:30 TuBT8.2

A Safe Preference Learning Approach for Personalization with Applications to Autonomous Vehicles, N/A

Karagulle, Ruya	University of Michigan
Arechiga, Nikos	Toyota Research Institute
Best, Andrew	Toyota Research Institute
DeCastro, Jonathan	Cornell University
Ozay, Necmiye	Univ. of Michigan

16:30-16:45 TuBT8.3

Safety-Aware Causal Representation for Trustworthy Offline Reinforcement Learning in Autonomous Driving, N/A

Lin, Haohong	Carnegie Mellon University
Ding, Wenhao	Carnegie Mellon University
Liu, Zuxin	Carnegie Mellon University

Niu, Yaru	Carnegie Mellon University
Zhu, Jiacheng	Carnegie Mellon University
Niu, Yuming	Ford Motor Company
Zhao, Ding	Carnegie Mellon University

16:45-17:00 TuBT8.4

Decoupling-Based LPV Observer for Driver Torque Intervention Estimation in Human-Machine Shared Driving under Uncertain Vehicle Dynamics (I), N/A

Nguyen, Anh-Tu	INSA Hauts-De-France, Université Polytechnique Hauts-De-France
Guerra, Thierry Marie	Polytechnic University Hauts-De-France
Sentouh, Chouki	LAMIH UMR CNRS 8201, Université Polytechnique Hauts-De-France
Popieul, Jean-Christophe	Université Polytechnique Hauts-De-France

TuBT9 Room 9

Semantic Scene Understanding I (Regular session)

Chair: Beltrame, Giovanni — Ecole Polytechnique De Montreal

16:00-16:15 TuBT9.1

Follow Anything: Open-Set Detection, Tracking, and Following in Real-Time, N/A

Maalouf, Alaa	MIT
Jadhav, Ninad	Harvard University
Jatavallabhula, Krishna Murthy	MIT
Chahine, Makram	Massachusetts Institute of Technology
Vogt, Daniel	Harvard University
Wood, Robert	Harvard University
Torralba, Antonio	MIT
Rus, Daniela	MIT

16:15-16:30 TuBT9.2

FM-Fusion: Instance-Aware Semantic Mapping Boosted by Vision-Language Foundation Models, N/A

Liu, Chuhao	Hong Kong University of Science and Technology
Wang, Ke	Chang'an University
Shi, Jieqi	The Hong Kong University of Science and Technology
Qiao, Zhijian	Hong Kong University of Science and Technology
Shen, Shaojie	Hong Kong University of Science and Technology

16:30-16:45 TuBT9.3

Uni-DVPS: Unified Model for Depth-Aware Video Panoptic Segmentation, N/A

Ji-Yeon, Kim	POSTECH
Oh, Hyun-Bin	POSTECH
Kwon, Byungki	Pohang University of Science and Technology
Kim, Dahun	KAIST
Kwon, Yongjin	Electronics and Telecommunications Research Institute
Oh, Tae-Hyun	POSTECH

16:45-17:00 TuBT9.4

BEVGM: A Visual Place Recognition Method with Bird's Eye View Graph Matching, N/A

Niu, Haochen	Shanghai Jiao Tong University
Liu, Peilin	Shanghai Jiao Tong Universit
Ji, Xingwu	Shanghai Jiao Tong University
Zhang, Lantao	Shanghai Jiao Tong University
Ying, Rendong	Shanghai Jiao Tong University
Wen, Fei	Shanghai Jiao Tong University

TuBT10 Room 10

Computer Vision for Transportation I (Regular session)

Chair: Valada, Abhinav	University of Freiburg
Co-Chair: Hadj-Abdelkader, Hicham	IBISC

16:00-16:15 TuBT10.1

Vision-Based Estimation of Motorcycle Attitude, N/A

Alrazouk, Obaida	Université Paris-Saclay
Chellali, Amine	IBISC Lab, Univ Evry, Université Paris-Saclay
Arioui, Hichem	Evry Paris-Saclay University
Hadj-Abdelkader, Hicham	IBISC

16:15-16:30 TuBT10.2

MotionPerceiver: Real-Time Occupancy Forecasting for Embedded Systems, N/A

Ferenczi, Bryce	Monash University
Burke, Michael	Monash University
Drummond, Tom	University of Melbourne

16:30-16:45 TuBT10.3

Panoptic Out-Of-Distribution Segmentation, N/A

Mohan, Rohit	University of Freiburg
Kumaraswamy, Kiran	University of Freiburg
Juana Valeria, Hurtado	University of Freiburg
Petek, Kürsat	University of Freiburg
Valada, Abhinav	University of Freiburg

TuBT11 Room 11

Legged and Humanoid Robots (Regular session)

Co-Chair: Pucci, Daniele — Italian Institute of Technology

16:00-16:15 TuBT11.1

*Invariant Smoother for Legged Robot State Estimation with Dynamic Contact Event Information (I)**. N/A

Yoon, Ziwon	Georgia Institute of Technology
Kim, Joon-Ha	Korea Advanced Institute of Science and Technology(KAIST)
Park, Hae-Won	Korea Advanced Institute of Science and Technology

16:15-16:30 TuBT11.2

MorAL: Learning Morphologically Adaptive Locomotion Controller for Quadrupedal Robots on Challenging Terrains, N/A

Luo, Zeren	The University of Hong Kong
Dong, Yinzhao	The University of Hong Kong
Li, Xinqi	The University of Hong Kong
Huang, Rui	The University of Hong Kong
Shu, Zhengjie	The University of Hong Kong
Xiao, Erdong	The University of Hong Kong
Lu, Peng	The University of Hong Kong

16:30-16:45 TuBT11.3

Neuromorphic Quadratic Programming for Efficient and Scalable Model Predictive Control (I), N/A

Mangalore, Ashish Rao	Intel Duetschland GmbH
Fonseca Guerra, Gabriel Andres	Intel Labs, Intel Deutschland GmbH
Risbud, Sumedh	Intel Corporation, Santa Clara
Stratmann, Philipp	Intel Labs
Wild, Andreas	Intel Corporation

16:45-17:00 TuBT11.4

Development of Bioinspired Multimodal Underwater Robot "HERO-BLUE" for Walking, Swimming, and Crawling (I), N/A

Kim, Taesik	Pohang University of Science and Technology (POSTECH)
Kim, Juhwan	Pohang University of Science and Technology (POSTECH)
Yu, Son-Cheol	Pohang University of Science and Technology (POSTECH)

TuBT12 Room 12

Machine Learning for Robot Control (Regular session)

Chair: Crandall, Jacob W. — Brigham Young University

16:00-16:15 TuBT12.1

Improving Robot Proficiency Self-Assessment Via Meta-Assessment, N/A

Cao, Xuan	Brigham Young University
Crandall, Jacob W.	Brigham Young University
Goodrich, Michael A.	Brigham Young University

16:15-16:30 TuBT12.2

Funnel-Based Reward Shaping for Signal Temporal Logic Tasks in Reinforcement Learning, N/A

Saxena, Naman — Indian Institute of Science, Bengaluru
Gorantla, Sandeep — Indian Institute of Science, Bengaluru
Jagtap, Pushpak — Indian Institute of Science

16:30-16:45 TuBT12.3

IndoorSim-To-OutdoorReal: Learning to Navigate Outdoors without Any Outdoor Experience, N/A

Truong, Joanne — The Georgia Institute of Technology
Zitkovich, April — Google
Chernova, Sonia — Georgia Institute of Technology
Batra, Dhruv — Georgia Tech / Facebook AI Research
Zhang, Tingnan — Google
Tan, Jie — Google
Yu, Wenhao — Google

16:45-17:00 TuBT12.4

Learning Adaptive Controller for Hydraulic Machinery Automation, N/A

Nan, Fang — ETH Zurich
Hutter, Marco — ETH Zurich

TuBT13 Room 13

Software Tools for Robotics and Automation (Regular session)

Chair: Sartoretti, Guillaume Adrien — National University of Singapore (NUS)
Co-Chair: Bonsignorio, Fabio — FER, University of Zagreb

16:00-16:15 TuBT13.1

Learning to Simulate Tree-Branch Dynamics for Manipulation, N/A

Jacob, Jayadeep — The University of Sydney
Bandyopadhyay, Tirthankar — CSIRO
Williams, Jason — CSIRO
Borges, Paulo Vinicius Koerich — CSIRO
Ramos, Fabio — University of Sydney, NVIDIA

16:15-16:30 TuBT13.2

SHENRON Scalable, High Fidelity and EfficieNt Radar SimulatiON, N/A

Bansal, Kshitiz — University of California, San Diego
Reddy, Gautham Raghunatha — University of California San Diego
Bharadia, Dinesh — UC San Diego

16:30-16:45 TuBT13.3

VDMNav: Software Architecture for Aerodynamically Constrained Navigation on Small Fixed-Wing Drones, N/A

Laupre, Gabriel — EPFL
Sharma, Aman — EPFL
Skaloud, Jan — EPFL

16:45-17:00 TuBT13.4

Deploying and Evaluating LLMs to Program Service Mobile Robots, N/A

Hu, Zichao — University of Texas at Austin
Lucchetti, Francesca — Northeastern University
Schlesinger, Claire — Northeastern University
Saxena, Yash — The University of Texas at Austin
Freeman, Anders — Wellesley College
Modak, Sadanand — The University of Texas at Austin
Guha, Arjun — Northeastern University
Biswas, Joydeep — University of Texas at Austin

TuF1O Auditorium

Forum 1 - Robotics and AI for a Sustainable World (Forum)

Chair: Dario, Paolo — Scuola Superiore Sant'Anna
Co-Chair: Al-Hammadi, Arif — Khalifa University

14:00-17:00 TuF1O.1

*Robotics and AI for a Sustainable World**. N/A

Dario, Paolo — Scuola Superiore Sant'Anna
Al Hamadi, Arif — Khalifa University
Mazzolai, Barbara — Istituto Italiano Di Tecnologia

Wednesday October 16, 2024

WePI2T1 Room 1

Robotics and Automation II (Teaser Session)

Chair: Sahoo, Soumya Ranjan — Indian Institute of Technology Kanpur

09:00-10:00 WePI2T1.1

Robust Backstepping Controller with Adaptive Sliding Mode Observer for a Tilt-Augmented Quadrotor with Uncertainty Using SO(3), pp. 2223-2228. Attachment

Seshasayanan, Sathyanarayanan — Indian Institute of Technology Kanpur
Sahoo, Soumya Ranjan — Indian Institute of Technology Kanpur

09:00-10:00 WePI2T1.2

Design, Prototype, and Performance Assessment of an Autonomous Manipulation System for Mars Sample Recovery Helicopter, pp. 2229-2236.

Kalantari, Arash — NASA JPL
Brinkman, Alexander — Jet Propulsion Laboratory, California Institute of Technology
Carpenter, Kalind — Jet Propulsion Laboratory
Gildner, Matthew — Jet Propulsion Laboratory
Jenkins, Justin — Jet Propulsion Laboratory
Newill-Smith, David — NASA Jet Propulsion Laboratory
Seiden, Jeffrey — NASA Jet Propulsion Laboratory
Umali, Allen — NASA Jet Propulsion Laboratory
McCormick, Ryan — University of Nebraska - Lincoln

09:00-10:00 WePI2T1.3

The Control Strategy for Vehicle Transfer Robots in RO/RO Terminal Environments, pp. 2237-2242. Attachment

Liu, Zhi — Beijing Institute of Technology
Xu, Yongkang — Beijing Institute of Technology
Zhang, Lin — Beijing Institute of Technology
Wang, Shoukun — Beijing Institute of Technology
Wang, Junzheng — Beijing Institute of Technology

09:00-10:00 WePI2T1.4

Visuo-Tactile Exploration of Unknown Rigid 3D Curvatures by Vision-Augmented Unified Force-Impedance Control, pp. 2243-2250. Attachment

Karacan, Kübra — Technical University of Munich
Zhang, Anran — Technical University of Munich
Sadeghian, Hamid — Technical University of Munich
Wu, Fan — Technical University of Munich
Haddadin, Sami — Technical University of Munich

09:00-10:00 WePI2T1.5

Time-Optimal TCP and Robot Base Placement for Pick-And-Place Tasks in Highly Constrained Environments, pp. 2251-2257. Attachment

Wachter, Alexander — TU Wien
Kugi, Andreas — TU Wien
Hartl-Nesic, Christian — TU Wien

09:00-10:00 WePI2T1.6

Evaluation of the Design of a Tool for the Automated Assembly of Preconfigured Wires, pp. 2258-2263.

Bartelt, Stefanie — Ruhr-Universität Bochum
Kuhlenkötter, Bernd — Ruhr-Universität Bochum, Chair of Production Systems

09:00-10:00 WePI2T1.7

Image to Patterning: Density-Specified Patterning of Micro-Structured Surfaces with a Mobile Robot, pp. 2264-2270. Attachment

Taylor, Annalisa T. — Northwestern University
Landis, Malachi — Northwestern University
Wang, Yaoke — Northwestern University
Murphey, Todd — Northwestern University
Guo, Ping — Northwestern University

09:00-10:00 WePI2T1.8

Modernising Delivery: A Low-Energy Tethered Package System Using Fixed-Wing Drones, pp. 2271-2277.

Ord, Samuel	RMIT University
Marino, Matthew	RMIT University
Wiley, Timothy Colin	RMIT University

09:00-10:00 WePI2T1.9

IDF-MFL: Infrastructure-Free and Drift-Free Magnetic Field Localization for Mobile Robot, pp. 2278-2285.

Shen, Hongming	Nanyang Technological University
Wu, Zhenyu	Nanyang Technological University
Wang, Wei	Nanyang Technological University
Lyu, Qiyang	Nanyang Technological University
Zhou, Huiqin	Nanyang Technological University
Wang, Danwei	Nanyang Technological University

09:00-10:00 WePI2T1.10

Data-Driven Modeling of Cable Slab Dynamics Via Neural Networks, pp. 2286-2291.

Al-Rawashdeh, Yazan	Memorial University of Newfoundland
Al Saaideh, Mohammad	Memorial University of Newfoundland
Pumphrey, Michael Joseph	Memorial University of Newfoundland
Alatawneh, Natheer	Cysca Technologies
Al Janaideh, Mohammad	University of Guelph

09:00-10:00 WePI2T1.11

One Problem, One Solution: Unifying Robot Design and Cell Layout Optimization, pp. 2292-2298.

Baumgärtner, Jan	Karlsruhe Institute of Technology
Puchta, Alexander	Karlsruhe Institute of Technology
Fleischer, Jürgen	Karlsruhe Institute of Technology (KIT)

09:00-10:00 WePI2T1.12

Soft Task Planning with Hierarchical Temporal Logic Specifications, pp. 2299-2304.

Chen, Ziyang	University of Science and Technology of China
Zhou, Zhangli	University of Science and Technology of China
Li, Lin	University of Science and Technology of China
Kan, Zhen	University of Science and Technology of China

09:00-10:00 WePI2T1.13

Efficiently Obtaining Reachset Conformance for the Formal Analysis of Robotic Contact Tasks, pp. 2305-2311.

Tang, Chencheng	Technical University of Munich
Althoff, Matthias	Technische Universität München

09:00-10:00 WePI2T1.14

Stick Roller: Precise In-Hand Stick Rolling with a Sample-Efficient Tactile Model, pp. 2312-2318. Attachment

Du, Yipai	Hong Kong University of Science and Technology
Zhou, Pokuang	Purdue University
Wang, Michael Yu	Mywang@gbu.edu.cn
Lian, Wenzhao	Google X
She, Yu	Purdue University

09:00-10:00 WePI2T1.15

Robotic Measurement for Electrical Property of Polymers by Force-Sensing Robot Toward Materials Lab-Automation, pp. 2319-2324. Attachment

Asano, Yuki	The University of Tokyo
Okada, Kei	The University of Tokyo
Shiomi, Junichiro	University of Tokyo

09:00-10:00 WePI2T1.16

Lang2LTL-2: Grounding Spatiotemporal Navigation Commands Using Large Language and Vision-Language Models, pp. 2325-2332. Attachment

Liu, Jason Xinyu	Brown University
Shah, Ankit	Brown University
Konidaris, George	Brown University
Tellex, Stefanie	Brown
Paulius, David	Brown University

09:00-10:00 WePI2T1.17

Scheduling of Robotic Cellular Manufacturing Systems with Timed Petri Nets and Reinforcement Learning, pp. 2333-2338.

Yao, ZhuTao	Nanjing University of Sci & Tech

Huang, Bo	Nanjing University of Science and Technology
Lv, Jianyong	Nanjing University of Science and Technology
Lu, Xiaoyu	Nanjing University of Science and Technology
Cui, MeiJi	Nanjing University of Sciencen and Technology
Yu, ShaoHua	Nanjing University of Sciencen and Technology

WePI2T2	Room 2
Robotics in Healthcare I (Teaser Session)	
Chair: Alambeigi, Farshid	University of Texas at Austin
Co-Chair: Tavakoli, Mahdi	University of Alberta

09:00-10:00 WePI2T2.1

A Feasibility Study of a Soft, Low-Cost, 6-Axis Load Cell for Haptics, pp. 2339-2346. Attachment

Veliky, Madison	Vanderbilt University
Johnston, Garrison	Vanderbilt University
Yildiz, Ahmet	Vanderbilt University
Simaan, Nabil	Vanderbilt University

09:00-10:00 WePI2T2.2

Dung Beetle Optimizer-Based High-Precision Localization for Magnetic-Controlled Capsule Robot, pp. 2347-2352.

Zeng, Zijin	Beihang University
Wang, Fengwu	Beihang University
Li, Chan	Beihang University
Tan, Menglu	Beihang University
Wang, Shengyuan	Beihang University
Feng, Lin	Beihang University

09:00-10:00 WePI2T2.3

3D Ultrasound Image Acquisition and Diagnostic Analysis of the Common Carotid Artery with a Portable Robotic Device, pp. 2353-2359. Attachment

Tan, Longyue	Institute of Automation, Chinese Academy of Sciences
Deng, Zhaokun	Institute of Automation, Chinese Academy of Sciences
Hao, Mingrui	Institute of Automation, Chinese Academy of Sciences
Zhang, Pengcheng	Institute of Automation, Chinese Academy of Sciences
Hou, Xilong	Centre for Artificial Intelligence and Robotics, Hong Kong Insti
Chen, Chen	Institute of Automation, Chinese Academy of Sciences
Gu, Xiaolin	Lingshu Medical Company
Zhou, Xiao-Hu	Institute of Automation, Chinese Academy of Sciences
Hou, Zeng-Guang	Chinese Academy of Science
Wang, Shuangyi	Chinese Academy of Sciences

09:00-10:00 WePI2T2.4

Robot-Enabled Machine Learning-Based Diagnosis of Gastric Cancer Polyps Using Partial Surface Tactile Imaging, pp. 2360-2365.

Kapuria, Siddhartha	University of Texas at Austin
Bonyun, Jeff	University of Texas at Austin
Kulkarni, Yash	The University of Texas at Austin
Ikoma, Naruhiko	The University of Texas MD Anderson Cancer Center
Chinchali, Sandeep	The University of Texas at Austin
Alambeigi, Farshid	University of Texas at Austin

09:00-10:00 WePI2T2.5

Development of a Low Pressure Pouch Sensor for Force Measurement in Colonoscopy Procedures, pp. 2366-2372. Attachment

Borvorntanajanya, Korn	Imperial College London
Ahmed, Jabed F	Department of Surgery & Cancer, Imperial College London
Runciman, Mark	Imperial College London
Franco, Enrico	Imperial College London
Patel, Nisha	Imperial College London, Department of Surgery and Cancer
Rodriguez y Baena, Ferdinando	Imperial College, London, UK

09:00-10:00 WePI2T2.6

Thermal Ablation Therapy Control with Tissue Necrosis-Driven Temperature Feedback Enabled by Neural State Space Model with Extended Kalman Filter, pp. 2373-2379. Attachment

Murakami, Ryo	Worcester Polytechnic Institute

Mori, Satoshi	NA
Zhang, Haichong	Worcester Polytechnic Institute

09:00-10:00 WePI2T2.7

Towards Robotised Palpation for Cancer Detection through Online Tissue Viscoelastic Characterisation with a Collaborative Robotic Arm, pp. 2380-2386. Attachment

Beber, Luca	University of Trento
Lamon, Edoardo	University of Trento
Moretti, Giacomo	University of Trento
Fontanelli, Daniele	University of Trento
Saveriano, Matteo	University of Trento
Palopoli, Luigi	University of Trento

09:00-10:00 WePI2T2.8

Wirelessly Actuated Rotation-Free Magnetic Motor, pp. 2387-2393. Attachment

Harman, Umur Ulas	University of Sheffield
Hafez, Ahmed	University of Sheffield
Duffield, Cameron	The University of Sheffield
Zhao, Zihan	The University of Sheffield
Dixon, Luke	University of Sheffield
Rus, Daniela	MIT
Miyashita, Shuhei	University of Sheffield

09:00-10:00 WePI2T2.9

Development of Five-Finger Hand-Type Robotic Forceps for Laparoscopic Gastrointestinal Surgery, pp. 2394-2399.

Wakamatsu, Hiroyuki	Yokohama National University
Kobayashi, Ibuki	Yokohama National University
Nagase, Yuya	Yokohama National University
Kato, Ryu	Yokohama National University
Mukai, Masaya	Tokai University

09:00-10:00 WePI2T2.10

A Novel Approach for Precise Tissue Tracking in Breast Lumpectomy, pp. 2400-2406. Attachment

Aliyari, Yeganeh	University of Alberta
Afshar, Mehrnoosh	University of Alberta
Wiebe, Ericka	University of Alberta
Peiris, Lashan	University of Alberta
Tavakoli, Mahdi	University of Alberta

09:00-10:00 WePI2T2.11

Portable Robot for Needle Insertion Assistance to Femoral Artery, pp. 2407-2413. Attachment

Cheng, Zhuoqi	University of Southern Denmark
Mány, Bence	Neurescue ApS
Jørgensen, Kasper Balsby	University of Southern Denmark
An, Siheon	University
Jensen, Marcus Leander	Neurescue ApS
Thulstrup, Richard	Neurescue ApS
Frost, Habib	Neurescue ApS
Savarimuthu, Thiusius Rajeeth	University of Southern Denmark
Huldt, Olof	Neurescue ApS

09:00-10:00 WePI2T2.12

The Design of a Sensorized Laryngoscope Training System for Pediatric Intubation, pp. 2414-2420.

Hou, Ningzhe	University of Oxford
He, Liang	University of Oxford
Albini, Alessandro	University of Oxford
Halamek, Louis	Stanford University
Maiolino, Perla	University of Oxford

09:00-10:00 WePI2T2.13

Enhancing Surgical Precision in Autonomous Robotic Incisions Via Physics-Based Tissue Cutting Simulation, pp. 2421-2428.

Ge, Jiawei	Johns Hopkins University
Kilmer, Ethan	Johns Hopkins University
Mady, Leila	Johns Hopkins University

Opfermann, Justin	Johns Hopkins University
Krieger, Axel	Johns Hopkins University

09:00-10:00 WePI2T2.14

Head-Mounted Hydraulic Needle Driver for Targeted Interventions in Neurosurger, pp. 2429-2435.

Fang, Zhiwei	The Chinese University of Hong Kong
Xu, Chao	The Chinese University of Hong Kong
Gao, Huxin	National University of Singapore
Chan, Tat-Ming	Prince of Wales Hospital
Yuan, Wu	The Chinese University of Hong Kong
Ren, Hongliang	Chinese Univ Hong Kong (CUHK) & National Univ Singapore(NUS)

09:00-10:00 WePI2T2.15

CathFlow: Self-Supervised Segmentation of Catheters in Interventional Ultrasound Using Optical Flow and Transformers, pp. 2436-2443. Attachment

Ranne, Alex	Imperial College London
Kuang, Liming	Techinical University of Munich
Velikova, Yordanka	TU Munich
Navab, Nassir	TU Munich
Rodriguez y Baena, Ferdinando	Imperial College, London, UK

09:00-10:00 WePI2T2.16

Seven Benefits of Using Series Elastic Actuators in the Design of an Affordable, Simple Controlled, and Functional Prosthetic Hand, pp. 2444-2449. Attachment

Koochakzadeh, Erfan	University of Tehran
Kargar, Alireza	University of Tehran
Sattari, Parsa	University of Tehran
Ravanshid, Diba	University of Tehran
Nasiri, Rezvan	University of Tehran

WePI2T3 Room 3

Social HRI I (Teaser Session)

Chair: Hamann, Heiko	University of Konstanz
Co-Chair: Rossi, Silvia	Universita' Di Napoli Federico II

09:00-10:00 WePI2T3.1

Autonomous Storytelling for Social Robot with Human-Centered Reinforcement Learning, pp. 2450-2456.

Zhang, Lei	Ocean University of China
Zheng, Chuanxiong	Ocean University of China
Wang, Hui	Ocean University of China
Gomez, Randy	Honda Research Institute Japan Co., Ltd
Nichols, Eric	Honda Research Institute Japan
Li, Guangliang	Ocean University of China

09:00-10:00 WePI2T3.2

Understanding Robot Minds: Leveraging Machine Teaching for Transparent Human-Robot Collaboration across Diverse Groups, pp. 2457-2464.

Jayaraman, Suresh Kumaar	Carnegie Mellon University
Simmons, Reid	Carnegie Mellon University
Steinfeld, Aaron	Carnegie Mellon University
Admoni, Henny	Carnegie Mellon University

09:00-10:00 WePI2T3.3

Emotional Tandem Robots: How Different Robot Behaviors Affect Human Perception While Controlling a Mobile Robot, pp. 2465-2470. Attachment

Kaduk, Julian	University of Konstanz
Weilbeer, Friederike	Universität Zu Lübeck
Hamann, Heiko	University of Konstanz

09:00-10:00 WePI2T3.4

Good Things Come in Threes: The Impact of Robot Responsiveness on Workload and Trust in Multi-User Human-Robot Collaboration, pp. 2471-2478.

Semeraro, Francesco	The University of Manchester
Carberry, Jon	BAE Systems
Leadbetter, James Hugo	BAE Systems Ltd

Cangelosi, Angelo	University of Manchester

09:00-10:00 WePI2T3.5

PhotoBot: Reference-Guided Interactive Photography Via Natural Language, pp. 2479-2486. Attachment

Limoyo, Oliver	University of Toronto
Li, Jimmy	McGill University
Rivkin, Dmitriy	None
Kelly, Jonathan	University of Toronto
Dudek, Gregory	McGill University

09:00-10:00 WePI2T3.6

Multimodal Coherent Explanation Generation of Robot Failures, pp. 2487-2493.

Pramanick, Pradip	University of Naples Federico II
Rossi, Silvia	Universita' Di Napoli Federico II

09:00-10:00 WePI2T3.7

Where and When Should the Teleoperated Avatar Look: Gaze Instruction Dataset for Enhanced Teleoperated Avatar Communication, pp. 2494-2501.

Hoshimure, Kenya	Osaka University
Baba, Jun	CyberAgent, Inc
Nakanishi, Junya	Osaka Univ
Yoshikawa, Yuichiro	Osaka University
Ishiguro, Hiroshi	Osaka University

09:00-10:00 WePI2T3.8

Empathetic Response Generation System: Enhancing Photo Reminiscence Chatbot with Emotional Context Analysis, pp. 2502-2507.

Herrera Ruiz, Alberto	National Taiwan University
Qian, Xiaobei	National Taiwan University
Fu, Li-Chen	National Taiwan University

09:00-10:00 WePI2T3.9

OmniRace: 6D Hand Pose Estimation for Intuitive Guidance of Racing Drone, pp. 2508-2513.

Serpiva, Valerii	Skolkovo Institute of Science and Technology
Fedoseev, Aleksey	Skolkovo Institute of Science AndTechnology
Karaf, Sausar	Skolkovo Institute of Science and Technology
Abdulkarim, Ali Alridha	Skolkovo Institute of Science and Technology
Dzmitry, Tsetserukou	Skolkovo Institute of Science and Technology

09:00-10:00 WePI2T3.10

Investigating Behavioral and Cognitive Changes Induced by Autonomous Delivery Robots in Incidentally Copresent Persons, pp. 2514-2519. Attachment

Kim, Nayoung	KOREA, Korea Institute of Science and Technology (KIST)
Kwak, Sonya Sona	Korea Institute of Science and Technology (KIST)

09:00-10:00 WePI2T3.11

Are Large Language Models Aligned with People's Social Intuitions for Human–Robot Interactions?, pp. 2520-2527. Attachment

Wachowiak, Lennart	King's College London
Coles, Andrew	Kings College London
Celiktutan, Oya	King's College London
Canal, Gerard	King's College London

09:00-10:00 WePI2T3.12

Belief-Aided Navigation Using Bayesian Reinforcement Learning for Avoiding Humans in Blind Spots, pp. 2528-2535. Attachment

Kim, Jinyeob	KyungHee University
Daewon, Kwak	Kyunghee.uni
Rim, Hyunwoo	Kyung Hee University
Kim, Donghan	Kyung Hee University

09:00-10:00 WePI2T3.13

A Service Robot in the Wild: Analysis of Users Intentions, Robot Behaviors, and Their Impact on the Interaction, pp. 2536-2541. Attachment

Arreghini, Simone	IDSIA USI-SUPSI
Abbate, Gabriele	Istituto Dalle Molle Di Studi sull'Intelligenza Artificiale (IDS
Giusti, Alessandro	IDSIA USI-SUPSI

Paolillo, Antonio	IDSIA USI-SUPSI
09:00-10:00	WePI2T3.14
Context-Aware Conversation Adaptation for Human-Robot Interaction, pp. 2542-2548.	
Su, Zhidong	Oklahoma State University
Sheng, Weihua	Oklahoma State University
09:00-10:00	WePI2T3.15
AEGO: Modeling Attention for HRI in Ego-Sphere Neural Networks, pp. 2549-2555. Attachment	
Ferreira Chame, Hendry	University of Lorraine / CNRS
Alami, Rachid	CNRS
09:00-10:00	WePI2T3.16
Architectural-Scale Artistic Brush Painting with a Hybrid Cable Robot, pp. 2556-2563. Attachment	
Chen, Gerry	Georgia Institute of Technology
Al-Haddad, Tristan	Formations Studio
Dellaert, Frank	Verdant Robotics/Georgia Tech
Hutchinson, Seth	Georgia Institute of Technology

WePI2T4	Room 4
Perception I (Detection and Categorization) (Teaser Session)	
Chair: Xiang, Yu	University of Texas at Dallas
Co-Chair: Bensalem, Saddek	University Grenoble
09:00-10:00	WePI2T4.1
Swiss DINO: Efficient and Versatile Vision Framework for On-Device Personal Object Search, pp. 2564-2571. Attachment	
Paramonov, Kirill	Samsung Research UK
Zhong, Jia-Xing	University of Oxford
Michieli, Umberto	Samsung Research
Moon, Jijoong	Samsung Research Korea
Ozay, Mete	Samsung Research
09:00-10:00	WePI2T4.2
Continuous Rapid Learning by Human Imitation Using Audio Prompts and One-Shot Learning, pp. 2572-2577. Attachment	
Duque Domingo, Jaime	University of Valladolid
García-Gómez, Miguel	University of Valladolid
Zalama, Eduardo	Instituo De Las Tecnologías delaProducción(ITAP).Universityof Va
Gomez Garcia Bermejo, Jaime	University of Valladolid
09:00-10:00	WePI2T4.3
FedRC: A Rapid-Converged Hierarchical Federated Learning Framework in Street Scene Semantic Understanding, pp. 2578-2585. Attachment	
Kou, Wei-Bin	The University of Hong Kong
Lin, Qingfeng	The University of HongKong
Tang, Ming	Southern University of Science and Technology
Wang, Shuai	Shenzhen Institute of Advanced Technology, Chinese Academy of Sc
Zhu, Guangxu	Shenzhen Research Institute of Big Data
Wu, Yik-Chung	The University of Hong Kong
09:00-10:00	WePI2T4.4
Model Agnostic Defense against Adversarial Patch Attacks on Object Detection in Unmanned Aerial Vehicles, pp. 2586-2593. Attachment	
Pathak, Saurabh	Technology Innovation Institute
Shrestha, Samridha	Technology Innovation Institute
AlMahmoud, Abdelrahman	Technology Innovation Institute
09:00-10:00	WePI2T4.5
Proto-CLIP: Vision-Language Prototypical Network for Few-Shot Learning, pp. 2594-2601. Attachment	
P, Jishnu Jaykumar	The University of Texas at Dallas
Palanisamy, Kamalesh	University of Texas at Dallas
Chao, Yu-Wei	NVIDIA
Du, Xinya	UT Dallas
Xiang, Yu	University of Texas at Dallas

09:00-10:00 WePI2T4.6

SWCF-Net: Similarity-Weighted Convolution and Local-Global Fusion for Efficient Large-Scale Point Cloud Semantic Segmentation, pp. 2602-2609. Attachment

Lin, Zhenchao — Guangdong University of Technology
He, Li — Southern University of Science and Technology
Yang, Hongqiang — Meituan Technology Co., Ltd
Xiaoqun, Sun — Meituan
Zhang, Guojin — Meituan
Chen, Weinan — Guangdong University of Technology
Guan, Yisheng — Guangdong University of Technology
Zhang, Hong — Southern University of Science and Technology

09:00-10:00 WePI2T4.7

3D Object Detection Via Stereo Pyramid Transformers with Rich Semantic Feature Fusion, pp. 2610-2617.

Gu, Rongqi — Tongji University
Yang, Chu — Tongji University
Lu, Yaohan — Westwell-Lab
Liu, Peigen — Tongji University
Wu, Fei — Westwell-Lab
Chen, Guang — Tongji University

09:00-10:00 WePI2T4.8

MOSFormer: A Transformer-Based Multi-Modal Fusion Network for Moving Object Segmentation, pp. 2618-2623. Attachment

Cheng, Zike — Shanghai Jiao Tong University
Zhao, Hengwang — Shanghai Jiao Tong University
Shen, Qiyuan — Shanghai Jiao Tong University
Yan, Weihao — Shanghai Jiao Tong University
Wang, Chunxiang — Shanghai Jiaotong University
Yang, Ming — Shanghai Jiao Tong University

09:00-10:00 WePI2T4.9

CTS: Sim-To-Real Unsupervised Domain Adaptation on 3D Detection, pp. 2624-2631. Attachment

Zhang, Meiying — Southern University of Science and Technology
Peng, Weiyuan — Southern University of Science and Technology
Ding, Guangyao — Southern University of Science and Technology
Lei, Chenyang — Southern University of Science and Technology
Ji, Chunlin — Kuang-Chi Institute of Advanced Technology
Hao, Qi — Southern University of Science and Technology

09:00-10:00 WePI2T4.10

BAM: Box Abstraction Monitors for Real-Time OoD Detection in Object Detection, pp. 2632-2638. Attachment

Wu, Changshun — Université Grenoble Alpes
He, Weicheng — Université Grenoble Alpes
Cheng, Chih-Hong — Chalmers University of Technology
Huang, Xiaowei — University of Liverpool
Bensalem, Saddek — University Grenoble

09:00-10:00 WePI2T4.11

Embodied Uncertainty-Aware Object Segmentation, pp. 2639-2646. Attachment

Fang, Xiaolin — MIT
Kaelbling, Leslie — MIT
Lozano-Perez, Tomas — MIT

09:00-10:00 WePI2T4.12

Unsupervised 3D Part Decomposition Via Leveraged Gaussian Splatting, pp. 2647-2652. Attachment

Choy, Jae Goo — Sequor Robotics
Cha, Geonho — NAVER Corp
Kee, Hogun — Seoul National University
Oh, Songhwai — Seoul National University

09:00-10:00 WePI2T4.13

Non-Repetitive: A Promising LiDAR Scanning Pattern, pp. 2653-2659.

Xie, Angchen — Shanghai Jiao Tong University
Qian, Yeqiang — Shanghai Jiao Tong University

Yan, Weihao	Shanghai Jiao Tong University
Wang, Chunxiang	Shanghai Jiaotong University
Yang, Ming	Shanghai Jiao Tong University

09:00-10:00 WePI2T4.14

Scale Disparity of Instances in Interactive Point Cloud Segmentation, pp. 2660-2667. Attachment

Han, Chenrui	Zhejiang University
Yu, Xuan	Zhejiang University
Xie, Yuxuan	Tongji University
Liu, Yili	Zhejiang University
Mao, Sitong	ShenZhen Huawei Cloud Computing Technologies Co., Ltd
Zhou, Shunbo	The Chinese University of Hong Kong
Xiong, Rong	Zhejiang University
Wang, Yue	Zhejiang University

09:00-10:00 WePI2T4.15

MDHA: Multi-Scale Deformable Transformer with Hybrid Anchors for Multi-View 3D Object Detection, pp. 2668-2675. Attachment

Adeline, Michelle	Monash University Malaysia
Loo, Junn Yong	Monash Malaysia
Baskaran, Vishnu Monn	Monash University Malaysia

09:00-10:00 WePI2T4.16

R2SNet: Scalable Domain Adaptation for Object Detection in Cloud-Based Robotic Ecosystems Via Proposal Refinement, pp. 2676-2682. Attachment

Antonazzi, Michele	University of Milan
Luperto, Matteo	Università Degli Studi Di Milano
Borghese, N. Alberto	University of Milano
Basilico, Nicola	University of Milan

WePI2T5 Room 5

Deep Learning II (Teaser Session)

Chair: Shafique, Muhammad	New York University Abu Dhabi
Co-Chair: Zeng, Long	Tsinghua University

09:00-10:00 WePI2T5.1

A Non-Invasive Device for Skin Cancer Diagnosis: First Clinical Evidence with Spectroscopic Data Enhanced by Machine Learning Algorithms, pp. 2683-2688. Attachment

Mainardi, Vanessa	Scuola Superiore Sant'Anna
Carletti, Laura	Scuola Superiore Sant'Anna
Tsiakmakis, Dimitrios	Aristotle University of Thessaloniki
Dal Canto, Marco	Scuola Superiore Sant'Anna
Mellilo, Tommaso	Scuola Superiore Sant'Anna
Noferi, Stefano	Noze Srl
Bagnoni, Giovanni	Dermatological Department of Spedali Riuniti
Rubegni, Pietro	Dermatological Department of Senese Hospital
Ciuti, Gastone	Scuola Superiore Sant'Anna

09:00-10:00 WePI2T5.2

A Deep Signed Directional Distance Function for Shape Representation, pp. 2689-2695.

Zobeidi, Ehsan	University of California San Diego
Atanasov, Nikolay	University of California, San Diego

09:00-10:00 WePI2T5.3

Best of Both Worlds: Hybrid SNN-ANN Architecture for Event-Based Optical Flow Estimation, pp. 2696-2703.

Negi, Shubham	Purdue University
Sharma, Deepika	Purdue University
Kosta, Adarsh Kumar	Purdue University
Roy, Kaushik	Purdue University

09:00-10:00 WePI2T5.4

Just Flip: Flipped Observation Generation and Optimization for Neural Radiance Fields to Cover Unobserved View, pp. 2704-2711. Attachment

Lee, Sibaek	Sungkyunkwan University (SKKU)
Kang, Kyeongsu	Ulsan National Institute of Science and Technology (UNIST)

Yu, Hyeonwoo	SungKyunKwan University

09:00-10:00 WePI2T5.5

RAM-NAS: Resource-Aware Multiobjective Neural Architecture Search Method for Robot Vision Tasks, pp. 2712-2719.

Mao, Shouren	Harbin Institute of Technology
Qin, MingHao	Harbin Institute of Technology
Dong, Wei	Harbin Institute of Technology
Liu, Huajian	Harbin Institute of Technology
Gao, Yongzhuo	Harbin Institute of Technology

09:00-10:00 WePI2T5.6

Towards Dynamic and Small Objects Refinement for Unsupervised Domain Adaptative Nighttime Semantic Segmentation, pp. 2720-2727. Attachment

Pan, Jingyi	The Hong Kong University of Science and Technology (Guangzhou)
Li, Sihang	New York University
Chen, Yucheng	Hong Kong University of Technology and Science(Guangzhou)
Zhu, Jinjing	HKUST(GZ)
Wang, Lin	HKUST

09:00-10:00 WePI2T5.7

Latent Disentanglement for Low Light Image Enhancement, pp. 2728-2733.

Zheng, Zhihao	Lehigh University
Chuah, Mooi Choo	Lehigh University

09:00-10:00 WePI2T5.8

CaFNet: A Confidence-Driven Framework for Radar Camera Depth Estimation, pp. 2734-2740.

Sun, Huawei	Technical University of Munich; Infineon Technologies AG
Feng, Hao	Technical University of Munich
Ott, Julius	Infineon Technologies AG
Servadei, Lorenzo	Technical University of Munich
Wille, Robert	Technical University of Munich

09:00-10:00 WePI2T5.9

VANP: Learning Where to See for Navigation with Self-Supervised Vision-Action Pre-Training, pp. 2741-2746. Attachment

Nazeri, Mohammad	PhD Student at George Mason University
Wang, Junzhe	George Mason University
Payandeh, Amirreza	George Mason
Xiao, Xuesu	George Mason University

09:00-10:00 WePI2T5.10

SD-Net: Symmetric-Aware Keypoint Prediction and Domain Adaptation for 6D Pose Estimation in Bin-Picking Scenarios, pp. 2747-2754.

Huang, Dingtao	Tsinghua University
Lin, Ente	Tsinghua University
Chen, Lipeng	Tencent
Liu, Lifu	Shenzhen International Graduate School, Tsinghua University
Zeng, Long	Tsinghua University

09:00-10:00 WePI2T5.11

MaskingDepth: Masked Consistency Regularization for Semi-Supervised Monocular Depth Estimation, pp. 2755-2762. Attachment

Baek, Jongbeom	Korea University
Kim, Gyeongnyeon	Korea University
Park, Seonghoon	Korea University
An, Honggyu	Korea University
Poggi, Matteo	University of Bologna
Kim, Seungryong	Korea University

09:00-10:00 WePI2T5.12

Learning to Estimate the Pose of a Peer Robot in a Camera Image by Predicting the States of Its LEDs, pp. 2763-2769. Attachment

Carlotti, Nicholas	Dalle Molle Institute for Artificial Intelligence (IDSIA)
Nava, Mirko	IDSIA
Giusti, Alessandro	IDSIA USI-SUPSI

09:00-10:00 WePI2T5.13

Exploring Few-Beam LiDAR Assistance in Self-Supervised Multi-Frame Depth Estimation, pp. 2770-2777.

Fan, Rizhao	University of Bologna
Poggi, Matteo	University of Bologna
Mattoccia, Stefano	University of Bologna

09:00-10:00 WePI2T5.14

MARVIS: Motion & Geometry Aware Real and Virtual Image Segmentation, pp. 2778-2785. Attachment

Wu, Jiayi	University of Maryland, College Park
Lin, Xiaomin	University of Maryland
Negahdaripour, Shahriar	University of Miami
Fermuller, Cornelia	University of Maryland
Aloimonos, Yiannis	University of Maryland

09:00-10:00 WePI2T5.15

SSAP: A Shape-Sensitive Adversarial Patch for Comprehensive Disruption of Monocular Depth Estimation in Autonomous Navigation Applications, pp. 2786-2793.

Guesmi, Amira	NYU Abu Dhabi
Hanif, Muhammad Abdullah	New York University Abu Dhabi (NYUAD)
Alouani, Ihsen	Queen's University Belfast
Ouni, Bassem	Technology Innovation Institute
Shafique, Muhammad	New York University Abu Dhabi

09:00-10:00 WePI2T5.16

Conditional Variational Autoencoders for Probabilistic Pose Regression, pp. 2794-2800.

Zangeneh, Fereidoon	KTH Royal Institute of Technology
Bruns, Leonard	KTH Royal Institute of Technology
Dekel, Amit	Univrses AB
Pieropan, Alessandro	KTH
Jensfelt, Patric	KTH - Royal Institute of Technology

WePI2T6 Room 6

Learning I (Teaser Session)

Chair: Valada, Abhinav	University of Freiburg
Co-Chair: Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

09:00-10:00 WePI2T6.1

Bayesian Optimization for Sample-Efficient Policy Improvement in Robotic Manipulation, pp. 2801-2808. Attachment

Röfer, Adrian	University of Freiburg
Nematollahi, Iman	University of Freiburg
Welschehold, Tim	Albert-Ludwigs-Universität Freiburg
Burgard, Wolfram	University of Technology Nuremberg
Valada, Abhinav	University of Freiburg

09:00-10:00 WePI2T6.2

DecAP : Decaying Action Priors for Accelerated Imitation Learning of Torque-Based Legged Locomotion Policies, pp. 2809-2815. Attachment

Sood, Shivam	Indian Institute of Technology Kharagpur
Sun, Ge	National University of Singapore
Li, Peizhuo	National University of Singapore
Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

09:00-10:00 WePI2T6.3

Efficient Trajectory Forecasting and Generation with Conditional Flow Matching, pp. 2816-2823.

Ye, Sean	Georgia Institute of Technology
Gombolay, Matthew	Georgia Institute of Technology

09:00-10:00 WePI2T6.4

Driving from Vision through Differentiable Optimal Control, pp. 2824-2831. Attachment

Acerbo, Flavia Sofia	Siemens Digital Industries Software
Swevers, Jan	KU Leuven
Tuytelaars, Tinne	KU Leuven
Tong, Son	Siemens Digital Industries Software

09:00-10:00 WePI2T6.5

Learning Multi-Reference Frame Skills from Demonstration with Task-Parameterized Gaussian Processes, pp. 2832-2839. Attachment

Ramirez Montero, Mariano	Delft University of Technology
Franzese, Giovanni	TU Delft
Kober, Jens	TU Delft
Della Santina, Cosimo	TU Delft

09:00-10:00 WePI2T6.6

IntervenGen: Interventional Data Generation for Robust and Data-Efficient Robot Imitation Learning, pp. 2840-2846. Attachment

Hoque, Ryan	University of California, Berkeley
Mandlekar, Ajay Uday	NVIDIA
Garrett, Caelan	NVIDIA
Goldberg, Ken	UC Berkeley
Fox, Dieter	University of Washington

09:00-10:00 WePI2T6.7

Learning Generalizable Tool-Use Skills through Trajectory Generation, pp. 2847-2854. Attachment

Qi, Carl	University of Texas at Austin
Wu, Yilin	Carnegie Mellon University
Yu, Lifan	Carnegie Mellon University
Liu, Haoyue	Carnegie Mellon University
Jiang, Bowen	Carnegie Mellon University
Lin, Xingyu	UC Berkeley
Held, David	Carnegie Mellon University

09:00-10:00 WePI2T6.8

ARCADE: Scalable Demonstration Collection and Generation Via Augmented Reality for Imitation Learning, pp. 2855-2861. Attachment

Yang, Yue	The University of North Carolina at Chapel Hill
Ikeda, Bryce	University of North Carolina Chapel Hill
Bertasius, Gedas	UNC Chapel Hill
Szafir, Daniel J.	University of North Carolina at Chapel Hill

09:00-10:00 WePI2T6.9

Self Supervised Detection of Incorrect Human Demonstrations: A Path Toward Safe Imitation Learning by Robots in the Wild, pp. 2862-2869.

Sojib, Noushad	University of New Hampshire
Begum, Momotaz	University of New Hampshire

09:00-10:00 WePI2T6.10

*Learning Force-Based Control Policies Via Differentiable Virtual Coupling (Diff-VC)**.

Galvan, Aldo	University of Texas at Austin
Majewicz Fey, Ann	University of Texas at Austin
Patel, Ravi	University of Texas at Austin

09:00-10:00 WePI2T6.11

RISE: 3D Perception Makes Real-World Robot Imitation Simple and Effective, pp. 2870-2877. Attachment

Wang, Chenxi	Shanghai Noematrix Intelligence Technology Ltd
Fang, Hongjie	Shanghai Jiao Tong University
Fang, Hao-Shu	Massachusetts Institute of Technology
Lu, Cewu	ShangHai Jiao Tong University

09:00-10:00 WePI2T6.12

TinyLidarNet: 2D Lidar-Based End-To-End Deep Learning Model for F1TENTH Autonomous Racing, pp. 2878-2884. Attachment

Zarrar, Mohammed Misbah	University of Kansas
Weng, QiTao	University of Kansas
Yerjan, Bakhbyergyen	University of Kansas
Soyyigit, Ahmet	University of Kansas
Yun, Heechul	University of Kansas

09:00-10:00 WePI2T6.13

Robust Imitation Learning for Mobile Manipulator Focusing on Task-Related Viewpoints and Regions, pp. 2885-2892. Attachment

Ishida, Yutaro	Toyota Motor Corporation
Noguchi, Yuki	Toyota Motor Corporation

Kanai, Takayuki	Toyota Motor Corporation
Shintani, Kazuhiro	Toyota Motor Corporation
Bito, Hiroshi	Toyota Motor Corporation

09:00-10:00 WePI2T6.14

Safe CoR: A Dual-Expert Approach to Integrating Imitation Learning and Safe Reinforcement Learning Using Constraint Rewards, pp. 2893-2898. Attachment

Kwon, Hyeokjin	Seoul National University
Lee, Gunmin	Seoul National University
Lee, Junseo	Seoul National University
Oh, Songhwai	Seoul National University

09:00-10:00 WePI2T6.15

Imitation Learning for Sim-To-Real Adaptation of Robotic Cutting Policies Based on Residual Gaussian Process Disturbance Force Model, pp. 2899-2906.

Hathaway, Jamie	University of Birmingham, Birmingham, UK
Rastegarpanah, Alireza	University of Birmingham
Stolkin, Rustam	University of Birmingham

09:00-10:00 WePI2T6.16

ViSaRL: Visual Reinforcement Learning Guided by Human Saliency, pp. 2907-2912. Attachment

Liang, Anthony	University of Southern California
Thomason, Jesse	USC Viterbi School of Engineering
Bıyık, Erdem	University of Southern California

WePI2T7 Room 7

Grasping & Manipulation I (Teaser Session)

Co-Chair: Calli, Berk	Worcester Polytechnic Institute

09:00-10:00 WePI2T7.1

RTTF: Rapid Tactile Transfer Framework for Contact-Rich Manipulation Tasks, pp. 2913-2920. Attachment

Wu, Qiwei	Harbin Institute of Technology, Shenzhen
Peng, Xuanbin	Harbin Institute of Technology, Shenzhen
Zhou, Jiayu	Harbin Institute of Technology, Shenzhen
Sun, Zhuoran	Harbin Institute of Technology, Shenzhen
Xiong, Xiaogang	Harbin Institute of Technology, Shenzhen
Lou, Yunjiang	Harbin Institute of Technology, Shenzhen

09:00-10:00 WePI2T7.2

Seg2Grasp: A Robust Modular Suction Grasping in Bin Picking, pp. 2921-2927. Attachment

Yoon, Hye Jung	Seoul National University
Kim, Juno	Seoul National University
Park, Yesol	Seoul National University
Lee, Jun Ki	Seoul National University
Zhang, Byoung-Tak	Seoul National University

09:00-10:00 WePI2T7.3

Beyond the Cascade: Juggling Vanilla Siteswap Patterns, pp. 2928-2934.

Gomez Andreu, Mario Alejandro	Technical University Darmstadt
Ploeger, Kai	Technische Universität Darmstadt
Peters, Jan	Technische Universität Darmstadt

09:00-10:00 WePI2T7.4

Insert-One: One-Shot Robust Visual-Force Servoing for Novel Object Insertion with 6-DoF Tracking, pp. 2935-2942. Attachment

Chang, Haonan	Rutgers University
Boularias, Abdeslam	Rutgers University
Jain, Siddarth	Mitsubishi Electric Research Laboratories (MERL)

09:00-10:00 WePI2T7.5

Exploring How Non-Prehensile Manipulation Expands Capability in Robots Experiencing Multi-Joint Failure, pp. 2943-2950. Attachment

Briscoe-Martinez, Gilberto	University of Colorado Boulder
Pasricha, Anuj	University of Colorado Boulder
Abderezaei, Ava	University of Colorado Boulder
Chaganti, Rama Durga Santosh Kumar	University of Colorado Boulder

Vajrala, Sarath Chandra	University of Colorado Boulder
Popuri, Srikanth	University of Colorado Boulder
Roncone, Alessandro	University of Colorado Boulder

09:00-10:00 WePI2T7.6

Multimodal Failure Prediction for Vision-Based Manipulation Tasks with Camera Faults, pp. 2951-2957. Attachment

Ma, Yuliang	University of Stuttgart
Liu, Jingyi	University of Stuttgart
Mamaev, Ilshat	Proximity Robotics & Automation GmbH
Morozov, Andrey	University of Stuttgart

09:00-10:00 WePI2T7.7

Development of a Bendable and Extendable Soft Gripper Driven by Differential Worm Gear Mechanism, pp. 2958-2963. Attachment

Selvamuthu, Moses Gladson	Yamagata University
Tadakuma, Riichiro	Yamagata University

09:00-10:00 WePI2T7.8

Gravity-Aware Grasp Generation with Implicit Grasp Mode Selection for Underactuated Hands, pp. 2964-2970. Attachment

Ko, Tianyi	Woven by Toyota, Inc
Ikeda, Takuya	Woven by Toyota, Inc
Stewart, Thomas	Woven by Toyota
Lee, Robert	Australian Centre for Robotic Vision
Nishiwaki, Koichi	Woven by Toyota

09:00-10:00 WePI2T7.9

Multi-Fingered End-Effector Grasp Reflex Modeling for One-Shot Tactile Servoing in Tool Manipulation Tasks, pp. 2971-2977. Attachment

Sheetz, Emily	University of Michigan
Savchenko, Misha	METECS
Zemler, Emma	NASA
Presswala, Abbas	Aeyon (Jacobs)
Crouch, Andrew	CACI
Azimi, Shaun	NASA
Kuipers, Benjamin	University of Michigan

09:00-10:00 WePI2T7.10

MultiGripperGrasp: A Dataset for Robotic Grasping from Parallel Jaw Grippers to Dexterous Hands, pp. 2978-2984. Attachment

Casas, Luis Felipe	University of Texas at Dallas
Khargonkar, Ninad	University of Texas at Dallas
Prabhakaran, B	University of Texas at Dallas
Xiang, Yu	University of Texas at Dallas

09:00-10:00 WePI2T7.11

Speeding up 6-DoF Grasp Sampling with Quality-Diversity, pp. 2985-2991. Attachment

Huber, Johann	ISIR, Sorbonne Université
Hélénon, François	Sorbonne Université
Kappel, Mathilde	Institut Des Systèmes Intelligents Et De Robotique
Chelly, Elie	Sorbonne Université - Institut Des Systèmes Intelligents Et Rob
Khoramshahi, Mahdi	Sorbonne Université
Ben Amar, Faiz	Université Pierre Et Marie Curie, Paris 6
Doncieux, Stéphane	Sorbonne University

09:00-10:00 WePI2T7.12

Toward an Analytic Theory of Intrinsic Robustness for Dexterous Grasping, pp. 2992-2999. Attachment

Li, Albert H.	California Institute of Technology
Culbertson, Preston	Stanford University
Ames, Aaron	Caltech

09:00-10:00 WePI2T7.13

6-DoF Grasp Detection in Clutter with Enhanced Receptive Field and Graspable Balance Sampling, pp. 3000-3007. Attachment

Wang, Hanwen	Beijing University of Posts and Telecommunications
Ying, Zhang	Beijing University of Posts and Telecommunications
Wang, Yunlong	Institute of Automation, Chinese Academy of Sciences (CASIA)

Li, Jian	Beihang University & National Research Center for Rehabilitation

09:00-10:00 WePI2T7.14

GripFlexer: Development of Hybrid Gripper with a Novel Shape That Can Perform in Narrow Spaces, pp. 3008-3013.

Kim, Donghyun	Daegu Gyeongbuk Institute of Science and Technology
Choi, Sunghyun	Daegu Gyeongbuk Institute of Science & Technology
Song, Bongsub	Daegu Gyeongbuk Institute of Science and Technology
Song, Jinhyeok	DGIST
Yoon, Jingon	Daegu Gyeongbuk Institute of Science and Technology (DGIST), Dae
Yun, Dongwon	Daegu Gyeongbuk Institute of Science and Technology (DGIST)

09:00-10:00 WePI2T7.15

Enhancing Object Grasping Efficiency with Deep Learning and Post-Processing for Multi-Finger Robotic Hands, pp. 3014-3021. Attachment

Samandi, Pouya	Simon Fraser University
Gupta, Kamal	Simon Fraser University
Mehrandezh, Mehran	University of Regina

09:00-10:00 WePI2T7.16

Task-Oriented Design Method for Monolithic Flexible Hands with Wire Drive Systems, pp. 3022-3029. Attachment

Kusuhara, Rina	Osaka University
Higashimori, Mitsuru	Osaka University

09:00-10:00 WePI2T7.17

A Novel Geometrical Structure Robot Hand for Linear-Parallel Pinching and Coupled Self-Adaptive Hybrid Grasping, pp. 3030-3035. Attachment

Chen, Shi	Nanchang University
Zhang, Bihao	University of Science and Technology of China
Feng, Kehan	Nanjing University of Aeronautics and Astronautics
Wang, Yizhou	Southern University of Science and Technology
Li, Jiayun	The Hong Kong University of Science and Technology
Zhang, Wenzeng	Shenzhen X-Institute

WePI2T8 Room 8

Robot Motion Planning I (Teaser Session)

Chair: Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)
Co-Chair: Stein, Gregory	George Mason University

09:00-10:00 WePI2T8.1

Active Information Gathering for Long-Horizon Navigation under Uncertainty by Predicting the Value of Information, pp. 3036-3042. Attachment

Arnob, Raihan Islam	George Mason University
Stein, Gregory	George Mason University

09:00-10:00 WePI2T8.2

Time-Optimal Path Parameterization for Cooperative Multi-Arm Robotic Systems with Third-Order Constraints, pp. 3043-3048. Attachment

Dio, Maximilian	Friedrich-Alexander-Universität Erlangen-Nürnberg
Graichen, Knut	Friedrich Alexander University Erlangen-Nürnberg
Völz, Andreas	Friedrich-Alexander-Universität Erlangen-Nürnberg

09:00-10:00 WePI2T8.3

Neural Trajectory Model: Implicit Neural Trajectory Representation for Trajectories Generation, pp. 3049-3054. Attachment

Yu, Zihan	The Hongkong University of Science and Technology(Guangzhou)
Tang, Yuqing	International Digital Economy Academy (IDEA)

09:00-10:00 WePI2T8.4

Planning for Long-Term Monitoring Missions in Time-Varying Environments, pp. 3055-3061.

Stephens, Alex	University of Oxford
Lacerda, Bruno	University of Oxford
Hawes, Nick	University of Oxford

09:00-10:00 WePI2T8.5

Local Path Planning among Pushable Objects Based on Reinforcement Learning, pp. 3062-3068.

Yao, Linghong	University College London

Modugno, Valerio	University College London
Delfaki, Andromachi Maria	University College London
Liu, Yuanchang	University College London
Stoyanov, Danail	University College London
Kanoulas, Dimitrios	University College London

09:00-10:00 WePI2T8.6

Learning-Informed Long-Horizon Navigation under Uncertainty for Vehicles with Dynamics, pp. 3069-3075. Attachment

Khanal, Abhish	George Mason University
Bui, Hoang-Dung	George Mason University
Plaku, Erion	U.S. National Science Foundation
Stein, Gregory	George Mason University

09:00-10:00 WePI2T8.7

Enhancing Safety Via Deep Reinforcement Learning in Trajectory Planning for Agile Flights within Unknown Environments, pp. 3076-3083. Attachment

Rocha, Lidia	UFSCar
Bidinotto, Jorge	University of Sao Paulo
Heintz, Fredrik	Linköping University
Tiger, Mattias	AI and Integrated Computer Systems (AIICS), Linköping University
Vivaldini, Kelen Cristiane Teixeira	FEL-CTU / DC - UFSCar

09:00-10:00 WePI2T8.8

A Generic Trajectory Planning Method for Constrained All-Wheel-Steering Robots, pp. 3084-3091.

Xin, Ren	The Hong Kong University of Science and Technology
Liu, Hongji	The Hong Kong University of Science and Technology
Chen, Yingbing	The Hongkokng University of Science and Technology
Cheng, Jie	Hong Kong University of Science and Technology
Wang, Sheng	Hong Kong University of Science and Technology
Ma, Jun	The Hong Kong University of Science and Technology
Liu, Ming	Hong Kong University of Science and Technology (Guangzhou)

09:00-10:00 WePI2T8.9

A Safe and Efficient Timed-Elastic-Band Planner for Unstructured Environments, pp. 3092-3099. Attachment

Xi, Haoyu	University of Chinese Academy of Sciences
Li, Wei	Institute of Computing Technology, Chinese Academy of Sciences
Zhao, Fangzhou	Institute of Computing Technology, Chinese Academy of Sciences
Chen, Liang	Institute of Computing Technology: Beijing, CN
Hu, Yu	Institute of Computing Technology Chinese Academy of Sciences

09:00-10:00 WePI2T8.10

An Optimization-Based Planner with B-Spline Parameterized Continuous-Time Reference Signals, pp. 3100-3107. Attachment

Tao, Chuyuan	University of Illinois, Urbana and Champaign
Cheng, Sheng	University of Illinois Urbana-Champaign
Zhao, Yang	University of Illinois Urbana-Champaign
Wang, Fanxin	University of Illinois at Urbana-Champaign
Hovakimyan, Naira	University of Illinois at Urbana-Champaign

09:00-10:00 WePI2T8.11

Sequential Convex Programming for Time-Optimal Quadrotor Waypoint Flight, pp. 3108-3115.

Shen, Zhipeng	The Hong Kong Polytechnic University
Zhou, Guanzhong	The Hong Kong Polytechnic University
Huang, Hailong	The Hong Kong Polytechnic University

09:00-10:00 WePI2T8.12

Energy-Optimized Planning in Non-Uniform Wind Fields with Fixed-Wing Aerial Vehicles, pp. 3116-3122. Attachment

Duan, Yufei	KTH Royal Institute of Technology
Achermann, Florian	ETH Zurich, ASL
Lim, Jaeyoung	ETH Zurich
Siegwart, Roland	ETH Zurich

09:00-10:00 WePI2T8.13

Efficient Path Planning for Modular Reconfigurable Robots, pp. 3123-3129.

Mayer, Matthias	Technical University of Munich
Li, Zihao	Technical University of Munich

Althoff, Matthias	Technische Universität München

09:00-10:00 WePI2T8.14

Robust Precision Landing of a Quadrotor with Online Temporal Scaling Adaptation of Dynamic Movement Primitives, pp. 3130-3137. Attachment

Rothomphiwat, Kongkiat	VidyasirimedhiInstitute of Science and Technology (VISTEC)
Jaroonsorn, Prakarn	AI and Robotics Ventures Co., Ltd
Kriengkomol, Pakpoom	AI and Robotics Ventures
Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

09:00-10:00 WePI2T8.15

Sampling-Based Motion Planning for Optimal Probability of Collision under Environment Uncertainty, pp. 3138-3145. Attachment

Lu, Hao	Australian National University
Kurniawati, Hanna	Australian National University
Shome, Rahul	The Australian National University

09:00-10:00 WePI2T8.16

Flexible Informed Trees (FIT): Adaptive Batch-Size Approach in Informed Sampling-Based Path Planning*, pp. 3146-3152. Attachment

Zhang, Liding	Technical University of Munich
Bing, Zhenshan	Technical University of Munich
Chen, Kejia	Technical University of Munich
Chen, Lingyun	Technical University of Munich
Cai, Kuanqi	Technical University of Munich
Zhang, Yu	Technical University of Munich
Wu, Fan	Technical University of Munich
Krumbholz, Peter	KION Group
Yuan, Zhilin	KION Group
Haddadin, Sami	Technical University of Munich
Knoll, Alois	Tech. Univ. Muenchen TUM

WePI2T9 Room 9

Navigation I (Teaser Session)

Chair: Okuda, Hiroyuki	Nagoya University
Co-Chair: Moustakas, Konstantinos	University of Patras

09:00-10:00 WePI2T9.1

DriVLMe: Enhancing LLM-Based Autonomous Driving Agents with Embodied and Social Experiences, pp. 3153-3160. Attachment

Huang, Yidong	University of Michigan
Sansom, Jacob	University of Michigan
Ma, Ziqiao	University of Michigan
Gervits, Felix	DEVCOM Army Research Laboratory
Chai, Joyce	University of Michigan

09:00-10:00 WePI2T9.2

Perception for Connected Autonomous Vehicles under Adverse Weather Conditions, pp. 3161-3166. Attachment

Tsakmakopoulou, Dimitra	University of Patras
Moustakas, Konstantinos	University of Patras

09:00-10:00 WePI2T9.3

Reward-Field Guided Motion Planner for Navigation with Limited Sensing Range, pp. 3167-3174.

Bayer, Jan	Czech Technical University in Prague
Faigl, Jan	Czech Technical University in Prague

09:00-10:00 WePI2T9.4

Real-Time Path Generation and Alignment Control for Autonomous Curb Following, pp. 3175-3181. Attachment

Wang, Yuanzhe	Nanyang Technological University
Dai, Yunxiang	Nanyang Technological University
Wang, Danwei	Nanyang Technological University

09:00-10:00 WePI2T9.5

Real-Time Hazard Prediction in Connected Autonomous Vehicles: A Digital Twin Approach, pp. 3182-3188. Attachment

Barroso Ramírez, Sergio	Universidad De Extremadura
Zapata Cornejo, Noé José	Universidad De Extremadura

Pérez González, Gerardo	Universidad De Extremadura
Bustos, Pablo	Universidad De Extremadura
Núñez, Pedro	University of Extremadura

09:00-10:00 WePI2T9.6

Domain Adaptation in Visual Reinforcement Learning Via Self-Expert Imitation with Purifying Latent Feature, pp. 3189-3195.

Chen, Lin	Hu Nan University
Huang, Jianan	Hunan University
Zhou, Zhen	Hunan University
Wang, Yaonan	Hunan University
Mo, Yang	Hunan University
Miao, Zhiqiang	Hunan University
Zeng, Kai	Hunan University
Feng, Mingtao	Xidian University
Wang, Danwei	Nanyang Technological University

09:00-10:00 WePI2T9.7

Switching Sampling Space of Model Predictive Path-Integral Controller to Balance Efficiency and Safety in 4WIDS Vehicle Navigation, pp. 3196-3203. Attachment

Aoki, Mizuho	Nagoya University
Honda, Kohei	Nagoya University
Okuda, Hiroyuki	Nagoya University
Suzuki, Tatsuya	Nagoya University

09:00-10:00 WePI2T9.8

Visual Perception System for Autonomous Driving, pp. 3204-3211. Attachment

Zhang, Qi	University of Bath
Gou, Siyuan	University of Bath
Li, Wenbin	University of Bath

09:00-10:00 WePI2T9.9

Rain-Reaper: Unmasking LiDAR-Based Detector Vulnerabilities in Rain, pp. 3212-3217. Attachment

Capraru, Richard	Nanyang Technological University
Lupu, Emil Constantin	Imperial College London
Demetriou, Soteris	Imperial College London
Wang, Jian-Gang	Institute for Infocomm Research
Soong, Boon Hee	Nanyang Technological University

09:00-10:00 WePI2T9.10

An Observability Constrained Downward-Facing Optical-Flow-Aided Visual-Inertial Odometry, pp. 3218-3225. Attachment

Liu, Dandi	Zhejiang University
Mei, Jiahao	Zhejiang University of Technology
Zhou, Jin	Zhejiang University
Li, Shuo	Zhejiang University

09:00-10:00 WePI2T9.11

Learning Autonomous Driving from Aerial Imagery, pp. 3226-3233. Attachment

Murali, Varun	Massachusetts Institute of Technology
Rosman, Guy	Massachusetts Institute of Technology
Karaman, Sertac	Massachusetts Institute of Technology
Rus, Daniela	MIT

09:00-10:00 WePI2T9.12

Magnetic Field Aided Vehicle Localization with Acceleration Correction, pp. 3234-3239.

Deshpande, Mrunmayee	Texas A&M University
Majji, Manoranjan	Texas A&M University
Ramos, J Humberto	University of Florida

09:00-10:00 WePI2T9.13

Neuro-Explorer: Efficient and Scalable Exploration Planning Via Learned Frontier Regions, pp. 3240-3245. Attachment

Han, Kyung Min	Ewha Womans Univeristy
Kim, Young J.	Ewha Womans University

09:00-10:00 WePI2T9.14

Skill Q-Network: Learning Adaptive Skill Ensemble for Mapless Navigation in Unknown Environments, pp. 3246-3253.

Attachment

Seong, Hyunki	KAIST
Shim, David Hyunchul	KAIST

09:00-10:00 WePI2T9.15

Look before You Leap: Socially Acceptable High-Speed Ground Robot Navigation in Crowded Hallways, pp. 3254-3259.

Sharma, Lakshay	Massachusetts Institute of Technology
Buono, Nicolaniello	Massachusetts Institute of Technology
Flather, Ashton	Massachusetts Institute of Technology
Cai, Xiaoyi	Massachusetts Institute of Technology
How, Jonathan	Massachusetts Institute of Technology

09:00-10:00 WePI2T9.16

Learning Sampling Distribution and Safety Filter for Autonomous Driving with VQ-VAE and Differentiable Optimization, pp. 3260-3267. Attachment

Idoko, Simon	University of Tartu
Sharma, Basant	University of Tartu
Singh, Arun Kumar	University of Tartu

WePI2T10 Room 10

Simultaneous Localization and Mapping (SLAM) II (Teaser Session)

Chair: La, Hung	University of Nevada at Reno
Co-Chair: Milford, Michael J	Queensland University of Technology

09:00-10:00 WePI2T10.1

CBGL: Fast Monte Carlo Passive Global Localisation of 2D LIDAR Sensor, pp. 3268-3275. Attachment

Filotheou, Alexandros	Aristotle University of Thessaloniki

09:00-10:00 WePI2T10.2

SGNet: Salient Geometric Network for Point Cloud Registration, pp. 3276-3282.

Wu, Qianliang	Nanjing University of Science and Technology
Ding, Yaqing	Czech Technical University in Prague
Luo, Lei	Nanjing University of Science and Technology
Jiang, Haobo	Nanjing University of Science and Technology
Gu, Shuo	Nanjing University of Science and Technology
Zhou, Chuanwei	Nanjing University of Science and Technology
Xie, Jin	Nanjing University of Science and Technology
Yang, Jian	Nanjing University of Science & Technology

09:00-10:00 WePI2T10.3

Resource-Aware Collaborative Monte Carlo Localization with Distribution Compression, pp. 3283-3290. Attachment

Zimmerman, Nicky	University of Lugano
Giusti, Alessandro	IDSIA USI-SUPSI
Guzzi, Jerome	IDSIA, USI-SUPSI

09:00-10:00 WePI2T10.4

Neighborhood Consensus Guided Matching Based Place Recognition with Spatial-Channel Embedding, pp. 3291-3296.

Li, Kunmo	Northeastern University
Zhang, Yunzhou	Northeastern University
Ning, Jian	Northeastern University
Zhao, Xinge	Northeastern University
Wang, Guiyuan	Jiangsu Shuguang Optoelectronics Co., Ltd., Yangzhou, China
Liu, Wei	Jiangsu Shuguang Optoelectronics Co., Ltd., Yangzhou, China

09:00-10:00 WePI2T10.5

Optimal Robot Formations: Balancing Range-Based Observability and User-Defined Configurations, pp. 3297-3304. Attachment

Ahmed, Syed Shabbir	McGill University
Shalaby, Mohammed Ayman	McGill University
Le Ny, Jerome	Polytechnique Montreal
Forbes, James Richard	McGill University

09:00-10:00 WePI2T10.6

Augmenting Vision with Radar for All-Weather Geo-Localization without a Prior HD Map, pp. 3305-3311.

Dong, Can	Harbin Institute of Technology, Shenzhen

Hong, Ziyang	Heriot-Watt University
Li, Siru	Harbin Institute of Technology, Shenzhen
Hu, Liang	Harbin Institute of Technology, Shenzhen
Gao, Huijun	Harbin Institute of Technology

09:00-10:00 WePI2T10.7

High-Accuracy 2-D AoA Estimation Using Lightweight UWB Arrays, pp. 3312-3317.

Li, Yi	Tsinghua University
Zhao, Hanying	Tsinghua University
Liu, Yiman	Tsinghua University
Wang, Tianyu	QiYuan Lab
Jincheng, Yu	Tsinghua University
Shen, Yuan	Tsinghua University

09:00-10:00 WePI2T10.8

Explicit Interaction for Fusion-Based Place Recognition, pp. 3318-3325.

Xu, Jingyi	Beijing Institute of Technology
Ma, Junyi	Beijing Institute of Technology
Wu, Qi	Shanghai Jiao Tong University
Zhou, Zijie	Beijing Institute of Technology
Wang, Yue	Zhejiang University
Chen, Xieyuanli	National University of Defense Technology
Yu, Wenxian	Shanghai Jiao Tong University
Pei, Ling	Shanghai Jiao Tong University

09:00-10:00 WePI2T10.9

ModaLink: Unifying Modalities for Efficient Image-To-PointCloud Place Recognition, pp. 3326-3333. Attachment

Xie, Weidong	Xi'an Jiaotong University
Luo, Lun	Zhejiang University
Ye, Nanfei	Haomo
Ren, Yi	Carnegie Mellon University
Du, Shaoyi	Xi'an Jiaotong University
Wang, Minhang	HAOMO.AI Technology Co., Ltd
Xu, Jintao	HAOMO.AI Technology Co., Ltd
Ai, Rui	HAOMO.AI Technology Co., Ltd
Gu, Weihao	HAOMO.AI Technology Co., Ltd
Chen, Xieyuanli	National University of Defense Technology

09:00-10:00 WePI2T10.10

A Multi-Model Fusion of LiDAR-Inertial Odometry Via Localization and Mapping, pp. 3334-3339. Attachment

Nguyen, An	University of Nevada, Reno
Le, Chuong	University of Nevada, Reno
Walunj, Pratik	University of Nevada Reno
Do, Thanh Nho	UNSW
Netchaev, Anton	USACE ERDC
La, Hung	University of Nevada at Reno

09:00-10:00 WePI2T10.11

Dynamically Modulating Visual Place Recognition Sequence Length for Minimum Acceptable Performance Scenarios, pp. 3340-3347. Attachment

Malone, Connor	Queensland University of Technology
Vora, Ankit	Ford Motor Company
Peynot, Thierry	Queensland University of Technology (QUT)
Milford, Michael J	Queensland University of Technology

09:00-10:00 WePI2T10.12

JointLoc: A Real-Time Visual Localization Framework for Planetary UAVs Based on Joint Relative and Absolute Pose Estimation, pp. 3348-3355. Attachment

Luo, Xubo	University of Chinese Academy of Sciences
Wan, Xue	Technology and Engineering Center for Space Utilization, Chinese
Gao, Yixing	Jilin University
Tian, Yaolin	University of Chinese Academy of Sciences
Zhang, Wei	Chinese Academy of Sciences
Shu, Leizheng	Chinese Academy of Sciences

09:00-10:00 WePI2T10.13

Enhancing Visual Place Recognition Via Fast and Slow Adaptive Biasing in Event Cameras, pp. 3356-3363. Attachment

B Nair, Gokul — QUT Centre for Robotics, Brisbane, Australia
Milford, Michael J — Queensland University of Technology
Fischer, Tobias — Queensland University of Technology

09:00-10:00 WePI2T10.14

Tightly-Coupled Factor Graph Formulation for Radar-Inertial Odometry, pp. 3364-3370. Attachment

Michalczyk, Jan — University of Klagenfurt
Quell, Julius Karsten Oskar — Institute of Robotics and Mechatronics - German Aerospace Center
Steidle, Florian — German Aerospace Center
Müller, Marcus Gerhard — German Aerospace Center
Weiss, Stephan — Universität Klagenfurt

09:00-10:00 WePI2T10.15

Three-Dimensional Vehicle Dynamics State Estimation for High-Speed Race Cars under Varying Signal Quality, pp. 3371-3378. Attachment

Goblirsch, Sven — Technical University Munich
Weinmann, Marcel — Technical University Munich
Betz, Johannes — Technical University of Munich

09:00-10:00 WePI2T10.16

LiDAR-Based HD Map Localization Using Semantic Generalized ICP with Road Marking Detection, pp. 3379-3386. Attachment

Gong, Yansong — UISEE Technology Co., Ltd
Zhang, Xinglian — UISEE (Shanghai) Automotive Technologies Ltd
Feng, Jingyi — UISEE Technology Co., Ltd
He, Xiao — UISEE Technology (Beijing) Co., Ltd
Zhang, Dan — Uisee Technology (Beijing) Co., Ltd

WePI2T11 Room 11

Multi-Robot Systems and Swarms I (Teaser Session)

Chair: Parasuraman, Ramviyas — University of Georgia
Co-Chair: Simonin, Olivier — INSA De Lyon

09:00-10:00 WePI2T11.1

HGP-RL: Distributed Hierarchical Gaussian Processes for Wi-Fi-Based Relative Localization in Multi-Robot Systems, pp. 3387-3394. Attachment

Latif, Ehsan — University of Georgia
Parasuraman, Ramviyas — University of Georgia

09:00-10:00 WePI2T11.2

Anchor-Oriented Localized Voronoi Partitioning for GPS-Denied Multi-Robot Coverage, pp. 3395-3402. Attachment

Munir, Aiman — University of Georgia
Latif, Ehsan — University of Georgia
Parasuraman, Ramviyas — University of Georgia

09:00-10:00 WePI2T11.3

Deep Ad-Hoc Sub-Team Partition Learning for Multi-Agent Air Combat Cooperation, pp. 3403-3408.

Fan, Songyuan — Harbin Institute of Technology
Piao, Haiyin — Northwestern Polytechnical University
Hu, Yi — Harbin Institute of Technology
Jiang, Feng — Harbin Institute of Technology
Yang, Roushu — SAIL

09:00-10:00 WePI2T11.4

Robustness Study of Optimal Geometries for Cooperative Multi-Robot Localization, pp. 3409-3416.

Theunissen, Mathilde — LS2N, CNRS
Fantoni, Isabelle — CNRS
Malis, Ezio — Inria
Martinet, Philippe — INRIA

09:00-10:00 WePI2T11.5

Decentralized Communication-Maintained Coordination for Multi-Robot Exploration: Achieving Connectivity and Adaptability, pp. 3417-3424. Attachment

Tang, Wei	Zhejiang University
Li, Chao	Hangzhou Deeprobotics Co.Ltd
Wu, Jun	Zhejiang University
Zhu, Qiuguo	Zhejiang University

09:00-10:00 WePI2T11.6

Collaborative Object Manipulation on the Water Surface by a UAV-USV Team Using Tethers, pp. 3425-3432. Attachment

Novák, Filip	Czech Technical University in Prague
Baca, Tomas	Ceske Vysoke Uceni Technicke V Praze, FEL
Saska, Martin	Czech Technical University in Prague

09:00-10:00 WePI2T11.7

Multi-Robot Path Planning with Boolean Specification Tasks under Motion Uncertainties, pp. 3433-3438.

Zhang, Zhe	Shaanxi University of Science and Technology
He, Zhou	Shaanxi University of Science and Technology
Ran, Ning	Hebei University
Reniers, Michel	Eindhoven University of Technology

09:00-10:00 WePI2T11.8

Coalition Formation Game Approach for Task Allocation in Heterogeneous Multi-Robot Systems under Resource Constraints, pp. 3439-3446.

Zhang, Liwang	National University of Defense Technology
Liang, Dong	College of Sciences, National University of Defense Technology
Li, Minglong	National University of Defense Technology
Yang, Wenjing	State Key Laboratory of High Performance Computing (HPCL), Schoo
Yang, Shaowu	National University of Defense Technology

09:00-10:00 WePI2T11.9

Design of a Multi-Robot Coordination System Based on Functional Expressions Using Large Language Models, pp. 3447-3454. Attachment

Kato, Yuki	Osaka University
Yoshida, Takahiro	Osaka University
Sueoka, Yuichiro	Osaka Univ
Osuka, Koichi	Osaka University
Yajima, Ryosuke	The University of Tokyo
Nagatani, Keiji	The University of Tokyo
Asama, Hajime	The University of Tokyo

09:00-10:00 WePI2T11.10

CGA: Corridor Generating Algorithm for Multi-Agent Environments, pp. 3455-3462.

Pertzovsky, Arseniy	Ben-Gurion University of the Negev
Stern, Roni	Ben Gurion University of the Negev, Palo Alto Research Center (P
Zivan, Roie	Ben Gurion University of the Negev

09:00-10:00 WePI2T11.11

Learning to Imitate Spatial Organization in Multi-Robot Systems, pp. 3463-3469. Attachment

Agunloye, Ayomide Oluwaseyi	University of Southampton
Ramchurn, Sarvapali	University of Southampton
Soorati, Mohammad D.	University of Southampton

09:00-10:00 WePI2T11.12

D-MARL: A Dynamic Communication-Based Action Space Enhancement for Multi Agent Reinforcement Learning Exploration of Large Scale Unknown Environments, pp. 3470-3475. Attachment

Calzolari, Gabriele	Luleå Tekniska Universitet
Sumathy, Vidya	Luleå University of Technology
Kanellakis, Christoforos	LTU
Nikolakopoulos, George	Luleå University of Technology

09:00-10:00 WePI2T11.13

Opinion-Based Strategy for Distributed Multi-Robot Task Allocation in Swarms of Robots, pp. 3476-3481.

Zhang, Ziqiao	Georgia Institute of Technology
Chen, Shengkang	Georgia Tech
Mayberry, Scott	Georgia Institute of Technology
Zhang, Fumin	Georgia Institute of Technology

09:00-10:00 WePI2T11.14

Robust and Safe Task-Driven Planning and Navigation for Heterogeneous Multi-Robot Teams with Uncertain Dynamics, pp. 3482-3489.

Pan, Tianyang	Rice University
Verginis, Christos	Uppsala University
Kavraki, Lydia	Rice University

09:00-10:00 WePI2T11.15

Communication-Constrained Multi-Robot Exploration with Intermittent Rendezvous, pp. 3490-3497. Attachment

Ribeiro da Silva, Alysson	Universidade Federal De Minas Gerais
Chaimowicz, Luiz	Federal University of Minas Gerais
Costa Silva, Thales	University of Pennsylvania
Hsieh, M. Ani	University of Pennsylvania

09:00-10:00 WePI2T11.16

Tree-Based Reconfiguration of Metamorphic Robots, pp. 3498-3504. Attachment

Ondika, Patrick	Faculty of Informatics Masaryk University
Mrázek, Jan	Masaryk University
Barnat, Jiri	Faculty of Informatics Masaryk University

09:00-10:00 WePI2T11.17

Multi-Robot Navigation among Movable Obstacles: Implicit Coordination to Deal with Conflicts and Deadlocks, pp. 3505-3511. Attachment

Renault, Benoit	INSA Lyon
Saraydaryan, Jacques	Cpe Lyon
Brown, David	Inria
Simonin, Olivier	INSA De Lyon

WePI2T12 Room 12

Mechanisms and Actuation (Teaser Session)

Chair: Ikemoto, Shuhei	Kyushu Institute of Technology
Co-Chair: Gan, Dongming	Purdue University

09:00-10:00 WePI2T12.1

Active Learning for Forward/Inverse Kinematics of Redundantly-Driven Flexible Tensegrity Manipulator, pp. 3512-3518. Attachment

Yoshimitsu, Yuhei	Kyushu Institute of Technology
Osa, Takayuki	University of Tokyo
Ben Amor, Heni	Arizona State University
Ikemoto, Shuhei	Kyushu Institute of Technology

09:00-10:00 WePI2T12.2

Design of a Variable Wheel-Propeller Integrated Mechanism for Amphibious Robots, pp. 3519-3525. Attachment

Lu, Liang	Huazhong University of Science and Technology
Gao, Xiangquan	Huazhong University of Science and Technology
Xiang, Ming	Huazhong University of Science and Technology
Yan, Zefeng	Huazhong University of Science & Technology
Han, Bin	Huazhong University of Science and Technology

09:00-10:00 WePI2T12.3

Static Modeling of the Stiffness and Contact Forces of Rolling Element Eccentric Drives for Use in Robotic Drive Systems, pp. 3526-3533. Attachment

Fritsch, Simon	Technical University of Munich
Landler, Stefan	Technical University of Munich
Otto, Michael	Technical University of Munich, Chair of Machine Elements, Gear
Vogel-Heuser, Birgit	Technical University Munich
Zimmermann, Markus	Technical University of Munich
Stahl, Karsten	Technical University of Munich

09:00-10:00 WePI2T12.4

Energy Minimization Using Custom-Designed Magnetic-Spring Actuators, pp. 3534-3539.

Fu, Yue Yang	Vanderbilt University
Kilic, Ali Umut	Vanderbilt University
Braun, David	Vanderbilt University

09:00-10:00 WePI2T12.5

Novel Multiport Output Twisted String Actuator with Self-Differential Mechanism: Hand Glove Application, pp.

3540-3545.

Wei, Dunwen	University of Electronic Science and Technology of China
Cui, Chenguang	University of Electronic Science and Technology of China
Yu, Haitao	University of Electronic Science and Technology of China
Gao, Tao	University of Electronic Science and Technology of China
Li, Chao	Sichuan Cancer Center
Hussain, Sajjad	University of Naples Federico II
Ficuciello, Fanny	Università Di Napoli Federico II

09:00-10:00 WePI2T12.6

Torque Ripple Reduction in Quasi-Direct Drive Motors through Angle-Based Repetitive Learning Observer and Model Predictive Torque Controller, pp. 3546-3552. Attachment

Zhang, Hefei	University of Science and Technology of China
Zhang, Xiaohu	University of Science and Technology of China
Cheng, Jinyu	University of Science and Technology of China
Hu, Jiangtao	University of Science and Technology of China
Ji, Chao	University of Science and Technology of China
Wang, Yu	Harbin Institute of Technology, Shenzhen
Jiang, Yutong	China North Vehicle Research Institute
Han, Zhen	China North Vehicle Research Institute
Gao, Wei	University of Science and Technology of China
Zhang, Shiwu	University of Science and Technology of China

09:00-10:00 WePI2T12.7

Development of a Mobile Reconfigurable Mecanum Robot with a Locking Device of Rollers, pp. 3553-3558. Attachment

Zakharov, Dmitrii	ITMO University
Iaremenko, Andrei	ITMO
Kurovskii, Denis	ITMO University
Kurovskii, Artem	ITMO University
Borisov, Oleg	ITMO University
Zhang, Botao	Hangzhou Dianzi University

09:00-10:00 WePI2T12.8

Parametric Synthesis of Compliant Joints for Impact Robust Shaftless Leg Mechanisms, pp. 3559-3564. Attachment

Rakshin, Egor	ITMO University
Ogureckiy, Dmitriy	ITMO University
Borisov, Ivan	ITMO University
Kolyubin, Sergey	ITMO University

09:00-10:00 WePI2T12.9

Trans-Rotor: An Active Omnidirectional Aerial-Ground Vehicle with Differential Gear Joint Transformation Mechanism, pp. 3565-3572. Attachment

Wu, Xuankang	Northeastern University
Sun, Haoxiang	Northeastern University
Xiao, Tong	Northeastern University
Pan, Yanzhang	Northeastern University
Fang, Zheng	Northeastern University

09:00-10:00 WePI2T12.10

SNU-Avatar Haptic Glove: Novel Modularized Haptic Glove Via Trigonometric Series Elastic Actuators, pp. 3573-3580. Attachment

Sung, Eunho	Seoul National University
You, Seungbin	Seoul National University
Moon, Seongkyeong	Seoul National University
Kim, Juhyun	Seoul National University
Park, Jaeheung	Seoul National University

09:00-10:00 WePI2T12.11

Versatile Variable-Stiffness Scooping End-Effector: Tilting-Scooping-Transfer Mechanism for Objects with Various Properties, pp. 3581-3588. Attachment

Takahashi, Yuta	Tohoku University
Tadakuma, Kenjiro	Osaka University
Abe, Kazuki	Osaka University
Watanabe, Masahiro	Osaka University
Shimizu, Shoya	Tohoku University

Tadokoro, Satoshi	Tohoku University

09:00-10:00 WePI2T12.12

Enhanced Omni-Ball: Spherical Omnidirectional Wheel Achieving Passive Rollers with High Load Capacity and Smoothness through an Offset Rotational Axis, pp. 3589-3596. Attachment

Tadakuma, Kenjiro	Osaka University
Sakiyama, Seiji	Tohoku University
Takane, Eri	Tohoku University
Tadakuma, Riichiro	Yamagata University
Tadokoro, Satoshi	Tohoku University

09:00-10:00 WePI2T12.13

Design and Control of a Novel Six-Degree-Of-Freedom Hybrid Robotic Arm, pp. 3597-3604. Attachment

Chen, Yang	Beijing Academy of Agriculture and Forestry Sciences
Miao, Zhonghua	Shanghai University
Ge, Yuanyue	Beijing Academy of Agriculture and Forestry Sciences
Lin, Sen	Intelligent Equipment Research Center, Beijing Academy of Agricu
Chen, Liping	Intelligent Equipment Research Center, Beijing Academy of Agricu
Xiong, Ya	Beijing Academy of Agriculture and Forestry Sciences

09:00-10:00 WePI2T12.14

DIABLO: A 6-DoF Wheeled Bipedal Robot Composed Entirely of Direct-Drive Joints, pp. 3605-3612. Attachment

Liu, Dingchuan	Sun Yat-Sen University
Fangfang, Yang	Sun Yat-Sen University
Liao, Xuanhong	Direct Drive Technology Ltd
Lyu, Ximin	Sun Yat-Sen University

09:00-10:00 WePI2T12.15

Safe Imitation Learning of Nonlinear Model Predictive Control for Flexible Robots, pp. 3613-3619. Attachment

Mamedov, Shamil	KU Leuven
Reiter, Rudolf	University of Freiburg
Basiri Azad, Seyed Mahdi	University of Freiburg
Viljoen, Ruan Matthys	KU Leuven
Boedecker, Joschka	University of Freiburg
Diehl, Moritz	Univ. of Heidelberg
Swevers, Jan	KU Leuven

09:00-10:00 WePI2T12.16

Design and Modeling of a Thin-Walled Multi-Segment Continuum Robotic Bronchoscope, pp. 3620-3626. Attachment

Bian, Gui-Bin	Institute of Automation, Chinese Academy of Sciences
Zhang, Ming-Yang	Institute of Automation, Chinese Academy of Sciences
Ye, Qiang	Institute of Automation, Chinese Academy of Sciences
Ren, Han	Institute of Automation, Chinese Academy of Sciences
Zhai, Yu-Peng	School of Automation, Beijing Information Science and Technology
Ma, Ruichen	Institute of Automation, Chinese Academy of Sciences
Li, Zhen	Institute of Automation, Chinese Academy of Sciences

WeAT1 Room 1

Best Safety, Security, and Rescue Robotics Papers (IRSI) (Regular session)

Chair: Kyrki, Ville — Aalto University

10:00-10:15 WeAT1.1

Automating ROS2 Security Policies Extraction through Static Analysis, pp. 3627-3634.

Zanatta, Giacomo	Ca' Foscari University of Venice
Caiazza, Gianluca	Ca Foscari University of Venice
Ferrara, Pietro	Ca' Foscari University of Venice
Negrini, Luca	Ca' Foscari University of Venice
White, Ruffin	University of California San Diego

10:15-10:30 WeAT1.2

Jointly Learning Cost and Constraints from Demonstrations for Safe Trajectory Generation, pp. 3635-3642. Attachment

Chaubey, Shivam	Aalto University
Verdoja, Francesco	Aalto University
Kyrki, Ville	Aalto University

10:30-10:45 WeAT1.3

Learned Regions of Attraction for Safe Motion Primitive Transitions, pp. 3643-3650. Attachment

Ubellacker, Wyatt — California Institute of Technology
Ames, Aaron — California Institute of Technology

10:45-11:00 WeAT1.4

Embodied AI with Two Arms: Zero-Shot Learning, Safety and Modularity, pp. 3651-3657. Attachment

Varley, Jacob — Google
Singh, Sumeet — Google
Jain, Deepali — Robotics at Google
Choromanski, Krzysztof — Google DeepMind Robotics
Zeng, Andy — Google DeepMind
Basu Roy Chowdhury, Somnath — UNC Chapel Hill
Dubey, Avinava — Google
Sindhwani, Vikas — Google Brain, NYC

WeAT2 Room 2

Best Mobile Manipulation Papers (OMRON Sinix X Corp.) (Regular session)

Chair: Harada, Kensuke — Osaka University

10:00-10:15 WeAT2.1

Harmonic Mobile Manipulation, pp. 3658-3665. Attachment

Yang, Ruihan — UC San Diego
Kim, Yejin — Allen Institute for AI
Hendrix, Rose — Allen Institute for AI
Kembhavi, Aniruddha — Allen Institute for AI
Wang, Xiaolong — UC San Diego
Ehsani, Kiana — Allen Institute for Artificial Intelligence

10:15-10:30 WeAT2.2

BaSeNet: A Learning-Based Mobile Manipulator Base Pose Sequence Planning for Pickup Tasks, pp. 3666-3673.

Naik, Lakshadeep — University of Southern Denmark (SDU)
Kalkan, Sinan — Middle East Technical University
Sørensen, Sune Lundø — University of Southern Denmark
Mikkel, Kjærgaard — University of Southern Denmark
Krüger, Norbert — University of Southern Denmark

10:30-10:45 WeAT2.3

MAkEable: Memory-Centered and Affordance-Based Task Execution Framework for Transferable Mobile Manipulation Skills, pp. 3674-3681. Attachment

Pohl, Christoph — Karlsruhe Institute of Technology (KIT)
Reister, Fabian — Karlsruhe Institute of Technology (KIT)
Peller-Konrad, Fabian — Karlsruhe Institute of Technology (KIT)
Asfour, Tamim — Karlsruhe Institute of Technology (KIT)

10:45-11:00 WeAT2.4

A Novel Variable Stiffness Suspension System for Improved Stability and Control of Tactile Mobile Manipulators, pp. 3682-3689. Attachment

Kuhn, Sebastian — Technical University of Munich
Yildirim, Mehmet Can — Technical University of Munich
Pozo Fortunić, Edmundo — Technical University of Munich
Karacan, Kübra — Technical University of Munich
Swikir, Abdalla — Technical University of Munich
Haddadin, Sami — Technical University of Munich

WeAT3 Room 3

Manipulation and Grasping I (Regular session)

Chair: D'Avella, Salvatore — Sant'Anna School of Advanced Studies
Co-Chair: Khorrami, Farshad — New York University Tandon School of Engineering

10:00-10:15 WeAT3.1

A Novel Dual-Robot Accurate Calibration Method Using Convex Optimization and Lie Derivative (I), N/A

Jiang, Cheng — Huazhong University of Science and Technology

Li, Wen-long	Huazhong University of Science and Technology
Li, Wen-pan	The Chinese University of Hong Kong
Wang, Dongfang	Huazhong University of Science and Technology
Zhu, Lijun	Huazhong University of Science and Technology
Xu, Wei	Huazhong University of Science & Technology
Zhao, Huan	Huazhong University of Science and Technology
Ding, Han	Huazhong University of Science and Technology

10:15-10:30 WeAT3.2

Grasp Multiple Objects with One Hand, N/A

Li, Yuyang	Tsinghua University
Liu, Bo	National University of Singapore
Geng, Yiran	Peking University
Li, Puhao	Tsinghua University
Yang, Yaodong	Peking University
Zhu, Yixin	Peking University
Liu, Tengyu	Beijing Institute for General Artificial Intelligence
Huang, Siyuan	Beijing Institute for General Artificial Intelligence

10:30-10:45 WeAT3.3

*One-Finger Manipulation of 3D Objects by Planning Start-To-Push Points and Pushing Forces**. N/A

Xiao, Mubang	National University of Defense Technology,
Ding, Ye	Shanghai Jiao Tong University
Fan, Shixun	National University of Defense Technology

10:45-11:00 WeAT3.4

Enabling Grasp Synthesis Approaches to Task-Oriented Grasping Considering the End-State Comfort and Confidence Effects, N/A

Maranci, Emilio	Scuola Superiore Sant'Anna
D'Avella, Salvatore	Sant'Anna School of Advanced Studies
Tripicchio, Paolo	Scuola Superiore Sant'Anna
Avizzano, Carlo Alberto	Scuola Superiore Sant'Anna

WeAT4 Room 4

Soft Robot Materials and Design I (Regular session)

Chair: Wakimoto, Shuichi	Okayama University
Co-Chair: Cha, Youngsu	Korea University

10:00-10:15 WeAT4.1

*Electroactive Soft Bistable Actuator with Adjustable Energy Barrier and Stiffness (I)**. N/A

Jiang, Lei	Xi'an Jiaotong University
Li, Bo	Xi'an Jiatotong University
Ma, Wentao	Xi'an Jiaotong University, School of Mechanical Engineering
Wu, Yehui	Xi'an Jiaotong University
Bai, Ruiyu	Xi'an Jiaotong University
Sun, Wenjie	School of Mechanical and Precision Instrument Engineering, Xi' A
Wang, Yanjie	Hohai University
Chen, Guimin	Xi'an Jiaotong University

10:15-10:30 WeAT4.2

Multi-Modal Soft Amphibious Robots Using Simple Plastic Sheet-Reinforced Thin Pneumatic Actuators (I), N/A

Wu, Jiaxi	Peking University
Mingxin, Wu	Peking University
Chen, Wenhui	Peking University
Wang, Chen	Peking University
Xie, Guangming	Peking University

10:30-10:45 WeAT4.3

Design of an Accordion-Fold-Inspired Soft Electrohydraulic Actuator for Angular Motion, N/A

Kim, Sohyun	Korea University
Oh, Yenee	Korea University
Kang, Joohyeon	Korea University
Cha, Youngsu	Korea University

10:45-11:00 WeAT4.4

Fabrication Process for Twisting Artificial Muscles by Utilizing Braiding Technology and Water-Soluble Fibers, N/A

Tian, Weihang	Okayama University
Wakimoto, Shuichi	Okayama University
Yamaguchi, Daisuke	Okayama University
Kanda, Takefumi	Okayama Univ

WeAT5 Room 5

Robot Safety I (Regular session)

Chair: Saveriano, Matteo — University of Trento

10:00-10:15 WeAT5.1

Safe-VLN: Collision Avoidance for Vision-And-Language Navigation of Autonomous Robots Operating in Continuous Environments, N/A

Yue, Lu	Peking University
Zhou, Dongliang	Harbin Institute of Technology, Shenzhen
Xie, Liang	Unmanned Systems Research Center, National Institute of Defense
Zhang, Feitian	Peking University
Yan, Ye	Academy of Military Sciences China
Yin, Erwei	Harbin Engineering University

10:15-10:30 WeAT5.2

Safe Control for Navigation in Cluttered Space Using Multiple Lyapunov-Based Control Barrier Functions, N/A

Jang, Inkyu	Seoul National University
Kim, H. Jin	Seoul National University

10:30-10:45 WeAT5.3

A Novel Safety-Aware Energy Tank Formulation Based on Control Barrier Functions, N/A

Michel, Youssef	Technical University of Munich
Saveriano, Matteo	University of Trento
Lee, Dongheui	Technische Universität Wien (TU Wien)

10:45-11:00 WeAT5.4

Compliant Robust Control for Robotic Insertion of Soft Bodies, N/A

Liu, Yi	University Ghent
Verleysen, Andreas	Ghent University
Wyffels, Francis	Ghent University

WeAT6 Room 6

Actuation and Joint Mechanisms (Regular session)

Chair: Khorasani, Amin — Vrije Universiteit Brussel

10:00-10:15 WeAT6.1

Mitigating Collision Forces and Improving Response Performance in Human-Robot Interaction by Using Dual-Motor Actuators, N/A

Khorasani, Amin	Vrije Universiteit Brussel
Usman, Muhammad	Vrije Universiteit Brussel
Hubert, Thierry	Vrije Universiteit Brussel
Furnémont, Raphaël	Vrije Universiteit Brussel
Lefeber, Dirk	Vrije Universiteit Brussel - VUB
Vanderborght, Bram	VUB
Verstraten, Tom	Vrije Universiteit Brussel

10:15-10:30 WeAT6.2

Flexible Shaft As Remote and Elastic Transmission for Robot Arms, N/A

Usman, Muhammad	Vrije Universiteit Brussel
Hubert, Thierry	Vrije Universiteit Brussel
Khorasani, Amin	Vrije Universiteit Brussel
Furnémont, Raphaël	Vrije Universiteit Brussel
Vanderborght, Bram	Vrije Universiteit Brussel
Lefeber, Dirk	Vrije Universiteit Brussel - VUB

Van de Perre, Greet	Vrije Universiteit Brussel
Verstraten, Tom	Vrije Universiteit Brussel

10:30-10:45 WeAT6.3

Universal Actuation Module and Kinematic Model for Heart Valve Interventional Catheter Robotization, N/A

Wang, Weizhao	King's College London
Wu, Zicong	King's College London
Saija, Carlo	King's College London
Zeidan, Aya Mutaz	King's College London
Xu, Zhouyang	King's College London
Pishkahi, Aryana	King's College London
Patterson, Tiffany	Guy's & St. Thomas' Hospitals NHS Foundation Trust
Redwood, Simon	King's College London
Wang, Shuangyi	Chinese Academy of Sciences
Rhode, Kawal	King's College London
Housden, Richard James	King's College London

10:45-11:00 WeAT6.4

Foam-Embedded Soft Robotic Joint with Inverse Kinematic Modeling by Iterative Self-Improving Learning, N/A

Huang, Anlun	University of California, San Diego
Cao, Yongxi	Delft University of Technology
Guo, Jiajie	Nanyang Technological University
Fang, Zhonggui	Southern University of Science and Technology
Su, Yinyin	The University of Hong Kong
Liu, Sicong	Southern University of Science and Technology
Yi, Juan	Southern University of Science and Technology
Wang, Hongqiang	Southern University of Science and Technology
Dai, Jian	School of Natural and Mathematical Sciences, King's College Lond
Wang, Zheng	Southern University of Science and Technology

WeAT7 Room 7

Rehabilitation Robotics (Regular session)

Chair: Kyung, Ki-Uk	Korea Advanced Institute of Science & Technology (KAIST)
Co-Chair: Campolo, Domenico	Nanyang Technological University

10:00-10:15 WeAT7.1

Hierarchical Trajectory Deformation Algorithm with Hybrid Controller for Active Lower Limb Rehabilitation, N/A

Yang, Ze	University of Science and Technology of China
Jin, Hu	University of Science and Technology of China
Gao, Wei	University of Science and Technology of China
Wang, Erlong	University of Science and Technology of China
Shu, Yang	University of Science and Technology of China
Wu, Ming	The First Affiliated Hospital of USTC, Division of Life Sciences
Zhang, Shiwu	University of Science and Technology of China

10:15-10:30 WeAT7.2

Optimization-Based Adaptive Assistance for Lower Limb Exoskeleton Robots with a Robotic Walker Via Spatially Quantized Gait (I), N/A

Zou, Chaobin	University of Electronic Science and Technology of China
Peng, Zhinan	Unversity of Electronic Science and Tehcnology of China
Zhang, Long	University of Electronic Science and Technology of China
Mu, Fengjun	University of Electronic Science and Technology of China
Huang, Rui	University of Electronic Science and Technology of China
Cheng, Hong	University of Electronic Science and Technology

10:30-10:45 WeAT7.3

Development of a Dual Function Joint Modular Soft Actuator and Its Evaluation Using a Novel Dummy Finger Joint-Soft Actuator Complex Model, N/A

Tortós, Pablo	Department of Medical System Engineering, Chiba University
Kokubu, Shota	Chiba University
Matsunaga, Fuko	Chiba University

Lu, Yuxi	Department of Medical System Engineering, Chiba University
Zhou, Zhongchao	Graduate School of Science and Engineering, Chiba University
Gomez-Tames, Jose	Chiba University
Yu, Wenwei	Chiba University

10:45-11:00 WeAT7.4

Origami-Inspired Wearable Robot for Shoulder Abduction Assistance: A Double-Petal Mechanism Utilizing Shape Memory Alloy Actuators, N/A

Chung, Chongyoung	Korea Advanced Institute of Science and Technology (KAIST)
Hyeon, Kyujin	KAIST
Jeong, Jaeyeon	Korea Advanced Institute of Science Ane Technology
Lee, Dae-Young	Korea Advanced Institute of Science and Technology
Kyung, Ki-Uk	Korea Advanced Institute of Science & Technology (KAIST)

WeAT8 Room 8

Mapping I (Regular session)

Chair: Nuechter, Andreas — University of Würzburg

10:00-10:15 WeAT8.1

An Integrated Hierarchical Approach for Real-Time Mapping with Gaussian Mixture Model, N/A

Gao, Yuan	Shanghai Jiao Tong University
Dong, Wei	Shanghai Jiao Tong University

10:15-10:30 WeAT8.2

Incremental Triangle Mesh Generation with Mesh Refinement, N/A

Niedźwiedzki, Jakub	Lodz University of Technology
Lipinski, Piotr	Lodz University of Technology
Podsedkowski, Leszek	Lodz University of Technology, Institute of Machine Tools and Pr

10:30-10:45 WeAT8.3

Uni-Fusion: Universal Continuous Mapping (I), N/A

Yuan, Yijun	University of Wuerzburg
Nuechter, Andreas	University of Würzburg

WeAT9 Room 9

Task and Motion Planning I (Regular session)

Chair: Loianno, Giuseppe	New York University
Co-Chair: Ornik, Melkior	University of Illinois Urbana-Champaign

10:00-10:15 WeAT9.1

E(2)-Equivariant Graph Planning for Navigation, N/A

Zhao, Linfeng	Northeastern University
Li, Hongyu	Brown University
Padir, Taskin	Northeastern University
Jiang, Huaizu	Northeastern University
Wong, Lawson L.S.	Northeastern University

10:15-10:30 WeAT9.2

Text2Reaction : Enabling Reactive Task Planning Using Large Language Models, N/A

Yang, Zejun	University
Ning, Li	University of Chinese Academy of Science
Wang, Haitao	University of Chinese Academy of Sciences
Jiang, Tianyu	Institute of Automation, Chinese Academy of Scienses
Zhang, Shaolin	Institute of Automation, Chinese Academy of Sciences
Cui, Shaowei	Institute of Automation, Chinese Academy of Sciences
Jiang, Hao	Institute of Computing Technology, Chinese Academy of Sciences
Li, Chunpeng	University
Wang, Shuo	Chinese Academy of Sciences
Wang, Zhaoqi	Institute of Computing Technology, the Chinese Academy of Scienc

10:30-10:45 WeAT9.3

Graph Neural Network for Decentralized Multi-Robot Goal Assignment, N/A

Goarin, Manohari	New York University, Tandon School of Engineering

Loianno, Giuseppe	New York University
10:45-11:00	WeAT9.4
Modular Multi-Level Replanning TAMP Framework for Dynamic Environment, N/A	
Lin, Tao	Harbin Institute of Technology
Yue, Chengfei	Harbin Institute of Technology, Shenzhen
Liu, Ziran	Research Center of the Satellite Technology
Cao, Xibin	Research Center of the Satellite Technology

WeAT10	Room 10
Vision-Based Navigation I (Regular session)	
Chair: Yang, Tao	Northwestern Polytechnical University
Co-Chair: Ehsan, Shoaib	University of Essex
10:00-10:15	WeAT10.1
RMSC-VIO: Robust Multi-Stereoscopic Visual-Inertial Odometry for Local Visually Challenging Scenarios, N/A	
Zhang, Tong	Northwestern Polytechnical University
Xu, Jianyu	Northwestern Polytechnical University
Shen, Hao	Northwestern Polytechnical University
Yang, Rui	Université De Technologie De Belfort Montbéliard
Yang, Tao	Northwestern Polytechnical University
10:15-10:30	WeAT10.2
LIVER: A Tightly Coupled LiDAR-Inertial-Visual State Estimator with High Robustness for Underground Environments, N/A	
Wen, Tianci	Nankai University
Fang, Yongchun	Nankai University
Lu, Biao	Nankai University
Zhang, Xuebo	Nankai University,
Tang, Chaoquan	China University of Mining and Technology
10:30-10:45	WeAT10.3
Aggregating Multiple Bio-Inspired Image Region Classifiers for Effective and Lightweight Visual Place Recognition, N/A	
Arcanjo, Bruno	University of Essex
Ferrarini, Bruno	Universtiy of Essex
Fasli, Maria	University of Essex
Milford, Michael J	Queensland University of Technology
McDonald-Maier, Klaus	University of Essex
Ehsan, Shoaib	University of Essex
10:45-11:00	WeAT10.4
Design Space Exploration of Low-Bit Quantized Neural Networks for Visual Place Recognition, N/A	
Grainge, Oliver Edward	University of Southampton
Milford, Michael J	Queensland University of Technology
Bodala, Indu	University of Southampton
Ramchurn, Sarvapali	University of Southampton
Ehsan, Shoaib	University of Essex

WeAT11	Room 11
Path Planning for Multiple Mobile Robots or Agents (Regular session)	
Chair: Sartoretti, Guillaume Adrien	National University of Singapore (NUS)
10:00-10:15	WeAT11.1
Collaborative Planning for Catching and Transporting Objects in Unstructured Environments, N/A	
Pei, Liuao	Zhejiang University
Lin, Junxiao	Zhejiang University
Han, Zhichao	Zhejiang University
Quan, Lun	Zhejiang University
Cao, Yanjun	Zhejiang University, Huzhou Institute of Zhejiang University
Xu, Chao	Zhejiang University
Gao, Fei	Zhejiang University
10:15-10:30	WeAT11.2

A TSP-Based Online Algorithm for Multi-Task Multi-Agent Pickup and Delivery, N/A

Kudo, Fumiya	Osaka Metropolitan University
Cai, Kai	Osaka Metropolitan University

10:30-10:45 WeAT11.3

*Motion Planning for Multiple Heterogeneous Magnetic Robots under Global Input (I)**. N/A

Asadi, Farshid	Southern Methodist University
Hurmuzlu, Yildirim	Southern Methodist University

10:45-11:00 WeAT11.4

Leadership Inference for Multi-Agent Interactions, N/A

Khan, Hamzah	The University of Texas at Austin
Fridovich-Keil, David	The University of Texas at Austin

WeAT12 Room 12

Reinforcement Learning I (Regular session)

Co-Chair: Panov, Aleksandr AIRI

10:00-10:15 WeAT12.1

*Learning Whole-Body Manipulation for Quadrupedal Robot**. N/A

Jeon, Seunghun	KAIST
Jung, Moonkyu	Korea Advanced Institute of Science and Technology
Choi, Suyoung	KAIST
Kim, Beomjoon	Korea Advanced Institute of Science and Technology
Hwangbo, Jemin	Korean Advanced Institute of Science and Technology

10:15-10:30 WeAT12.2

OmniDrones: An Efficient and Flexible Platform for Reinforcement Learning in Drone Control, N/A

Xu, Botian	Tsinghua University
Gao, Feng	Tsinghua University
Yu, Chao	Tsinghua University
Zhang, Ruize	Tsinghua University
Wu, Yi	Tsinghua University
Wang, Yu	Tsinghua University

10:30-10:45 WeAT12.3

Skill-Critic: Refining Learned Skills for Hierarchical Reinforcement Learning, N/A

Hao, Ce	University of California, Berkeley
Weaver, Catherine	University of California, Berkeley
Tang, Chen	University of California Berkeley
Kawamoto, Kenta	Sony Research Inc
Tomizuka, Masayoshi	University of California
Zhan, Wei	Univeristy of California, Berkeley

10:45-11:00 WeAT12.4

Data-Efficient Task Generalization Via Probabilistic Model-Based Meta Reinforcement Learning, N/A

Bhardwaj, Arjun	ETH Zurich
Rothfuss, Jonas	ETH Zurich
Sukhija, Bhavya	ETH Zürich
As, Yarden	ETH Zurich
Hutter, Marco	ETH Zurich
Coros, Stelian	ETH Zurich
Krause, Andreas	ETH Zurich

WeAT13 Room 13

Scientific Exploration (Regular session)

Chair: Sutoh, Masataku	Japan Aerospace Exploration Agency
Co-Chair: Kim, Pyojin	Gwangju Institute of Science and Technology (GIST)

10:00-10:15 WeAT13.1

Transition Gradient from Standing to Traveling Waves for Energy-Efficient Slope Climbing of a Gecko-Inspired Robot, N/A

Haomachai, Worasuchad	Nanjing University of Aeronautics and Astronautics

Dai, Zhendong	Nanjing University of Aeronautics and Astronautics
Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

10:15-10:30 WeAT13.2

A Multi-Arm Robotic Platform for Scientific Exploration (I), N/A

Marques Marinho, Murilo	The University of Manchester
Quiroz Omana, Juan Jose	The University of Tokyo
Harada, Kanako	The University of Tokyo

10:30-10:45 WeAT13.3

Astrobee ISS Free-Flyer Datasets for Space Intra-Vehicular Robot Navigation Research, N/A

Kang, Suyoung	Sookmyung Women's University
Soussan, Ryan	Aerodyne Industries
Lee, Daekyeong	Sookmyung Women University
Coltin, Brian	Carnegie Mellon University
Mora, Andres	NASA Ames Research Center
Moreira, Marina	Instituto Superior Técnico, Lisbon University
Browne, Katie	University of Nevada, Reno
Garcia Ruiz, Ruben	KBR Inc, NASA Ames
Bualat, Maria	NASA Ames Research Center
Smith, Trey	NASA Ames Research Center
Barlow, Jonathan	KBR, Inc
Benavides, Jose	NASA
Jeong, Eunju	Sookmyung Women's University
Kim, Pyojin	Gwangju Institute of Science and Technology (GIST)

10:45-11:00 WeAT13.4

Transformable Nano Rover for Space Exploration, N/A

Hirano, Daichi	Japan Aerospace Exploration Agency
Inazawa, Mariko	Japan Aerospace Exploration Agency
Sutoh, Masataku	Japan Aerospace Exploration Agency
Sawada, Hirotaka	JAXA
Kawai, Yuta	Japan Aerospace Exploration Agency
Nagata, Masaharu	Sony Group Corporation
Sakoda, Gen	Sony Group Corporation
Yoneda, Yousuke	TAKARATOMY
Watanabe, Kimitaka	Doshisha University

WeAT14 Room 14

Terrestrial Navigation (Regular session)

Chair: Lim, Yongseob	DGIST
Co-Chair: Karki, Hamad	Khalifa University

10:00-10:15 WeAT14.1

*Horizontal Attention Based Generation Module for Unsupervised Domain Adaptive Stereo Matching**. N/A

Wang, Sungjun	DGIST
Seo, Junghyun	DGIST
Jeon, Hyeonjae	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Lim, Sungjin	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Park, Sang Hyun	DGIST
Lim, Yongseob	DGIST

10:15-10:30 WeAT14.2

BeautyMap: Binary-Encoded Adaptable Ground Matrix for Dynamic Points Removal in Global Maps, N/A

Jia, Mingkai	The Hong Kong University of Science and Technology
Zhang, Qingwen	KTH Royal Institute of Technology
Yang, Bowen	The Hong Kong University of Science and Technology, Robotics Ins
Wu, Jin	HKUST
Liu, Ming	Hong Kong University of Science and Technology (Guangzhou)
Jensfelt, Patric	KTH - Royal Institute of Technology

10:30-10:45 WeAT14.3

Under-Canopy Navigation Using Aerial Lidar Maps, N/A

Carvalho de Lima, Lucas	The University of Queensland
Lawrance, Nicholas	CSIRO Data61
Khosoussi, Kasra	The Commonwealth Scientific and Industrial Research (CSIRO)
Borges, Paulo Vinicius Koerich	CSIRO
Bruenig, Michael	The University of Queensland

WeBT1 Room 1

Best Industrial Robotics Research for Application Papers (Mujin Inc.) (Regular session)

Co-Chair: Nakamura, Taro — Chuo University

11:00-11:15 WeBT1.1

Peristaltic Soft Robot for Long-Distance Pipe Inspection with an Endoskeletal Structure for Propulsion and Traction Amplification, pp. 4053-4060. Attachment

Okuma, Ryusei	Chuo University
Naruse, Yuta	Chuo University
Ito, Fumio	Chuo University
Nakamura, Taro	Chuo University

11:15-11:30 WeBT1.2

A Robust and Efficient Robotic Packing Pipeline with Dissipativity-Based Adaptive Impedance-Force Control, pp. 4061-4068.

Zhou, Zhenning	Shanghai Jiao Tong University
Zhou, Lei	National University of Singapore
Sun, Shengxin	Shanghai Jiao Tong University
Ang Jr, Marcelo H	National University of Singapore

11:30-11:45 WeBT1.3

Harnessing with Twisting: Single-Arm Deformable Linear Object Manipulation for Industrial Harnessing Task, pp. 4069-4075.

Zhang, Xiang	University of California, Berkeley
Lin, Hsien-Chung	FANUC Corporation
Zhao, Yu	FANUC America Corporation
Tomizuka, Masayoshi	University of California

11:45-12:00 WeBT1.4

Beyond Feasibility: Efficiently Planning Robotic Assembly Sequences That Minimize Assembly Path Lengths, pp. 4076-4083. Attachment

Cebulla, Alexander	Karlsruhe Institute of Technology (KIT)
Asfour, Tamim	Karlsruhe Institute of Technology (KIT)
Kroeger, Torsten	Intrinsic Innovation LLC

WeBT2 Room 2

Best Robot Mechanisms and Design Papers (ROBOTIS) (Regular session)

Chair: Renda, Federico — Khalifa University of Science and Technology

11:00-11:15 WeBT2.1

A Novel Vitreoretinal Surgical Robot System to Maximize the Internal Reachable Workspace and Minimize the External Link Motion, pp. 4084-4089. Attachment

Jeong, Gowoon	Chonnam National University
Ko, Seong Young	Chonnam National University

11:15-11:30 WeBT2.2

Multistable Soft Actuator for Physical Human-Robot Interaction, pp. 4090-4097. Attachment

Long, Juncai	Zhejiang University
Li, Jituo	Zhejiang University
Diao, Xiaojie	Zhejiang University
Zhou, Chengdi	ZheJiang University
Lu, GuoDong	Zhejiang University
Feng, Yixiong	Zhejiang University

11:30-11:45 WeBT2.3

Development of a Compact Robust Passive Transformable Omni-Ball for Enhanced Step-Climbing and Vibration Reduction, pp. 4098-4105. Attachment

Hongo, Kazuo	Sony Group Corporation
Kito, Takashi	Sony Group Corporation

Kamikawa, Yasuhisa	Sony Group Corporation
Kinoshita, Masaya	Sony Group Corporation
Kawanami, Yasunori	Sony Group Corporation

11:45-12:00 WeBT2.4

BaRiFlex: A Robotic Gripper with Versatility and Collision Robustness for Robot Learning, pp. 4106-4113. Attachment

Jeong, Gu-Cheol	University of Texas at Austin
Bahety, Arpit	Columbia University
Pedraza, Gabriel	The University of Texas at Austin
Deshpande, Ashish	The University of Texas
Martín-Martín, Roberto	University of Texas at Austin

WeBT3 Room 3

Manipulation and Grasping II (Regular session)

Chair: Tzes, Anthony	New York University Abu Dhabi
Co-Chair: Khorrami, Farshad	New York University Tandon School of Engineering

11:00-11:15 WeBT3.1

On the Generality and Application of Mason's Voting Theorem to Center of Mass Estimation for Pure Translational Motion (I), N/A

Gao, Ziyan	Japan Advanced Institute of Science and Technology
Elibol, Armagan	Forschungszentrum Jülich GmbH
Chong, Nak Young	Japan Advanced Institute of Science and Technology

11:15-11:30 WeBT3.2

Probabilistic Closed-Loop Active Grasping, N/A

Schaub, Henry	Hochschule Muenchen University of Applied Sciences
Wolff, Christian	University of Regensburg
Hoh, Maximilian	University of Applied Sciences Munich
Schöttl, Alfred	University of Applied Sciences Munich, Dept. for Electrical Engi

11:30-11:45 WeBT3.3

Pre-Grasp Approaching on Mobile Robots: A Pre-Active Layered Approach, N/A

Naik, Lakshadeep	University of Southern Denmark (SDU)
Kalkan, Sinan	Middle East Technical University
Krüger, Norbert	University of Southern Denmark

11:45-12:00 WeBT3.4

Smooth Distances for Second Order Kinematic Robot Control (I), N/A

Gonçalves, Vinicius Mariano	New York University Abu Dhabi, United Arab Emirates
Tzes, Anthony	New York University Abu Dhabi
Khorrami, Farshad	New York University Tandon School of Engineering
Fraisse, Philippe	LIRMM

WeBT4 Room 4

Soft Robot Materials and Design II (Regular session)

Chair: Nabae, Hiroyuki	Tokyo Institute of Technology
Co-Chair: Wakimoto, Shuichi	Okayama University

11:00-11:15 WeBT4.1

A Nitinol-Embedded Wearable Soft Robotic Gripper for Deep-Sea Manipulation (I), N/A

Zuo, Zonghao	Beihang University
He, Xia	Beihang University
Wang, Haoxuan	Beihang University
Shao, Zhuyin	Beihang University
Liu, Jiaqi	Beihang University
Zhang, Qiyi	Beihang University
Pan, Fei	Beihang University
Wen, Li	Beihang University

11:15-11:30 WeBT4.2

*A Novel Hybrid Variable Stiffness Mechanism: Synergistic Integration of Layer Jamming and Shape Memory Polymer**. N/A

Yu, WenKai	Department of Mechanics and Aerospace Engineering, Southern Univ

Liu, Jingyi	Southern University of Science and Technology
Li, Xin	Department of Mechanics and Aerospace Engineering, Southern Univ
Yu, Ziyue	Southern University of Science and Technology
Yuan, Hongyan	Southern University of Science and Technology

11:30-11:45 WeBT4.3

A Soft Crawling Robot That Can Self-Repair Material Removal and Deep Lengthwise Cuts, Actuated by Thin McKibben Muscles, N/A

Xie, Mengfei	Tokyo Institute of Technology
Feng, Yunhao	Tokyo Institute of Technology
Nabae, Hiroyuki	Tokyo Institute of Technology
Suzumori, Koichi	Tokyo Institute of Technology

11:45-12:00 WeBT4.4

Experimental Validation of a 7-DOF Power Soft Robot Driven by Hydraulic Artificial Muscles, N/A

Feng, Yunhao	Tokyo Institute of Technology
Ide, Tohru	Tokyo Institute of Technology
Nabae, Hiroyuki	Tokyo Institute of Technology
Endo, Gen	Tokyo Institute of Technology
Sakurai, Ryo	Bridgestone Corporation
Ohno, Shingo	Bridgestone Corporation
Suzumori, Koichi	Tokyo Institute of Technology

WeBT5 Room 5

Robust and Adaptive Control I (Regular session)

Chair: Kumar, Shivesh	DFKI GmbH
Co-Chair: Monje, Concepción A.	University Carlos III of Madrid

11:00-11:15 WeBT5.1

Hierarchical Incremental MPC for Redundant Robots: A Robust and Singularity-Free Approach (I), N/A

Wang, Yongchao	Technical University of Munich
Liu, Yang	Technical University of Munich
Leibold, Marion	Technische Universität München
Buss, Martin	Technische Universität München
Lee, Jinoh	German Aerospace Center (DLR)

11:15-11:30 WeBT5.2

Traversability-Aware Adaptive Optimization for Path Planning and Control in Mountainous Terrain, N/A

Yoo, Se-Wook	Seoul National University
Son, E-In	Seoul National University
Seo, Seung-Woo	Seoul National University

11:30-11:45 WeBT5.3

Neural-FxSMC: A Robust Adaptive Neural Fixed-Time Sliding Mode Control for Quadrotors with Unknown Uncertainties, N/A

Yogi, Subhash Chand	Indian Institute of Technology - Kanpur
Behera, Laxmidhar	IIT Kanpur
Tripathy, Twinkle	IIT Bombay

11:45-12:00 WeBT5.4

An Open Source Dual Purpose Acrobot and Pendubot Platform for Benchmarking Control Algorithms for Underactuated Robotics (I), N/A

Wiebe, Felix	DFKI GmbH Robotics Innovation Center
Kumar, Shivesh	DFKI GmbH
Shala, Lasse	Deutsches Forschungszentrum Für Künstliche Intelligenz
Vyas, Shubham	Robotics Innovation Center, DFKI GmbH
Javadi, Mahdi	German Research Center for Artificial Intelligence Robotics Inn
Kirchner, Frank	University of Bremen

WeBT6 Room 6

Mechanism Design I (Regular session)

Chair: Stefanini, Cesare	Scuola Superiore Sant'Anna

11:00-11:15 WeBT6.1

MTABot: An Efficient Morphable Terrestrial-Aerial Robot with Two Transformable Wheels, N/A

Shi, Ke	Harbin Institute of Technology
Jiang, Zainan	State Key Laboratory of Robotics and System, Harbin Institute Of
Ma, Liyan	Harbin Institute of Technology
Qi, Le	Harbin Institute of Technology
Jin, Minghe	Harbin Institute of Technology

11:15-11:30 WeBT6.2

Rail DRAGON: Long-Reach Bendable Modularized Rail Structure for Constant Observation Inside PCV, N/A

Yokomura, Ryota	The University of Tokyo
Goto, Masataka	The University of Tokyo
Yoshida, Takehito	University of Tokyo
Warisawa, Shin'ichi	The University of Tokyo
Hanari, Toshihide	JAEA
Kawabata, Kuniaki	Japan Atomic Energy Agency
Fukui, Rui	The University of Tokyo

11:30-11:45 WeBT6.3

Transformable Inspection Robot Design and Implementation for Complex Pipeline Environment, N/A

Wang, Jianlin	Chinese University of Hongkong
Wang, Yixiang	Rensselaer Polytechnic Institute
Peng, Lining	The Chinese University of Hong Kong, Shenzhen
Zhang, Haixiang	The Chinese University of Hong Kong, Shenzhen
Gao, Hang	The Chinese University of Hong Kong, Shenzhen
Wang, Chengjiang	The Chinese University of Hong Kong, ShenZhen
Gao, Yuan	Shenzhen Institute of Artificial Intelligence and Robotics for S
Luo, Huanliang	Dapeng Customs of the People's Republic of China
Chen, Yongquan	The Chinese University of Hong Kong, Shenzhen

11:45-12:00 WeBT6.4

Enhancing Maximum Stroke of Twisted String Actuators by Adjusting Twisting Ratio, N/A

Baek, Seungjoon	Korea Advanced Institute of Science and Technology
Jang, JaeHyung	Korea Advanced Institute of Science and Technology
Ryu, Jee-Hwan	Korea Advanced Institute of Science and Technology

WeBT7 Room 7

Wearable Robotics (Regular session)

Chair: Hussain, Irfan — Khalifa University

11:00-11:15 WeBT7.1

A Wearable Finger Tremor-Suppression Orthosis Using the PVC Gel Linear Actuator, N/A

Liu, Chen	Queen Mary University of London
Zhang, Ketao	Queen Mary University of London

11:15-11:30 WeBT7.2

Novel Lightweight Lower Limb Exoskeleton Design for Single-Motor Sequential Assistance of Knee & Ankle Joints in Real World, N/A

Wu, Xinyu	Xi'an Jiaotong University
Zhu, Aibin	Xi'an Jiaotong University
Li, Xiao	Rehabilitation Department, Senior Department of Orthopedics, The
Bao, Bingsheng	Institute of Robotics & Intelligent Systems, Shaanxi Key Laborat
Zhang, Jing	Xi'an Jiaotong University
Shi, Lei	Xi'an Jiaotong University
Diyang, Dang	Xi'an Jiaotong University
Xu, Peng	Honghui Hospital, Xi'an Jiaotong University

11:30-11:45 WeBT7.3

Advanced Enhanced Control of a Novel Wearable Lower-Limb Exoskeleton, N/A

Qiu, Shuang	Beihang University
Pei, Zhongcai	Beihang University
Shi, Jia	BEIHANG UNIVERSITY
Zhang, Xu	Beijing Legendary Soaring Technology Company
Wang, Chen	Beihang University

Tang, Zhiyong	Beihang University

11:45-12:00 WeBT7.4

Bio-Inspired Cable-Driven Actuation System for Wearable Robotic Devices: Design, Control and Characterization (I), pp. N/A

Xu, Ming	Peking University
Zhou, Zhihao	Peking University
Wang, Zezheng	Peking University
Ruan, Lecheng	University of California Los Angeles
Mai, Jingeng	Peking University
Wang, Qining	Peking University

WeBT8 Room 8

Localization I (Regular session)

Chair: Ma, Junyi	Beijing Institute of Technology

11:00-11:15 WeBT8.1

LCPR: A Multi-Scale Attention-Based LiDAR-Camera Fusion Network for Place Recognition, N/A

Zhou, Zijie	Beijing Institute of Technology
Xu, Jingyi	Beijing Institute of Technology
Xiong, Guangming	Beijing Institute of Technology
Ma, Junyi	Beijing Institute of Technology

11:15-11:30 WeBT8.2

Robust Cooperative Localization with Failed Communication and Biased Measurements, N/A

He, Ronghai	Sun Yat-Sen University
Shan, Yunxiao	Sun Yat-Sen University
Huang, Kai	Sun Yat-Sen University

11:30-11:45 WeBT8.3

GeoCluster: Enhancing Visual Place Recognition in Spatial Domain on Aerial Vehicle Platforms, N/A

Chen, Chao	Beijing University of Chemical Technology
He, Mengfan	TsinghuaUniversity
Wang, Jun	Beijing University of Chemical Technology
Meng, Ziyang	Tsinghua University

WeBT9 Room 9

Motion and Path Planning I (Regular session)

Co-Chair: Bennewitz, Maren	University of Bonn

11:00-11:15 WeBT9.1

*Safe Navigation Using Density Functions**. N/A

Zheng, Andrew	Clemson University
Krishnamoorthy Shankara Narayanan, Sriram Sundar	Clemson University
Vaidya, Umesh	Clemson University

11:15-11:30 WeBT9.2

State-Feedback Optimal Motion Planning in the Presence of Obstacles, N/A

Rousseas, Panagiotis	National Technical University of Athens
Bechlioulis, Charalampos	University of Patras
Kyriakopoulos, Kostas	New York University - Abu Dhabi

11:30-11:45 WeBT9.3

*Efficiency Improvement to Neural-Network-Driven Optimal Path Planning Via Region and Guideline Prediction**. N/A

Huang, Yuan	Waseda University
Tsao, Cheng Tien	Waseda University
Lee, Hee-hyol	Waseda University

11:45-12:00 WeBT9.4

Spatiotemporal Attention Enhances Lidar-Based Robot Navigation in Dynamic Environments, N/A

de Heuvel, Jorge	University of Bonn
Zeng, Xiangyu	University of Bonn
Shi, Weixian	University of Bonn
Sethuraman, Tharun	Hochschule Bonn-Rhein-Sieg
Bennewitz, Maren	University of Bonn

WeBT10	Room 10
Data Sets for Robotic Vision I (Regular session)	
Chair: Aguiari, Davide	TII
Co-Chair: Meyer, Lukas	Friedrich-Alexander-Universität Erlangen-Nürnberg
11:00-11:15	WeBT10.1
Race against the Machine: A Fully-Annotated, Open-Design Dataset of Autonomous and Piloted High-Speed Flight, N/A	
Bosello, Michael	Technology Innovation Institute
Aguiari, Davide	TII
Keuter, Yvo	TII
Pallotta, Enrico	TII
Kiade, Sara	TII
Caminati, Gyordan	TII
Pinzarrone, Flavio	TII
Halepota, Junaid	TII
Panerati, Jacopo	Technology Innovation Institute
Pau, Giovanni	TII - Technology Innovation Institute
11:15-11:30	WeBT10.2
Multi-Class Trajectory Prediction in Urban Traffic Using the View-Of-Delft Prediction Dataset, N/A	
Boekema, Hidde	TU Delft
Martens, Bruno	TU Delft
Kooij, Julian Francisco Pieter	TU Delft
Gavrila, Dariu	Delft University of Technology
11:30-11:45	WeBT10.3
Car-Studio: Learning Car Radiance Fields from Single-View and Unlimited In-The-Wild Images, N/A	
Liu, Tianyu	Hong Kong University of Science and Technology
Zhao, Hao	Tsinghua University
Yu, Yang	Hong Kong University of Science and Technology (GUANG ZHOU)
Zhou, Guyue	Tsinghua University
Liu, Ming	Hong Kong University of Science and Technology (Guangzhou)

WeBT11	Room 11
Multi-Robot Systems I (Regular session)	
Co-Chair: Sun, Guibin	Beihang University
11:00-11:15	WeBT11.1
A Spatial Calibration Method for Robust Cooperative Perception, N/A	
Song, Zhiying	Tsinghua University
Xie, Tenghui	Tsinghua University
Zhang, Hailiang	Tsinghua University
Liu, Jiaxin	Tsinghua University
Fuxi, Wen	Tsinghua University
Li, Jun	Tsinghua University
11:15-11:30	WeBT11.2
Mean-Shift Shape Formation of Multi-Robot Systems without Target Assignment, N/A	
Zhang, Yunjie	Beihang University
Zhou, Rui	School of Automation Science and Electrical Engineering, Beihang
Li, Xing	Beihang Univeristy
Sun, Guibin	Beihang University
11:30-11:45	WeBT11.3
Distributed Coverage Control for Spatial Processes Estimation with Noisy Observations, N/A	
Mantovani, Mattia	University of Modena and Reggio Emilia
Pratissoli, Federico	Università Degli Studi Di Modena E Reggio Emilia
Sabattini, Lorenzo	University of Modena and Reggio Emilia
11:45-12:00	WeBT11.4
Communication-Efficient Multi-Robot Exploration Using Distributed Coverage-Biased Q-Learning, N/A	

Latif, Ehsan — University of Georgia
Parasuraman, Ramviyas — University of Georgia

WeBT12 — Room 12
Reinforcement Learning II (Regular session)
Co-Chair: Seo, Seung-Woo — Seoul National University

11:00-11:15 — WeBT12.1
Diffusion Policies for Out-Of-Distribution Generalization in Offline Reinforcement Learning, N/A
Ada, Suzan Ece — Bogazici University
Oztop, Erhan — Osaka University / Ozyegin University
Ugur, Emre — Bogazici University

11:15-11:30 — WeBT12.2
Self-Supervised Curriculum Generation for Autonomous Reinforcement Learning without Task-Specific Knowledge, N/A
Lee, Sang-Hyun — Seoul National University
Seo, Seung-Woo — Seoul National University

11:30-11:45 — WeBT12.3
Maneuver-Conditioned Decision Transformer for Tactical In-Flight Decision-Making, N/A
Jung, Hoseong — Agency for Defense Development
Kim, Yong-Duk — Korea Advanced Institute of Science and Technology
Kim, Youngjung — ADD

11:45-12:00 — WeBT12.4
Diffusion Policies for Out-Of-Distribution Generalization in Offline Reinforcement Learning, N/A
Ada, Suzan Ece — Bogazici University
Oztop, Erhan — Osaka University / Ozyegin University
Ugur, Emre — Bogazici University

WeBT13 — Room 13
Object Detection, Segmentation and Categorization I (Regular session)
Chair: Vu, Minh Nhat — TU Wien, Austria
Co-Chair: Ehsan, Shoaib — University of Essex

11:00-11:15 — WeBT13.1
*VRVP: Valuable Region and Valuable Point Anchor-Free 3D Object Detection**. N/A
Deng, Pengzhen — University of Chinese Academy of Sciences
Zhou, Li — Institute of Microelectronics of the Chinese Academy of Sciences
Chen, Jie — Institute of Microelectronics of the Chinese Academy of Sciences

11:15-11:30 — WeBT13.2
Enhanced Optical Tracking of Weld Beads in Autonomous Inspection of Separator Vessels, N/A
Terres, Vinicius de Vargas — Universidade Tecnológica Federal Do Paraná
Teixeira, Marco Antonio Simões — PUCPR - Pontifícia Universidade Católica Do Paraná
Neves-Jr, Flávio — Federal University of Technology - Parana
Ramos de Arruda, Lucia Valeria — UTFPR
de Oliveira, Andre Schneider — Federal University of Technology - Parana

11:30-11:45 — WeBT13.3
Generalizable Stable Points Segmentation for 3D LiDAR Scan-To-Map Long-Term Localization, N/A
Hroob, Ibrahim — University of Lincoln
Mersch, Benedikt — University of Bonn
Stachniss, Cyrill — University of Bonn
Hanheide, Marc — University of Lincoln

11:45-12:00 — WeBT13.4
Class Semantics Modulation for Open-Set Instance Segmentation, N/A
Yang, Yifei — Zhejiang University
Zhou, Zhongxiang — Zhejiang University
Wu, Jun — Zhejiang University
Wang, Yue — Zhejiang University
Xiong, Rong — Zhejiang University

WeBT14	Room 14
Aerial Navigation (Regular session)	
Chair: Loianno, Giuseppe	New York University
Co-Chair: Ferrante, Eliseo	Vrije Universiteit Amsterdam
11:00-11:15	WeBT14.1
DIVE: Deep Inertial-Only Velocity Aided Estimation for Quadrotors, N/A	
Bajwa, Angad	McGill University
Cossette, Charles Champagne	McGill University
Shalaby, Mohammed Ayman	McGill University
Forbes, James Richard	McGill University
11:15-11:30	WeBT14.2
RMS: Redundancy-Minimizing Point Cloud Sampling for Real-Time Pose Estimation, N/A	
Petracek, Pavel	Czech Technical University in Prague
Alexis, Kostas	NTNU - Norwegian University of Science and Technology
Saska, Martin	Czech Technical University in Prague
11:30-11:45	WeBT14.3
SPDAGG-TransNet: Integrating Symmetric Positive Definite Networks with Transformers for UAV-Human Action Recognition, pp. 4479-4486. Attachment	
Akremi, Mohamed Sanim	Phd Student
Neji, Najett	Universite Paris Saclay
Tabia, Hedi	ETIS-ENSEA

WeF2O	Auditorium
Forum 2 - Government Forum: Funding for Robotics Research (Forum)	
Chair: Qidwai, Siddiq	NSF
09:00-12:00	WeF2O.1
*Government Forum: Funding for Robotics Research**. N/A	
Ye, Cang	Virginia Commonwealth University

WeF3O	Room 17/18
Forum 3 - Europe Regulates Artificial Intelligence: The Challenge for Robotics (Forum)	
Chair: Bertolini, Andrea	Scuola Superiore S. Anna
09:00-12:00	WeF3O.1
*Europe Regulates Artificial Intelligence: The Challenge for Robotics**. N/A	
Bertolini, Andrea	Scuola Superiore S. Anna

WePI3T1	Room 1
Robotics and Automation III (Teaser Session)	
Chair: Bombieri, Nicola	University of Verona
Co-Chair: Sugano, Shigeki	Waseda University
15:30-16:30	WePI3T1.1
Exploratory Motion Guided Tactile Learning for Shape-Consistent Robotic Insertion, pp. 4487-4494. Attachment	
Yan, Gang	Waseda University
He, Jinsong	WASEDA University
Funabashi, Satoshi	Waseda University
Schmitz, Alexander	Waseda University
Sugano, Shigeki	Waseda University
15:30-16:30	WePI3T1.2
LTL-D: Incrementally Optimal Replanning for Feasible and Infeasible Tasks in Linear Temporal Logic Specifications*, pp. 4495-4502. Attachment	
Ren, Jiming	Georgia Institute of Technology
Miller, Haris	Georgia Institute of Technology
Feigh, Karen	Georgia Institute of Technology
Coogan, Samuel	Georgia Tech
Zhao, Ye	Georgia Institute of Technology
15:30-16:30	WePI3T1.3

Cooperative Modular Manipulation with Numerous Cable-Driven Robots for Assistive Construction and Gap Crossing, pp. 4503-4510. Attachment

Murphy, Kevin	University of Illinois at Urbana-Champaign
Soares, João Carlos Virgolino	Istituto Italiano Di Tecnologia
Yim, Justin K.	University of Illinois Urbana-Champaign
Nottage, Dustin	Construction Engineering Research Lab
Soylemezoglu, Ahmet	US Army Corps of Engineers
Ramos, Joao	University of Illinois at Urbana-Champaign

15:30-16:30 WePI3T1.4

GDM-Net: Gas Distribution Mapping with a Mobile Robot Using Deep Reinforcement Learning and Gaussian Process Regression, pp. 4511-4518. Attachment

Kulbaka, Iliya	University of North Florida
Dutta, Ayan	University of North Florida
Kreidl, Patrick	University of North Florida
Bölöni, Ladislau	University of Central Florida
Roy, Swapnoneel	University of North Florida

15:30-16:30 WePI3T1.5

GNC Design and Orbital Performance Evaluation of ISS Onboard Autonomous Free-Flying Robot Int-Ball2, pp. 4519-4526. Attachment

Nishishita, Taisei	Japan Aerospace Exploration Agency
Watanabe, Keisuke	Japan Aerospace Exploration Agency
Hirano, Daichi	Japan Aerospace Exploration Agency
Mitani, Shinji	JAXA

15:30-16:30 WePI3T1.6

Development of a Peristaltic Flexible Transfer System for Transporting Feces under Microgravity: Construction and Validation of Transport Models, pp. 4527-4533. Attachment

Kawano, Masaki	Chuo University
Uzawa, Shogo	Chuo University
Yamazaki, Chiaki	Japan Aerospace Exploration Agency
Nakamura, Taro	Chuo University

15:30-16:30 WePI3T1.7

Test-Time Certifiable Self-Supervision to Bridge the Sim2Real Gap in Event-Based Satellite Pose Estimation, pp. 4534-4541. Attachment

Jawaid, Mohsi	The University of Adelaide
Talak, Rajat	MIT
Latif, Yasir	University of Adelaide
Carlone, Luca	Massachusetts Institute of Technology
Chin, Tat-Jun	The University of Adelaide

15:30-16:30 WePI3T1.8

Stability of Tethered Ground Robots on Extreme Terrains, pp. 4542-4547.

Kumar, Rahul	Northeastern University
Chipade, Vishnu S.	University of Michigan
Yong, Sze Zheng	Northeastern University

15:30-16:30 WePI3T1.9

Satellite-Model-Free Deep Learning Based Pose Estimation of Non-Cooperative Satellite and Tracking Using Navigation Filter, pp. 4548-4555.

Shukla, Shubham	Tata Consultancy Services
Srivastava, Raunak	TCS Research
Lima, Rolif	TCS Research
Bera, Titas	TCS Innovation Labs

15:30-16:30 WePI3T1.10

Flight Structure Optimization of Modular Reconfigurable UAVs, pp. 4556-4562. Attachment

Su, Yao	Beijing Institute for General Artificial Intelligence
Jiao, Ziyuan	Beijing Institute for General Artificial Intelligence
Zhang, Zeyu	Beijing Institute for General Artificial Intelligence
Zhang, Jingwen	University of California, Los Angeles
Li, Hang	Beijing Institute for General Artificial Intelligence
Wang, Meng	Beijing Institute for General Artificial Intelligence
Liu, Hangxin	Beijing Institute for General Artificial Intelligence (BIGAI)

15:30-16:30 WePI3T1.11

Task-Driven Computational Framework for Simultaneously Optimizing Design and Mounted Pose of Modular Reconfigurable Manipulators, pp. 4563-4570. Attachment

Lei, Maolin — Humanoids and Human Centered Mechatronics (HHCM) Research Line O
Romiti, Edoardo — Istituto Italiano Di Tecnologia
Laurenzi, Arturo — Istituto Italiano Di Tecnologia
Tsagarakis, Nikos — Istituto Italiano Di Tecnologia

15:30-16:30 WePI3T1.12

Robot Design Optimization with Rotational and Prismatic Joints Using Black-Box Multi-Objective Optimization, pp. 4571-4577. Attachment

Kawaharazuka, Kento — The University of Tokyo
Okada, Kei — The University of Tokyo
Inaba, Masayuki — The University of Tokyo

15:30-16:30 WePI3T1.13

ROS-Lite2: Autonomous-Driving Software Platform for Clustered Many-Core Processor, pp. 4578-4585. Attachment

Tajima, Yuta — Saitama University
Tsunoda, Shuhei — Saitama University
Azumi, Takuya — Saitama University

15:30-16:30 WePI3T1.14

NeRF-Enabled Analysis-Through-Synthesis for ISAR Imaging of Small Everyday Objects with Sparse and Noisy UWB Radar Data, pp. 4586-4593. Attachment

Tasnim Oshim, Md Farhan — University of Massachusetts Amherst
Reed, Albert — Arizona State University
Jayasuriya, Suren — Arizona State University
Rahman, Tauhidur — University of California San Diego

15:30-16:30 WePI3T1.15

Optimizing Kubernetes Deployment of Robotic Applications with HEFT-Based Container Orchestration, pp. 4594-4599.

Lumpp, Francesco — University of Verona
Fummi, Franco — University of Verona
Bombieri, Nicola — University of Verona

15:30-16:30 WePI3T1.16

Hardware-Based Time Synchronization for a Multi-Sensor System, pp. 4600-4607.

Wang, Yueqi — University of New South Wales
Liu, Tangyou — The University of New South Wales
Feng, Licheng — University of New South Wales
Wang, Jinze — Swinburne University of Technology
Yang, Yang — University of New South Wales
Bao, Jianjun — China Coal Technology and Engineering Group
Li, Binghao — UNSW
Wu, Liao — University of New South Wales

15:30-16:30 WePI3T1.17

Procedural Generation of Tunnel Networks for Unsupervised Training and Testing in Underground Applications, pp. 4608-4615. Attachment

Cano, Lorenzo — Universidad De Zaragoza
Mosteo, Alejandro R. — Centro Universitario De La Defensa De Zaragoza
Tardioli, Danilo — Centro Universitario De La Defensa

WePI3T2 Room 2

Robotics in Healthcare II (Teaser Session)

Chair: Simaan, Nabil — Vanderbilt University
Co-Chair: Agrawal, Sunil — Columbia University

15:30-16:30 WePI3T2.1

A Robotic Mediation Device for Skill Assessment and Training During Colonoscopy, pp. 4616-4623. Attachment

Richards, Olivia — Vanderbilt University
Ahronovich, Elan — Vanderbilt ARMA
Shihora, Neel — Vanderbilt University
Yildiz, Ahmet — Vanderbilt University

Atoum, Jumana	Vanderbilt University
Wu, Jie Ying	Vanderbilt University
Obstein, Keith	Vanderbilt University
Simaan, Nabil	Vanderbilt University

15:30-16:30 WePI3T2.2

X-Ray-Guided Magnetic Fields for Wireless Control of Untethered Magnetic Robots in Cerebral Vascular Phantoms, pp. 4624-4629. Attachment

Ligtenberg, Leendert-Jan Wouter	University of Twente
de Boer, Marcus Cornelis Johannes	University of Twente
Mulder, Iris	University of Twente
Lomme, Roger MLM	Radboudumc
Wasserberg, Dorothee	University of Twente
Klein Rot, Emily A. M.	LipoCoat
Ben Ami, Doron	Triticum Medical
Sadeh, Udi	Triticum Medical
Liefers, Herman Remco	University of Twente
Shoseyov, Oded	The Hebrew University Og Jerusalem
Jonkheijm, Pascal	University of Twente
Warle, Michiel	Radboud University Medical Center
Khalil, Islam S.M.	University of Twente

15:30-16:30 WePI3T2.3

A Wearable Mechanical Pressure-Electrophysiological Bimodal Sensing System for Rehabilitation Electromechanical Device, pp. 4630-4635.

Wang, Peng	Hebei University of Technology
Liu, Jixiao	Hebei University of Technology
Qi, Dianpeng	Harbin Institute of Technology
Guo, Shijie	Hebei University of Technology

15:30-16:30 WePI3T2.4

Self-Selecting Semi-Supervised Transformer-Attention Convolutional Network for Four Class EEG-Based Motor Imagery Decoding, pp. 4636-4642.

Ng, Han Wei	Nanyang Technological University
Guan, Cuntai	Nanyang Technological University

15:30-16:30 WePI3T2.5

Design Improvements to the Float Upper-Limb Exoskeleton Better Mimics the Glenohumeral Complex Kinematics, pp. 4643-4650. Attachment

Bodo, Giulia	Politecnico Di Torino & Istituto Italiano Di Tecnologia
Tessari, Federico	Massachusetts Institute of Technology
Capitta, Gianluca	Istituto Italiano Di Tecnologia
De Guglielmo, Luca	Istituto Italiano Di Tecnologia
Buccelli, Stefano	Istituto Italiano Di Tecnologia
Laffranchi, Matteo	Istituto Italiano Di Tecnologia

15:30-16:30 WePI3T2.6

Modular Robot Wear for Walking Rehabilitation Assistance According to Physical Functionality, pp. 4651-4657. Attachment

Ogata, Kunihiro	National Institute of Advanced Industrial Science and Technology
Futawatari, Toshiki	The University of Tokyo
Fujimoto, Masahiro	National Institute of Advanced Industrial Science and Technology
Imamura, Yumeko	National Inst. of AIST
Matsumoto, Yoshio	AIST

15:30-16:30 WePI3T2.7

A Series Variable-Stiffness Joint for Robot-Assisted Resistance Training, pp. 4658-4663.

Hu, Xingyu	Beihang University
Li, Yuebing	Beihang University
Wu, Haoyang	Beihang University
Zhang, Wuxiang	Beihang University
Feng, Yanggang	Beihang University

15:30-16:30 WePI3T2.8

Creating Discomfort Maps Via Hand-Held Human Feedback Interface for Robotic Shoulder Physiotherapy, pp. 4664-4671. Attachment

Ravenberg, Jevon Gianni	Delft University of Technology
Belli, Italo	TU Delft
Prendergast, J. Micah	Delft University of Technology
Seth, Ajay	Delft University of Technology
Peternel, Luka	Delft University of Technology

15:30-16:30 WePI3T2.9

A Parallel-Actuated Robot with Two End-Effector Degrees-Of-Freedom: Application As a Novel Wearable Head-Neck Traction Brace, pp. 4672-4677.

Zhou, Jingzong	University of California, Riverside
Kulkarni, Priya	Columbia University
Agrawal, Sunil	Columbia University

15:30-16:30 WePI3T2.10

Discover2Walk: A Cable-Driven Robotic Platform to Promote Gait in Pediatric Population, pp. 4678-4685.

Romero Sorozabal, Pablo	CSIC
Delgado-Oleas, Gabriel	CSIC
Laudanski, Annemarie F	Dalhousie University
Gutierrez, Alvaro	Universidad Politécnica De Madrid
Rocon, Eduardo	CSIC

15:30-16:30 WePI3T2.11

Evaluating Gait Symmetry with a Smart Robotic Walker: A Novel Approach to Mobility Assessment, pp. 4686-4692. Attachment

Abdollah Chalaki, Mahdi	University of Alberta
Soleymani, Abed	University of Alberta
Li, Xingyu	University of Alberta
Mushahwar, Vivian K.	University of Alberta
Tavakoli, Mahdi	University of Alberta

15:30-16:30 WePI3T2.12

Meta-Learning for Fast Adaptation in Intent Inferral on a Robotic Hand Orthosis for Stroke, pp. 4693-4700.

La Rotta, Pedro Leandro	Columbia University
Xu, Jingxi	Columbia University
Chen, Ava	Columbia University
Winterbottom, Lauren	Columbia University
Chen, Wenxi	Columbia University
Nilsen, Dawn	Columbia University
Stein, Joel	Columbia University
Ciocarlie, Matei	Columbia University

15:30-16:30 WePI3T2.13

Generalized Path Impedance Control, pp. 4701-4707. Attachment

Montesino, Ignacio	Universidad Carlos III De Madrid
Victores, Juan G.	Universidad Carlos III De Madrid
Balaguer, Carlos	Universidad Carlos III De Madrid
Jardon, Alberto	Universidad Carlos Iii De Madrid

15:30-16:30 WePI3T2.14

Automatic Field of View Adjustment of an RCM Constraint-Free Continuum Laparoscopic Robot, pp. 4708-4715. Attachment

Zhang, Jing	Shenzhen Campus of Sun Yat-Sen University
Wang, Baichuan	Shenzhen Campus of Sun Yat-Sen University
Pan, Zhijie	Shenzhen Campus of Sun Yat-Sen University
Li, Weiqi	Shenzhen Campus of Sun Yat-Sen University
Li, Mengtang	Shenzhen Campus of Sun Yat-Sen University

WePI3T3 Room 3

Social HRI II (Teaser Session)

Chair: Miura, Jun	Toyohashi University of Technology
Co-Chair: Lim, Angelica	Simon Fraser University

15:30-16:30 WePI3T3.1

Skeleton-Based Human Action Recognition with Noisy Labels, pp. 4716-4723. Attachment

Xu, Yi	Kalrsruhe Institute of Technology, IAR

Peng, Kunyu	Karlsruhe Institute of Technology
Wen, Di	Kalrsruhe Institute of Technology, IAR
Liu, Ruiping	Karlsruhe Institute of Technology
Zheng, Junwei	Karlsruhe Institute of Technology
Chen, Yufan	Karlsruher Institut Für Technologie
Zhang, Jiaming	Karlsruhe Institute of Technology
Roitberg, Alina	University of Stuttgart
Yang, Kailun	Hunan University
Stiefelhagen, Rainer	Karlsruhe Institute of Technology

15:30-16:30 WePI3T3.2

Retargeting Human Facial Expression to Human-Like Robotic Face through Neural Network Surrogate-Based Optimization, pp. 4724-4730.

Wu, Bowen	Osaka University; RIKEN
Liu, Chaoran	Riken
Ishi, Carlos Toshinori	RIKEN
Minato, Takashi	RIKEN
Ishiguro, Hiroshi	Osaka University

15:30-16:30 WePI3T3.3

Reducing Cognitive Load in Teleoperating Swarms of Robots through a Data-Driven Shared Control Approach, pp. 4731-4738. Attachment

Turco, Enrico	Istituto Italiano Di Tecnologia
Castellani, Chiara	Istituto Italiano Di Tecnologia
Bo, Valerio	Istituto Italiano Di Tecnologia
Pacchierotti, Claudio	Centre National De La Recherche Scientifique (CNRS)
Prattichizzo, Domenico	University of Siena
Lisini Baldi, Tommaso	University of Siena

15:30-16:30 WePI3T3.4

PICaSo: A Collaborative Robotics System for Inpainting on Physical Canvas Using Marker and Eraser, pp. 4739-4746. Attachment

Nasrat, Shady	Pusan National University, Busan, SouthKorea
Yi, Jae-Bong	Pusan National University
Jo, Minseong	Pusan National University
Yi, Seung-Joon	Pusan National University

15:30-16:30 WePI3T3.5

React to This! How Humans Challenge Interactive Agents Using Nonverbal Behaviors, pp. 4747-4754. Attachment

Zhang, Chuxuan	Simon Fraser University
Burkanova, Bermet	Simon Fraser University
Kim, Lawrence H.	Simon Fraser University
Yip, Lauren	SFU
Cupcic, Ugo	Shadow Robot Company
Lallée, Stéphane	NA
Lim, Angelica	Simon Fraser University

15:30-16:30 WePI3T3.6

Combining Ontological Knowledge and Large Language Model for User-Friendly Service Robots, pp. 4755-4762.

Nakajima, Haru	Toyohashi University of Technology
Miura, Jun	Toyohashi University of Technology

15:30-16:30 WePI3T3.7

Pilot Study for a Robot-Assisted Timed up and Go Assessment, pp. 4763-4768. Attachment

Story, Matthew	Sheffield Hallam University
Ait Belaid, Khaoula	Loughborough University
Camp, Nicola	Nottingham Trent University
Vagnetti, Roberto	Nottingham Trent University
Magistro, Daniele	Nottingham Trent University
Zecca, Massimiliano	Loughborough University
Di Nuovo, Alessandro	Sheffield Hallam University

15:30-16:30 WePI3T3.8

Contextual Emotion Recognition Using Large Vision Language Models, pp. 4769-4776. Attachment

Etesam, Yasaman	Simon Fraser University
Yalcin, Ozge	Simon Fraser University

Zhang, Chuxuan	Simon Fraser University
Lim, Angelica	Simon Fraser University

15:30-16:30 WePI3T3.9

The Subtle Line between Personalization and User Manipulation in a European Regulatory Perspective. a Proposal for a Technology-Assessment Methodology for Artificial Intelligence Systems, pp. 4777-4784.

Bertolini, Andrea	Scuola Superiore S. Anna

15:30-16:30 WePI3T3.10

Socially Integrated Navigation: A Social Acting Robot with Deep Reinforcement Learning, pp. 4785-4792.

Flögel, Daniel	FZI Research Center for Information Technology, Karlsruhe Instit
Fischer, Lars	FZI Research Center for Information Technology, Karlsruhe Instit
Rudolf, Thomas	FZI Research Center for Information Technology, Karlsruhe Instit
Schürmann, Tobias	FZI Research Center for Information Technology, Karlsruhe Instit
Hohmann, Sören	Institute of Control Systems, Karlsruhe Institute of Technology

15:30-16:30 WePI3T3.11

Social Navigation in Crowded Environments with Model Predictive Control and Deep Learning-Based Human Trajectory Prediction, pp. 4793-4799. Attachment

Le, Viet-Anh	University of Delaware
Chalaki, Behdad	Honda Research Institute USA, Inc
Tadiparthi, Vaishnav	Honda Research Institute
Nourkhiz Mahjoub, Hossein	Honda Research Institute US
D'sa, Jovin	Honda Research Institute, USA
Moradi-Pari, Ehsan	Honda Research Institute

15:30-16:30 WePI3T3.12

Redefining Data Pairing for Motion Retargeting Leveraging a Human Body Prior, pp. 4800-4807. Attachment

Figuera Michal, Xiyana Veroska	Ulsan National Institute of Science and Technology (UNIST)
Park, Soogeun	UNIST (Ulsan National Institute of Science and Technology)
Ahn, Hyemin	Ulsan National Institute of Science and Technology

15:30-16:30 WePI3T3.13

SocialNav-FTI: Field-Theory-Inspired Social-Aware Navigation Framework Based on Human Behavior and Social Norms, pp. 4808-4815.

Lu, Siyi	Central South University
Zhong, Ping	Central South University
Ye, Shuqi	Central South University
Chen, Bolei	Central South University
Yu, Sheng	Central South University
Liu, Run	University of Chinese Academy of Sciences

15:30-16:30 WePI3T3.14

Adaptive Social Force Window Planner with Reinforcement Learning, pp. 4816-4822. Attachment

Martini, Mauro	Politecnico Di Torino
Perez-Higueras, Noe	University Pablo De Olavide
Ostuni, Andrea	Politecnico Di Torino
Chiaberge, Marcello	Politecnico Di Torino
Caballero, Fernando	Universidad De Sevilla
Merino, Luis	Universidad Pablo De Olavide

15:30-16:30 WePI3T3.15

Crowd-Aware Robot Navigation with Switching between Learning-Based and Rule-Based Methods Using Normalizing Flows, pp. 4823-4830. Attachment

Matsumoto, Kohei	Kyushu University
Hyodo, Yuki	Kyushu University
Kurazume, Ryo	Kyushu University

15:30-16:30 WePI3T3.16

Transformer-Based Relationship Inference Model for Household Object Organization by Integrating Graph Topology and Ontology, pp. 4831-4837.

Li, Xiaodong	Shandong University
Tian, Guohui	Shandong University
Cui, Yongcheng	Shandong University
Gu, Yu	Shandong University

WePI3T4 Room 4

Robot Vision I (Teaser Session)

Chair: Mouaddib, El Mustapha — Universite De Picardie Jules Verne

Co-Chair: Pan, Yongping — Sun Yat-Sen University

15:30-16:30 WePI3T4.1

Dynamic-Range Focal Sweep: Seamless Continuous Autofocus Based on High-Speed Vision for Magnified Object Tracking, pp. 4838-4845. Attachment

Zhang, Tianyi — Chiba University

Shimasaki, Kohei — Hiroshima University

Ishii, Idaku — Hiroshima University

Namiki, Akio — Chiba University

15:30-16:30 WePI3T4.2

A Mathematical Characterization of the Convergence Domain for Direct Visual Servoing, pp. 4846-4853.

Naamani, Meriem Belinda — CNRS-AIST JRL

Caron, Guillaume — CNRS

Morisawa, Mitsuharu — National Inst. of AIST

Mouaddib, El Mustapha — Universite De Picardie Jules Verne

15:30-16:30 WePI3T4.3

Visual Servo Control of a Conceptual Magnetically Anchored and Guided Flexible Endoscope, pp. 4854-4860.

Li, Weibing — Sun Yat-Sen University

Yang, Yang — Sun Yat-Sen University

Pan, Yongping — Sun Yat-Sen University

15:30-16:30 WePI3T4.4

Multi-Spectral Visual Servoing, pp. 4861-4866. Attachment

Fiasche, Enrico — Université Côte D'Azur

Malis, Ezio — Inria

Martinet, Philippe — INRIA

15:30-16:30 WePI3T4.5

Automating Trophectoderm Cells Aspiration and Separation in Embryo Biopsy at the Blastocyst Stage: A Vision-Based Control Approach, pp. 4867-4873.

Abu Ajamieh, Ihab — Birzeit University

Al Saaideh, Mohammad — Memorial University of Newfoundland

Al Janaideh, Mohammad — University of Guelph

Mills, James K. — University of Toronto

15:30-16:30 WePI3T4.6

Robust Partitioned Visual Servoing for Aerial Manipulation Utilizing Controllable-Space Image Planning and Adaptive Image Representation, pp. 4874-4881. Attachment

Soltanshah, Mohammad — Simon Fraser University

Eskandarpour, Abolfazl — Simon Fraser University

Mehrandezh, Mehran — University of Regina

Gupta, Kamal — Simon Fraser University

15:30-16:30 WePI3T4.7

A Unified Framework of Hybrid Vision-Force Control with Nullspace Compliance for Redundant Robots, pp. 4882-4887. Attachment

Li, Zhiwen — Sun Yat-Set University

Li, Weibing — Sun Yat-Sen University

Chen, Yanjie — Fuzhou University

Pan, Yongping — Sun Yat-Sen University

15:30-16:30 WePI3T4.8

Multi-Target Tracking with Occlusion Resistance for Mobile Robots in Dynamic Environments, pp. 4888-4895. Attachment

Liu, Zhongyan — Nankai University

Lu, Biao — Nankai University

Xing, Xinghai — Nankai University

Mao, Dun — Nankai University

Fang, Yongchun — Nankai University

15:30-16:30 WePI3T4.9

GroupTrack: Multi-Object Tracking by Using Group Motion Patterns, pp. 4896-4903. Attachment

Xu, Xinglong	Harbin Institute of Technology(Shenzhen)
Ren, Weihong	Harbin Institute of Technology (Shenzhen)
Sun, Gan	South China University of Technology
Ji, Haoyu	Harbin Institute of Technology, Shenzhen
Gao, Yu	Harbin Institute of Technology, Shenzhen
Liu, Honghai	Portsmouth University

15:30-16:30 WePI3T4.10

QTrack: Embracing Quality Clues for Robust 3D Multi-Object Tracking, pp. 4904-4911.

Yang, Jinrong	Huazhong University of Science and Technology
Yu, En	Huazhong University of Science and Technology
Li, Zeming	MEGVII Technolegy
Li, Xiaoping	Huazhong University of Science and Technology
Tao, Wenbing	Huazhong University of Science & Technology

15:30-16:30 WePI3T4.11

CLAT: Convolutional Local Attention Tracker for Real-Time UAV Target Tracking System with Feedback Information, pp. 4912-4919. Attachment

Sun, XiaoLou	Southeast University
Quan, Zhibin	Southeast University
Wang, Wei	Nanjing University of Information Science and Technology
Si, Wufei	Purple Mountain Laboratories
Wang, Chunyan	Purple Mountain Laboratories
Li, Yuntian	PML
Wu, Yuan	Purple Mountain Lab
Meng, Shen	Purple Mountain Laboratories

15:30-16:30 WePI3T4.12

FusionTrack: An Online 3D Multi-Object Tracking Framework Based on Camera-LiDAR Fusion, pp. 4920-4925.

Zeng, Weizhen	Tongji University
Fan, Jiaqi	Tongji University
Tian, Xuelin	Tongji University
Chu, Hongqing	Tongji University
Gao, Bingzhao	Tongji University

15:30-16:30 WePI3T4.13

CR3DT: Camera-RADAR Fusion for 3D Detection and Tracking, pp. 4926-4933. Attachment

Baumann, Nicolas	ETH
Baumgartner, Michael	ETH
Ghignone, Edoardo	ETH
Kühne, Jonas	ETH Zürich
Fischer, Tobias	ETH Zürich
Yang, Yung-Hsu	ETH
Pollefeys, Marc	ETH Zurich
Magno, Michele	ETH Zurich

15:30-16:30 WePI3T4.14

A Robotic-Centric Paradigm for 3D Human Tracking under Complex Environments Using Multi-Modal Adaptation, pp. 4934-4940. Attachment

Xin, Shuo	Zhejiang University
Zhang, Zhen	Zhejiang University
Liu, Liang	Zhejiang University
Hou, Xiaojun	Zhejiang University
Zhu, Deye	Zhejiang University
Wang, Mengmeng	Zhejiang University
Liu, Yong	Zhejiang University

15:30-16:30 WePI3T4.15

A Neurosymbolic Approach to Adaptive Feature Extraction in SLAM, pp. 4941-4948.

Chandio, Yasra	University of Massachusetts, Amherst
Khan, Momin Ahmad	University of Massachusetts Amherst
Selialia, Khotso	University of Massachusetts Amherst
Garcia, Luis Antonio	University of Utah
DeGol, Joseph	University of Illinois Urbana-Champaign
Anwar, Fatima M	UMASS AMHERST

15:30-16:30 WePI3T4.16

SDTrack: Spatially Decoupled Tracker for Visual Tracking, pp. 4949-4956.

Xia, Zihao — Nanjing University of Posts and Telecommunications
Bi, Xin — College of Automotive Studies, Tongji University
Fan, Baojie — Nanjing University of Posts and Telecommunications
Wang, Zhiquan — Nanjing University of Posts and Telecommunications

15:30-16:30 WePI3T4.17

SwinMTL: A Shared Architecture for Simultaneous Depth Estimation and Semantic Segmentation from Monocular Camera Images, pp. 4957-4964.

Taghavi, Pardis — Texas A&M
Pandey, Gaurav — Texas A&M
Langari, Reza — Texas A&M University

WePI3T5 Room 5

Deep Learning III (Teaser Session)

Chair: Piater, Justus — University of Innsbruck
Co-Chair: Betz, Johannes — Technical University of Munich

15:30-16:30 WePI3T5.1

Continual Domain Randomization, pp. 4965-4972. Attachment

Josifovski, Josip — Technical University of Munich
Auddy, Sayantan — University of Innsbruck
Malmir, Mohammadhossein — Technical University of Munich
Piater, Justus — University of Innsbruck
Knoll, Alois — Tech. Univ. Muenchen TUM
Navarro-Guerrero, Nicolás — Leibniz Universität Hannover

15:30-16:30 WePI3T5.2

Hyperbolic Image-And-Pointcloud Contrastive Learning for 3D Classification, pp. 4973-4979.

Hu, Naiwen — Xi'an Jiaotong University
Cheng, Haozhe — Xi'an Jiaotong University
Xie, Yifan — Xi'an Jiaotong University
Shi, Pengcheng — Xi'an Jiaotong University
Zhu, Jihua — Xi'an Jiaotong University

15:30-16:30 WePI3T5.3

Exploiting Local Features and Range Images for Small Data Real-Time Point Cloud Semantic Segmentation, pp. 4980-4987. Attachment

Fusaro, Daniel — Department of Information Engineering (DEI), University of Padov
Mosco, Simone — Università Degli Studi Di Padova
Menegatti, Emanuele — The University of Padua
Pretto, Alberto — University of Padova

15:30-16:30 WePI3T5.4

Single-Shot 6DoF Pose and 3D Size Estimation for Robotic Strawberry Harvesting, pp. 4988-4993. Attachment

Li, Lun — University of Groningen
Kasaei, Hamidreza — University of Groningen

15:30-16:30 WePI3T5.5

D2SR: Decentralized Detection, De-Synchronization, and Recovery of LiDAR Interference, pp. 4994-5001. Attachment

Rathnayake, Darshana — Singapore Management University
Sabbella, Hemanth — Singapore Management University
Radhakrishnan, Meera — University of Technology Sydney
Misra, Archan — Singapore Management University

15:30-16:30 WePI3T5.6

Robust Multi-Camera BEV Perception: An Image-Perceptive Approach to Counter Imprecise Camera Calibration, pp. 5002-5008. Attachment

Sun, Rundong — Beijing Institute of Technology
Fu, Mengyin — Beijing Institute of Technology
Liang, Hao — Beijing Institute of Technology
Zhu, Chunhui — Beijing Institute of Technology
Dong, Zhipeng — Beijing Institute of Technology

Yang, Yi	Beijing Institute of Technology

15:30-16:30 WePI3T5.7

Few-Shot Transparent Instance Segmentation, pp. 5009-5016.

Cherian, Anoop	Mitsubishi Electric Research Labs
Jain, Siddarth	Mitsubishi Electric Research Laboratories (MERL)
Marks, Tim K.	Mitsubishi Electric Research Laboratories (MERL)

15:30-16:30 WePI3T5.8

SSL-RGB2IR: Semi-Supervised RGB-To-IR Image-To-Image Translation for Enhancing Visual Task Training in Semantic Segmentation and Object Detection, pp. 5017-5023. Attachment

Sikdar, Aniruddh	Indian Institute of Science, Bangalore
Saadiyean, Qiranul	Indian Institute of Science, Banglore
Anand, Prahlad	Vellore Institute of Technology, Vellore
Sundaram, Suresh	Indian Institute of Science

15:30-16:30 WePI3T5.9

Assessing Monocular Depth Estimation Networks for UAS Deployment in Rainforest Environments, pp. 5024-5031. Attachment

Tangellapalli, Srisai Anirudh	University of Nebraska-Lincoln
Sangha, Harman Singh	Iowa State University
Peschel, Joshua	Iowa State University
Duncan, Brittany	University of Nebraska, Lincoln

15:30-16:30 WePI3T5.10

Rethinking 3D Geometric Object Features for Enhancing Skeleton-Based Action Recognition, pp. 5032-5039. Attachment

Wu, Yuankai	TUM
Wang, Chi	Technical University of Munich
Salihu, Driton	Technical University Munich
Patsch, Constantin	Technical University of Munich
Zakour, Marsil	Technical University of Munich
Steinbach, Eckehard	Technical University of Munich

15:30-16:30 WePI3T5.11

Fast Spatial Reasoning of Implicit 3D Maps through Explicit Near-Far Sampling Range Prediction, pp. 5040-5047. Attachment

Min, Chaerin	Brown University
Cha, Sehyun	LG Electronics
Won, Changhee	Hanyang University
Lim, Jongwoo	Hanyang University

15:30-16:30 WePI3T5.12

NeuFlow: Real-Time, High-Accuracy Optical Flow Estimation on Robots Using Edge Devices, pp. 5048-5055.

Zhang, Zhiyong	Northeastern University
Singh, Hanumant	Northeatern University
Jiang, Huaizu	Northeastern University

15:30-16:30 WePI3T5.13

Domain Randomization-Free Sim-To-Real : An Attention-Augmented Memory Approach for Robotic Tasks, pp. 5056-5063.

Qu, Jia	Mitsubishi Electric Corporation
Otsubo, Shun	Mitsubishi Electric Corporation
Yamanokuchi, Tomoya	Nara Institute of Science and Technology
Matsubara, Takamitsu	Nara Institute of Science and Technology
Miwa, Shotaro	Mitsubishi Electric Corp

15:30-16:30 WePI3T5.14

MPGNet: Learning Move-Push-Grasping Synergy for Target-Oriented Grasping in Occluded Scenes, pp. 5064-5071.

Li, Dayou	School of Control Science and Engineering, Shandong Universisty
Zhao, Chenkun	Shandong University, School of Control Science and Engineering
Yang, Shuo	Shandong University
Song, Ran	Shandong University
Li, Xiaolei	Shandong University
Zhang, Wei	Shandong University

15:30-16:30 WePI3T5.15

Progressive Representation Learning for Real-Time UAV Tracking, pp. 5072-5079.

Fu, Changhong	Tongji University
Lei, Xiang	Tongji University
Zuo, Haobo	University of Hong Kong
Yao, Liangliang	Tongji University
Zheng, Guangze	The University of Hong Kong
Pan, Jia	University of Hong Kong

15:30-16:30 WePI3T5.16

WasteGAN: Data Augmentation for Robotic Waste Sorting through Generative Adversarial Networks, pp. 5080-5087. Attachment

Bacchin, Alberto	University of Padua
Barcellona, Leonardo	University of Padova
Terreran, Matteo	University of Padova
Ghidoni, Stefano	University of Padova
Menegatti, Emanuele	The University of Padua
Kiyokawa, Takuya	Osaka University

WePI3T6 Room 6

Learning II (Teaser Session)

Chair: Ma, Jun	The Hong Kong University of Science and Technology
Co-Chair: Finzi, Alberto	University of Naples

15:30-16:30 WePI3T6.1

Reward-Driven Automated Curriculum Learning for Interaction-Aware Self-Driving at Unsignalized Intersections, pp. 5088-5095.

Peng, Zengqi	The Hong Kong University of Science and Technology (Guangzhou)
Zhou, Xiao	Harbin Institute of Technology
Zheng, Lei	The Hong Kong University of Science and Technology (Guangzhou)
Wang, Yubin	The Hong Kong University of Science and Technology (Guangzhou)
Ma, Jun	The Hong Kong University of Science and Technology

15:30-16:30 WePI3T6.2

JUICER: Data-Efficient Imitation Learning for Robotic Assembly, pp. 5096-5103.

Ankile, Lars	Massachusetts Institute of Technology
Simeonov, Anthony	Massachusetts Institute of Technology
Shenfeld, Idan	MIT
Agrawal, Pulkit	MIT

15:30-16:30 WePI3T6.3

DexSkills: Skill Segmentation Using Haptic Data for Learning Autonomous Long-Horizon Robotic Manipulation Tasks, pp. 5104-5111. Attachment

Mao, Xiaofeng	Edinburgh University
Giudici, Gabriele	Queen Mary University of London
Coppola, Claudio	Humanoid AI
Althoefer, Kaspar	Queen Mary University of London
Farkhatdinov, Ildar	King's College London
Li, Zhibin (Alex)	University College London
Jamone, Lorenzo	Queen Mary University London

15:30-16:30 WePI3T6.4

Efficient Tactile Sensing-Based Learning from Limited Real-World Demonstrations for Dual-Arm Fine Pinch-Grasp Skills, pp. 5112-5119.

Mao, Xiaofeng	Edinburgh University
Xu, Yucheng	University of Edinburgh
Wen, Ruoshi	Touchlab Limited
Kasaei, Mohammadreza	University of Edinburgh
Yu, Wanming	University of Oxford
Psomopoulou, Efi	University of Bristol
Lepora, Nathan	University of Bristol
Li, Zhibin (Alex)	University College London

15:30-16:30 WePI3T6.5

Beyond Success: Quantifying Demonstration Quality in Learning from Demonstration, pp. 5120-5127.

Bilal, Muhammad	The University of Melbourne
Lipovetzky, Nir	The University of Melbourne
Oetomo, Denny	The University of Melbourne
Johal, Wafa	University of Melbourne

15:30-16:30 WePI3T6.6

Knowledge-Based Programming by Demonstration Using Semantic Action Models for Industrial Assembly, pp. 5128-5135. Attachment

Ding, Junsheng	Fortiss GmbH
Zhang, Haifan	Technical University of Munich
Li, Weihang	Fortiss GmbH
Zhou, Liangwei	Fortiss GmbH
Perzylo, Alexander Clifford	Fortiss - An-Institut Technische Universität München

15:30-16:30 WePI3T6.7

PP-TIL: Personalized Planning for Autonomous Driving with Instance-Based Transfer Imitation Learning, pp. 5136-5143. Attachment

Lin, Fangze	Shenzhen University
He, Ying	Shenzhen University
Yu, Fei	Guangming Lab

15:30-16:30 WePI3T6.8

Riemannian Flow Matching Policy for Robot Motion Learning, pp. 5144-5151.

Braun, Max	Karlsruhe Institute of Technology (KIT)
Jaquier, Noémie	Karlsruhe Institute of Technology (KIT)
Rozo, Leonel	Bosch Center for Artificial Intelligence
Asfour, Tamim	Karlsruhe Institute of Technology (KIT)

15:30-16:30 WePI3T6.9

SE(3) Linear Parameter Varying Dynamical Systems for Globally Asymptotically Stable End-Effector Control, pp. 5152-5159. Attachment

Sun, Sunan	University of Pennsylvania
Figueroa, Nadia	University of Pennsylvania

15:30-16:30 WePI3T6.10

Learning Symbolic and Subsymbolic Temporal Task Constraints from Bimanual Human Demonstrations, pp. 5160-5167. Attachment

Dreher, Christian R. G.	Karlsruhe Institute of Technology (KIT)
Asfour, Tamim	Karlsruhe Institute of Technology (KIT)

15:30-16:30 WePI3T6.11

Diffusion-PbD: Generalizable Robot Programming by Demonstration with Diffusion Features, pp. 5168-5175. Attachment

Murray, Michael	University of Washington
Su, Entong	University of California San Diego
Cakmak, Maya	University of Washington

15:30-16:30 WePI3T6.12

*DragTraffic: Interactive and Controllable Traffic Scene Generation for Autonomous Driving**. pp. 14241-14247.

Wang, Sheng	Hong Kong University of Science and Technology
Sun, Ge	The Hong Kong University of Science and Technology
Ma, Fulong	The Hong Kong University of Science and Technology
Hu, Tianshuai	The Hong Kong University of Science and Technology
Qin, Qiang	Department of Production Engineering, KTH Royal Institute of Tec
Song, Yongkang	Ningbo Lotus Robotics Co., Ltd
Zhu, Lei	The Hong Kong University of Science and Technology (Guangzhou)
Liang, Junwei	HKUST (Guangzhou)

15:30-16:30 WePI3T6.13

Incremental Learning of Robotic Manipulation Tasks through Virtual Reality Demonstrations, pp. 5176-5181. Attachment

Rauso, Giuseppe	University of Naples "Federico II"
Caccavale, Riccardo	Università Di Napoli "Federico II"
Finzi, Alberto	University of Naples

15:30-16:30 WePI3T6.14

Is a Simulation Better Than Teleoperation for Acquiring Human Manipulation Skill Data?, pp. 5182-5188. Attachment

Kim, Donghyeon	Korea Advanced Institute of Science and Technology (KAIST)
Park, Seong-Su	Korea Advanced Institute of Science and Technology
Lee, Kwang-Hyun	Korea Advanced Institute of Science and Technology
Lee, Dongheui	Technische Universität Wien (TU Wien)
Ryu, Jee-Hwan	Korea Advanced Institute of Science and Technology

15:30-16:30 WePI3T6.15

Constrained Bootstrapped Learning for Few-Shot Robot Skill Adaptation, pp. 5189-5194. Attachment

Haque, A K M Nadimul	University of Technology Sydney
Sukkar, Fouad	University of Technology Sydney
Tanz, Lukas	Technical University of Munich
Carmichael, Marc	Centre for Autonomous Systems
Vidal-Calleja, Teresa A.	University of Technology Sydney

15:30-16:30 WePI3T6.16

Learning Temporally Composable Task Segmentations with Language, pp. 5195-5202. Attachment

Raj, Divyanshu	Arizona State University
Patil, Omkar Deepak	Arizona State University
Gu, Weiwei	Arizona State University
Baral, Chitta	Arizona State University
Gopalan, Nakul	Arizona State University

WePI3T7 Room 7

Grasping & Manipulation II (Teaser Session)

Chair: Taniguchi, Tadahiro	Ritsumeikan University
Co-Chair: Katzschmann, Robert Kevin	ETH Zurich

15:30-16:30 WePI3T7.1

Streamlining Object Pushing: Behavior Tree-Based Coordination of Control and Planning, pp. 5203-5210. Attachment

Bertoncelli, Filippo	Technology Innovation Institute
Sabattini, Lorenzo	University of Modena and Reggio Emilia

15:30-16:30 WePI3T7.2

Simulation-Assisted Learning for Efficient Bin-Packing of Deformable Packages in a Bimanual Robotic Cell, pp. 5211-5218. Attachment

Manyar, Omey Mohan	University of Southern California
Ye, Hantao	University of Southern California
Sagare, Meghana	University of Southern California
Mayya, Siddharth	Amazon Robotics
Wang, Fan	Amazon Robotics
Gupta, Satyandra K.	University of Southern California

15:30-16:30 WePI3T7.3

A Soft Robotic Finger Inspired by Biological Perception Models for Tactile Sensing, pp. 5219-5225. Attachment

Mao, Baijin	Tsinghua University
Yuan, Qiangjing	Tsinghua University
Xiang, Yuyaocen	Tsinghua Shenzhen International Graduate School
Zhou, Kunyu	Tsinghua University
Wang, Weichen	Tsinghua University
Chen, Yaozhen	Tsinghua University
Hao, Hongwei	Tsinghua University
Qu, Juntian	Tsinghua University

15:30-16:30 WePI3T7.4

Development of a Modular Robotic Finger for Gripping Various Shaped Objects, pp. 5226-5231.

Kim, Jisu	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Cho, Jinman	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Kang, Yeon	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Lee, Changhwa	Daegu Gyeongbuk Institute of Science and Technology
Yun, Dongwon	Daegu Gyeongbuk Institute of Science and Technology (DGIST)

15:30-16:30 WePI3T7.5

Haptic Contour Following with the Smart Suction Cup, pp. 5232-5237. Attachment

Lee, Sebastian	University of California, Berkeley
Lee, Jungpyo	University of California, Berkeley

Stuart, Hannah	UC Berkeley

15:30-16:30 WePI3T7.6

In-Hand Singulation and Scooping Manipulation with a 5 DOF Tactile Gripper, pp. 5238-5243. Attachment

Zhou, Yuhao	Purdue University
Zhou, Pokuang	Purdue University
Wang, Shaoxiong	MIT
She, Yu	Purdue University

15:30-16:30 WePI3T7.7

PROSPECT: Precision Robot Spectroscopy Exploration and Characterization Tool, pp. 5244-5251. Attachment

Hanson, Nathaniel	Massachusetts Institute of Technology
Lvov, Gary	Northeastern University
Rautela, Vedant	Northeastern University
Hibbard, Sam	Northeastern University
Holand, Ethan	Carnegie Mellon University
DiMarzio, Charles A	Northeastern University
Padir, Taskin	Northeastern University

15:30-16:30 WePI3T7.8

Precise Well-Plate Placing Utilizing Contact During Sliding with Tactile-Based Pose Estimation for Laboratory Automation, pp. 5252-5259. Attachment

Pai, Sameer	Massachusetts Institute of Technology
Takahashi, Kuniyuki	Preferred Networks, Inc
Masuda, Shimpei	Preferred Networks, Inc / University of Tsukuba
Fukaya, Naoki	Preferred Networks, Inc
Yamane, Koki	University of Tsukuba
Ummadisingu, Avinash	Preferred Networks, Inc

15:30-16:30 WePI3T7.9

Contact-Implicit Model Predictive Control for Dexterous In-Hand Manipulation: A Long-Horizon and Robust Approach, pp. 5260-5266. Attachment

Jiang, Yongpeng	Tsinghua University
Yu, Mingrui	Tsinghua University
Zhu, Xinghao	University of California, Berkeley
Tomizuka, Masayoshi	University of California
Li, Xiang	Tsinghua University

15:30-16:30 WePI3T7.10

Stable Object Placing Using Curl and Diff Features of Vision-Based Tactile Sensors, pp. 5267-5274. Attachment

Takahashi, Kuniyuki	Preferred Networks, Inc
Masuda, Shimpei	Preferred Networks, Inc / University of Tsukuba
Taniguchi, Tadahiro	Ritsumeikan University

15:30-16:30 WePI3T7.11

Robotic Valve Turning: Axial Misalignment Estimation from Reaction Torques, pp. 5275-5280. Attachment

Golani, Gautami	National University of Singapore
Turlapati, Sri Harsha	Nanyang Technological University
Yang, Lin	Nanyang Technological University
Ariffin, Mohammad	Nanyang Technological University Singapore
Campolo, Domenico	Nanyang Technological University

15:30-16:30 WePI3T7.12

Task-Oriented Dexterous Hand Pose Synthesis Using Differentiable Grasp Wrench Boundary Estimator, pp. 5281-5288. Attachment

Chen, Jiayi	Peking University
Chen, Yuxing	Peking University
Zhang, Jialiang	Peking University
Wang, He	Peking University

15:30-16:30 WePI3T7.13

A Multi-DoF Anthropomorphic Hand with Integrated Tactile Feedback for Grasping and Manipulation in Human Environments, pp. 5289-5296. Attachment

Yang, Sicheng	Tencent
Lee, Wang Wei	Tencent
Zhang, Zhong	City University of Hong Kong

Xiong, Youda	Tencent
Liang, Jiaming	Tencent
Lu, Peng	Tencent
Zhu, Yonghui	Tencent
Liu, Tianliang	Harbin Institute of Technology
Li, Jingchen	Tencent
Wang, Rui	Tencent
Li, Xiong	Tencent
Zheng, Yu	Tencent

15:30-16:30 WePI3T7.14

Under-Actuated Robotic Gripper with Multiple Grasping Modes Inspired by Human Finger, pp. 5297-5302. Attachment

Li, Jihao	Zhejiang University
Liao, Tingbo	National University of Singapore
Sirag, Hassen Nigatu	ZJU
Guo, Haotian	National University of Singapore
Lu, GuoDong	Zhejiang University
Dong, Huixu	Zhejiang University

15:30-16:30 WePI3T7.15

Rotograb: Combining Biomimetic Hands with Industrial Grippers Using a Rotating Thumb, pp. 5303-5310. Attachment

Bersier, Arnaud	ETH Zürich
Leonforte, Matteo	ETH
Vanetta, Alessio	ETH Zürich
Wotke, Sarah Lia Andrea	ETH Zurich
Nappi, Andrea	ETH Zürich
Zhou, Yifan	ETH Zürich
Oliani, Sebastiano	ETH Zürich
Kübler, Alexander M.	ETH Zürich
Katzschmann, Robert Kevin	ETH Zurich

15:30-16:30 WePI3T7.16

OPENGRASP-LITE Version 1.0: A Tactile Artificial Hand with a Compliant Linkage Mechanism, pp. 5311-5318. Attachment

Groß, Sonja	Technical University of Munich
Ratzel, Michael	Munich Institute of Robotics and Machine Intelligence (MIRMI)
Welte, Edgar	Karlsruhe Institute of Technology (KIT)
Hidalgo Carvajal, Diego Xavier	Technical University of Munich
Chen, Lingyun	Technical University of Munich
Pozo Fortunić, Edmundo	Technical University of Munich
Ganguly, Amartya	Technical University of Munich
Swikir, Abdalla	Technical University of Munich
Haddadin, Sami	Technical University of Munich

WePI3T8 Room 8

Robot Motion Planning II (Teaser Session)

Chair: Gao, Fei — Zhejiang University

15:30-16:30 WePI3T8.1

Hierarchical Large Scale Multirobot Path (Re)Planning, pp. 5319-5326. Attachment

Pan, Lishuo	Brown University
Hsu, Kevin	Brown University
Ayanian, Nora	Brown University

15:30-16:30 WePI3T8.2

*Alternative Connection Radius for Asymptotic Optimality in RRT**, pp. 5327-5331. Attachment

Shome, Rahul	The Australian National University

15:30-16:30 WePI3T8.3

An Actor-Critic Reinforcement Learning Scheme for Reactive 3D Optimal Motion Planning Based on Fluid Dynamics, pp. 5332-5339. Attachment

Malliaropoulos, Marios	National Technical University of Athens
Rousseas, Panagiotis	National Technical University of Athens
Bechlioulis, Charalampos	University of Patras

Kyriakopoulos, Kostas	New York University - Abu Dhabi

15:30-16:30 WePI3T8.4

DTG : Diffusion-Based Trajectory Generation for Mapless Global Navigation, pp. 5340-5347. Attachment

Liang, Jing	University of Maryland
Payandeh, Amirreza	George Mason University
Song, Daeun	University of Maryland
Xiao, Xuesu	George Mason University
Manocha, Dinesh	University of Maryland

15:30-16:30 WePI3T8.5

Flexible and Topological Consistent Local Replanning for Multirotors, pp. 5348-5355. Attachment

Wang, Dong	Zhejiang University
Ye, Hongkai	Zhejiang University
Pan, Neng	Zhejiang University
Huang, Jinxin	Beijing Sankuai Online Technology Co. Ltd
Zhang, Bangyan	Beijing Sankuai Online Technology Co. Ltd
Mao, Yinian	Meituan-Dianping Group
Huang, Guoquan	University of Delaware
Xu, Chao	Zhejiang University
Gao, Fei	Zhejiang University

15:30-16:30 WePI3T8.6

Multi-Fov-Constrained Trajectory Planning for Multirotor Safe Landing, pp. 5356-5363. Attachment

Wang, Dong	Zhejiang University
Wang, Jingping	Zhejiang University
He, Suqin	Tsinghua University
Huang, Jinxin	Beijing Sankuai Online Technology Co. Ltd
Zhang, Bangyan	Beijing Sankuai Online Technology Co. Ltd
Mao, Yinian	Meituan-Dianping Group
Huang, Guoquan	University of Delaware
Xu, Chao	Zhejiang University
Gao, Fei	Zhejiang University

15:30-16:30 WePI3T8.7

Learning Social Cost Functions for Human-Aware Path Planning, pp. 5364-5371. Attachment

Eirale, Andrea	Politecnico Di Torino
Leonetti, Matteo	King's College London
Chiaberge, Marcello	Politecnico Di Torino

15:30-16:30 WePI3T8.8

LF-3PM: A LiDAR-Based Framework for Perception-Aware Planning with Perturbation-Induced Metric, pp. 5372-5379. Attachment

Chai, Kaixin	Xi'an Jiaotong University
Xu, Long	Zhejiang University
Wang, Qianhao	Zhejiang University
Xu, Chao	Zhejiang University
Yin, Peng	City University of Hong Kong
Gao, Fei	Zhejiang University

15:30-16:30 WePI3T8.9

RT-RRT: Reverse Tree Guided Real-Time Path Planning/Replanning in Unpredictable Dynamic Environments, pp. 5380-5387. Attachment

Cui, Bo	Northwestern Polytechnical University
Cui, Rongxin	Northwestern Polytechnical University
Yan, Weisheng	Northwestern Polytechnical University
Wang, Y.K	NWPU
Zhang, Shi	Northwestern Polytechnical University

15:30-16:30 WePI3T8.10

Can Vehicle Motion Planning Generalize to Realistic Long-Tail Scenarios?, pp. 5388-5395. Attachment

Hallgarten, Marcel	University of Tübingen, Robert Bosch GmbH
Zapata Manjarres, Julian Jose	University of Duisburg-Essen
Stoll, Martin	Robert Bosch GmbH
Renz, Katrin	University of Tübingen

Zell, Andreas	University of Tübingen

15:30-16:30 WePI3T8.11

Generating Continuous Paths on Learned Constraint Manifolds Using Policy Search, pp. 5396-5401.

Canzini, Ethan	University of Sheffield
Pope, Simon A.	The University of Sheffield
Tiwari, Ashutosh	University of Sheffield

15:30-16:30 WePI3T8.12

Interactive-FAR: Interactive, Fast and Adaptable Routing for Navigation among Movable Obstacles in Complex Unknown Environments, pp. 5402-5409. Attachment

He, Botao	University of Maryland
Chen, Luke	Carnegie Mellon University
Wang, Wenshan	Carnegie Mellon University
Zhang, Ji	Carnegie Mellon University
Fermuller, Cornelia	University of Maryland
Aloimonos, Yiannis	University of Maryland

15:30-16:30 WePI3T8.13

Speeding up Path Planning Via Reinforcement Learning in MCTS for Automated Parking, pp. 5410-5415. Attachment

Zheng, Xinlong	University of Pennsylvania
Zhang, Xiaozhou	University of Pennsylvania
Xu, Donghao	Deeproute.ai Ltd

15:30-16:30 WePI3T8.14

Safety-First Tracker: A Trajectory Planning Framework for Omnidirectional Robot Tracking, pp. 5416-5423. Attachment

Lin, Yue	Dalian University of Technology
Liu, Yang	Dalian University of Technology
Zhang, Pingping	Dalian University of Technology
Chen, Xin	Dalian University of Technology
Wang, Dong	Dalian University of Technology
Lu, Huchuan	Dalian University of Technology

15:30-16:30 WePI3T8.15

Energy-Efficient Trajectory Planning with Media Transition for a Hybrid Unmanned Aerial-Underwater Vehicle, pp. 5424-5429.

Miranda Pinheiro, Pedro	Federal University of Rio Grande - FURG
Alves Neto, Armando	Universidade Federal De Minas Gerais
G. Macharet, Douglas	Universidade Federal De Minas Gerais
Drews-Jr, Paulo	Federal University of Rio Grande (FURG)

15:30-16:30 WePI3T8.16

3D Global Path Planning for Walking Robots on Sparse Volumetric Maps, pp. 5430-5437.

Grosse Besselmann, Marvin	FZI Forschungszentrum Informatik
Häuselmann, Ramona	KTH Royal Institude of Technology, SE-10044 Stockholm, Sweden
Mauch, Samuel	Karlsruhe Institute of Technology
Puck, Lennart	FZI Forschungszentrum Informatik
Schnell, Tristan	FZI Forschungszentrum Informatik
Roennau, Arne	Karlsruhe Institute of Technology (KIT)
Dillmann, Rüdiger	FZI - Forschungszentrum Informatik - Karlsruhe

WePI3T9 Room 9

Navigation II (Teaser Session)

Chair: Xiao, Xuesu	George Mason University
Co-Chair: Zeng, Long	Tsinghua University

15:30-16:30 WePI3T9.1

Terrain-Attentive Learning for Efficient 6-DoF Kinodynamic Modeling on Vertically Challenging Terrain, pp. 5438-5443. Attachment

Datar, Aniket	George Mason University
Pan, Chenhui	George Mason University
Nazeri, Mohammad	George Mason University
Pokhrel, Anuj	George Mason University
Xiao, Xuesu	George Mason University

15:30-16:30 WePI3T9.2

Efficient Incremental Penetration Depth Estimation between Convex Geometries, pp. 5444-5451.

Gao, Wei	Massachusetts Institute of Technology

15:30-16:30 WePI3T9.3

Collision-Free Robot Navigation in Crowded Environments Using Learning Based Convex Model Predictive Control, pp. 5452-5459. Attachment

Wen, ZhuangLei	China Jiliang University
Dong, Mingze	China Jiliang University
Chen, Xiai	China Jiliang University

15:30-16:30 WePI3T9.4

Generating Force Vectors from Projective Truncated Signed Distance Fields for Collision Avoidance and Haptic Feedback, pp. 5460-5465. Attachment

Bien, Seongjin	Technical University of Munich
Naceri, Abdeldjallil	Technical University of Munich
Figueredo, Luis	University of Nottingham (UoN)
Haddadin, Sami	Technical University of Munich

15:30-16:30 WePI3T9.5

LDP: A Local Diffusion Planner for Efficient Robot Navigation and Collision Avoidance, pp. 5466-5472. Attachment

Yu, Wenhao	University of Science and Technology of China
Peng, Jie	University of Science and Technology of China
Yang, Huanyu	University of Science and Technology of China
Zhang, Junrui	University of Science & Technology of China
Duan, Yifan	University of Science and Technology of China
Ji, Jianmin	University of Science and Technology of China
Zhang, Yanyong	University of Science and Technology of China

15:30-16:30 WePI3T9.6

Dynamic Reconfiguration Integrated Nested A: A Path Planner for Reconfigurable Robot to Improve Performance in Confined Spaces*, pp. 5473-5480. Attachment

Rishan Sachinthana, Wijenayaka Kankanamge	Singapore University of Technology and Design
Samarakoon Mudiyanselage, Bhagya Prasangi Samarakoon	Singapore University of Technology and Design
Muthugala Arachchige, Viraj Jagathpriya Muthugala	Singapore University of Technology and Design
Elara, Mohan Rajesh	Singapore University of Technology and Design

15:30-16:30 WePI3T9.7

Visual Forecasting As a Mid-Level Representation for Avoidance, pp. 5481-5488. Attachment

Yang, Hsuan-Kung	National Tsing Hua University
Chiang, Tsung-Chih	National Tsing Hua University
Liu, Ting-Ru	National Tsing Hua University
Liu, Jou-Min	National Tsing Hua University
Huang, Chun-Wei	National Tsing Hua University
Lee, Chun-Yi	National Tsing Hua University

15:30-16:30 WePI3T9.8

A Two-Stage Reinforcement Learning Approach for Robot Navigation in Long-Range Indoor Dense Crowd Environments, pp. 5489-5496. Attachment

Jing, Xinghui	Tsinghua University
Xiong, Xin	Tsinghua University
Li, Fuhao	Tsinghua University
Zhang, Tao	Pudu Technology Ltd
Zeng, Long	Tsinghua University

15:30-16:30 WePI3T9.9

MPP: Multiscale Path Planning for UGV Navigationin Semi-Structured Environments, pp. 5497-5504. Attachment

Cao, Rui	Shandong University
Yang, Zhiqiang	Shandong University
Song, Ran	Shandong University
Meng, Ziyu	Shandong University
Wang, Ruifeng	Jinan Preschool Education College
Zhang, Wei	Shandong University

15:30-16:30 WePI3T9.10

Preventing Catastrophic Forgetting in Continuous Online Learning for Autonomous Driving, pp. 5505-5512.

Yang, Rui	Université De Technologie De Belfort Montbéliard

Yang, Tao	Northwestern Polytechnical University
Yan, Zhi	University of Technology of Belfort-Montbéliard (UTBM)
Krajník, Tomáš	Czech Technical University
Ruichek, Yassine	University of Technology of Belfort-Montbeliard - France

15:30-16:30 WePI3T9.11

TRAVERSE: Traffic-Responsive Autonomous Vehicle Experience & Rare-Event Simulation for Enhanced Safety, pp. 5513-5520. Attachment

Thalapanane, Sandeep	University of Maryland, College Park
Senthil Kumar, Sandip Sharan	University of Maryland, College Park
Appiya Dilipkumar Peethambari, Guru Nandhan	University of Maryland College Park
Sri hari, Sourang	University of Maryland College Park
Zheng, Laura	University of Maryland, College Park
Poveda, Julio	University of Maryland
Lin, Ming C.	University of Maryland at College Park

15:30-16:30 WePI3T9.12

Context-Aware GAN-Based Image Retrieval for Coarse Localization of Autonomous Robots, pp. 5521-5526.

Swaminathan, Ruphan	OttonomyIO
Korupolu, Pradyot	Ottonomy Inc

15:30-16:30 WePI3T9.13

Embodiment Randomization for Cross Embodiment Navigation, pp. 5527-5534. Attachment

Putta, Pranav	Georgia Institute of Technology
Aggarwal, Gunjan	Georgia Tech
Mottaghi, Roozbeh	Meta
Batra, Dhruv	Georgia Tech / Facebook AI Research
Yokoyama, Naoki	Georgia Institute of Technology
Truong, Joanne	The Georgia Institute of Technology
Majumdar, Arjun	Georgia Institute of Technology

15:30-16:30 WePI3T9.14

Camera Pose Estimation from Bounding Boxes, pp. 5535-5542.

Vavra, Vaclav	Visual Recognition Group, FEE, CTU in Prague
Sattler, Torsten	Czech Technical University in Prague
Kukelova, Zuzana	Czech Technical University in Prague

15:30-16:30 WePI3T9.15

HM3D-OVON: A Dataset and Benchmark for Open-Vocabulary Object Goal Navigation, pp. 5543-5550. Attachment

Yokoyama, Naoki	Georgia Institute of Technology
Ramrakhya, Ram	Georgia Institute of Technology
Das, Abhishek	Georgia Tech
Batra, Dhruv	Georgia Tech / Facebook AI Research
Ha, Sehoon	Georgia Institute of Technology

15:30-16:30 WePI3T9.16

Cross-Observability Learning for Vehicle Routing Problems, pp. 5551-5558.

Liu, Ruifan	Cranfield University
Shin, Hyo-Sang	Cranfield University
Tsourdos, Antonios	Cranfield University

15:30-16:30 WePI3T9.17

StereoNavNet: Learning to Navigate Using Stereo Cameras with Auxiliary Occupancy Voxels, pp. 5559-5566. Attachment

Li, Hongyu	Brown University
Padir, Taskin	Northeastern University
Jiang, Huaizu	Northeastern University

WePI3T10 Room 10

Simultaneous Localization and Mapping (SLAM) III (Teaser Session)

Chair: Weiss, Stephan	Universität Klagenfurt
Co-Chair: Ismail, Hesham	DEWA

15:30-16:30 WePI3T10.1

Tightly Coupled Passive UWB Localization for Low-Density Anchor Networks, pp. 5567-5572.

Senevirathna, Nushen M	Memorial University of Newfoundland
De Silva, Oscar	Memorial University of Newfoundland
Mann, George K. I.	Memorial University of Newfoundland
Gosine, Raymond G.	Memorial University of Newfoundland

15:30-16:30 WePI3T10.2

Indoor Position Estimation Using NLoS Reflected Path with Wireless Distance Sensors, pp. 5573-5580. Attachment

Itsuka, Tomoya	Kyushu University
Kurazume, Ryo	Kyushu University

15:30-16:30 WePI3T10.3

Leveraging Neural Radiance Field in Descriptor Synthesis for Keypoints Scene Coordinate Regression, pp. 5581-5588.

Bui, Huy Hoang	Ritsumeikan University
Bui, Bach-Thuan	Ritsumeikan University
Tran, Dinh Tuan	College of Information Science and Engineering, Ritsumeikan Univ
Lee, Joo-Ho	Ritsumeikan University

15:30-16:30 WePI3T10.4

Geolocation on Cartographic Maps with Multi-Modal Fusion, pp. 5589-5596. Attachment

Zhou, Mengjie	University of Bristol
Liu, Liu	Huawei
Zhong, Yiran	SenseTime
Calway, Andrew	University of Bristol

15:30-16:30 WePI3T10.5

U-BEV: Height-Aware Bird's-Eye-View Segmentation and Neural Map-Based Relocalization, pp. 5597-5604. Attachment

Boscolo Camiletto, Andrea	Huawei
Bochicchio, Alfredo	Huawei
Liniger, Alexander	ETH Zurich
Dai, Dengxin	ETH Zurich
Gawel, Abel Roman	Boston Dynamics AI Institute

15:30-16:30 WePI3T10.6

ReLoc-Aligner : Orientation-Aware Scene Descriptor for Re-Localization within a 3D Point Cloud Map, pp. 5605-5612. Attachment

Cho, SungJoon	Korea Institute of Science and Technology
Kim, Jun-Sik	Korea Institute of Science & Technology

15:30-16:30 WePI3T10.7

SOS-Match: Segmentation for Open-Set Robust Correspondence Search and Robot Localization in Unstructured Environments, pp. 5613-5620. Attachment

Thomas, Annika	Massachusetts Institute of Technology
Kinnari, Jouko	Saab Finland Oy
Lusk, Parker C.	Massachusetts Institute of Technology
Kondo, Kota	Massachusetts Institute of Technology
How, Jonathan	Massachusetts Institute of Technology

15:30-16:30 WePI3T10.8

3D Localization of Objects Buried within Granular Material Using a Distributed 3-Axis Tactile Sensor, pp. 5621-5626. Attachment

Chen, Zhengqi	Queen Mary University of London
Versace, Elisabetta	Queen Mary University of London
Jamone, Lorenzo	Queen Mary University London

15:30-16:30 WePI3T10.9

Modular Meshed Ultra-Wideband Aided Inertial Navigation with Robust Anchor Calibration, pp. 5627-5634. Attachment

Jung, Roland	University of Klagenfurt
Santoro, Luca	University of Trento
Brunelli, Davide	University of Trento
Fontanelli, Daniele	University of Trento
Weiss, Stephan	Universität Klagenfurt

15:30-16:30 WePI3T10.10

Renderable Street View Map-Based Localization: Leveraging 3D Gaussian Splatting for Street-Level Positioning, pp. 5635-5640. Attachment

Jun, Howoong	Seoul National University
Yu, Hyeonwoo	SungKyunKwan University

Oh, Songhwai	Seoul National University

15:30-16:30 WePI3T10.11

LiDAR-Visual-Inertial Tightly-Coupled Odometry with Adaptive Learnable Fusion Weights, pp. 5641-5647.

Hulchuk, Vsevolod	Czech Technical University in Prague
Bayer, Jan	Czech Technical University in Prague
Faigl, Jan	Czech Technical University in Prague

15:30-16:30 WePI3T10.12

LF2SLAM: Learning-Based Features for Visual SLAM, pp. 5648-5655. Attachment

Legittimo, Marco	University of Perugia
Crocetti, Francesco	University of Perugia
Fravolini, Mario Luca	University of Perugia
Mollica, Giuseppe	University of Perugia - Department of Engineering
Costante, Gabriele	University of Perugia

15:30-16:30 WePI3T10.13

BEVLoc: Cross-View Localization and Matching Via Birds-Eye-View Synthesis, pp. 5656-5663.

Klammer, Christopher	Carnegie Mellon University
Kaess, Michael	Carnegie Mellon University

15:30-16:30 WePI3T10.14

GSLoc: Visual Localization with 3D Gaussian Splatting, pp. 5664-5671.

Botashev, Kazii	Skolkovo Institute of Science and Technology (Skoltech)
Pyatov, Vladislav	Skolkovo Institute of Science and Technology
Ferrer, Gonzalo	Skolkovo Institute of Science and Technology
Lefkimmiatis, Stamatios	MTS AI

15:30-16:30 WePI3T10.15

Joint Pedestrian Trajectory Prediction through Posterior Sampling, pp. 5672-5679. Attachment

Lin, Haotian	Tsinghua University
Wang, Yixiao	University of California, Berkeley
Huo, Mingxiao	Carnegie Mellon University
Peng, Chensheng	University of California, Berkeley
Liu, Zhiyuan	Tsinghua University
Tomizuka, Masayoshi	University of California

15:30-16:30 WePI3T10.16

Optimizing Interaction Space: Enlarging the Capture Volume for Multiple Portable Motion Capture Devices, pp. 5680-5687. Attachment

Fatoni, Muhammad Hilman	Technical University of Munich
Herneth, Christopher	Technical University Munich
Li, Junnan	Technical University of Munich
Budiman, Fajar	Technical University of Munich
Ganguly, Amartya	Technical University of Munich
Haddadin, Sami	Technical University of Munich

WePI3T11 Room 11

Multi-Robot Systems and Swarms II (Teaser Session)

Chair: Saska, Martin	Czech Technical University in Prague
Co-Chair: Luo, Wenhao	University of North Carolina at Charlotte

15:30-16:30 WePI3T11.1

MERSYS: A Collaborative Estimation and Dense Mapping System for Multi-Agent Generic SLAM, pp. 5688-5695. Attachment

Lai, Qianhua	University of Electronic Science and Technology of China
Zhao, Enhao	Harbin Institute of Technology
Fan, Shicai	University of Electronic Science and Technology of China
Zou, Jianxiao	UESTC

15:30-16:30 WePI3T11.2

Decentralized Collaborative Localization and Map Update with Buildings, pp. 5696-5703. Attachment

Escourrou, Maxime	Université De Technologie De Compiègne
Al Hage, Joelle	Univeristé De Technologie De Compiègne
Bonnifait, Philippe	Univ. of Technology of Compiegne

15:30-16:30 WePI3T11.3

Scalable Networked Feature Selection with Randomized Algorithm for Robot Navigation, pp. 5704-5709.

Pandey, Vivek — Lehigh University
Amini, Arash — Lehigh UNiversity
Liu, Guangyi — Lehigh University
Topcu, Ufuk — The University of Texas at Austin
Sun, Qiyu — University of Central Florida
Daniilidis, Kostas — University of Pennsylvania
Motee, Nader — Lehigh Universitty

15:30-16:30 WePI3T11.4

Autonomous Localization of Multiple Ionizing Radiation Sources Using Miniature Single-Layer Compton Cameras Onboard a Group of Micro Aerial Vehicles, pp. 5710-5717. Attachment

Werner, Michal — Czech Technical University in Prague
Baca, Tomas — Ceske Vysoke Uceni Technicke V Praze, FEL
Stibinger, Petr — Czech Technical University in Prague
Doubravova, Daniela — Advacam, S.r.o
Solc, Jaroslav — Czech Metrology Institute
Rusnak, Jan — Czech Metrology Institute
Saska, Martin — Czech Technical University in Prague

15:30-16:30 WePI3T11.5

Behavior Tree Based Decentralized Multi-Agent Coordination for Balanced Servicing of Time Varying Task Queues, pp. 5718-5723. Attachment

Dahlquist, Niklas — Luleå University of Technology
Saradagi, Akshit — Luleå University of Technology, Luleå, Sweden
Nikolakopoulos, George — Luleå University of Technology

15:30-16:30 WePI3T11.6

MAP-NBV: Multi-Agent Prediction-Guided Next-Best-View Planning for Active 3D Object Reconstruction, pp. 5724-5731. Attachment

Dhami, Harnaik — University of Maryland
Sharma, Vishnu D. — University of Maryland
Tokekar, Pratap — University of Maryland

15:30-16:30 WePI3T11.7

Graph Neural Network-Based Multi-Agent Reinforcement Learning for Resilient Distributed Coordination of Multi-Robot Systems, pp. 5732-5739.

Goeckner, Anthony — Northwestern University
Sui, Yueyuan — Northwestern University
Martinet, Nicolas — Northwestern University
Li, Xinliang — Northwestern University
Zhu, Qi — Northwestern University

15:30-16:30 WePI3T11.8

Distributed Model Predictive Covariance Steering, pp. 5740-5747. Attachment

Saravanos, Augustinos — Georgia Institute of Technology
Balci, Isin — University of Texas at Austin
Bakolas, Efstathios — The University of Texas at Austin
Theodorou, Evangelos — Georgia Institute of Technology

15:30-16:30 WePI3T11.9

Team Coordination on Graphs: Problem, Analysis, and Algorithms, pp. 5748-5755. Attachment

Zhou, Yanlin — George Mason University
Limbu, Manshi — George Mason University
Stein, Gregory — George Mason University
Wang, Xuan — George Mason University
Shishika, Daigo — George Mason University
Xiao, Xuesu — George Mason University

15:30-16:30 WePI3T11.10

MULAN-WC: Multi-Robot Localization Uncertainty-Aware Active NeRF with Wireless Coordination, pp. 5756-5763. Attachment

Wang, Weiying — Harvard University
Cai, Victor — Harvard University
Gil, Stephanie — Harvard University

15:30-16:30 WePI3T11.11

Solving Multi-Robot Task Allocation and Planning in Trans-Media Scenarios, pp. 5764-5769.

de La Rochefoucauld, Virgile	Osaka University
Lacroix, Simon	LAAS/CNRS
Ratsamee, Photchara	Department of Robotic and Design, Osaka Institute of Technology
Takemura, Haruo	Osaka University

15:30-16:30 WePI3T11.12

Integrating Online Learning and Connectivity Maintenance for Communication-Aware Multi-Robot Coordination, pp. 5770-5776.

Yang, Yupeng	University of North Carolina at Charlotte
Lyu, Yiwei	Carnegie Mellon University
Zhang, Yanze	University of North Carolina at Charlotte
Gao, Ian	University of North Carolina at Charlotte
Luo, Wenhao	University of North Carolina at Charlotte

15:30-16:30 WePI3T11.13

Decentralized Acceleration-Based Bird-Inspired Flocking, pp. 5777-5783.

Iacone, Luca	Università Degli Studi Di Napoli Federico II
Lejeune, Erwin Edouard Kossi	Technology Innovation Institute
Manoni, Tiziano	Technology Innovation Institute
Manfredi, Sabato	Università Degli Studi Di Napoli - Federico II
Albani, Dario	Technology Innovation Institure

15:30-16:30 WePI3T11.14

Risk-Aware Non-Myopic Motion Planner for Large-Scale Robotic Swarm Using CVaR Constraints, pp. 5784-5790. Attachment

Yang, Xuru	Peking University
Hu, Yunze	Peking University
Gao, Han	Peking University
Ding, Kang	Peking University
Li, Zhaoyang	Tsinghua University
Zhu, Pingping	Marshall University
Sun, Ying	The Pennsylvania State University
Liu, Chang	Peking University

15:30-16:30 WePI3T11.15

Automatic Design of Robot Swarms That Perform Composite Missions: An Approach Based on Inverse Reinforcement Learning, pp. 5791-5798.

Szpirer, Jeanne	IRIDIA, Université Libre De Bruxelles, Brussels, Belgium
Garzón Ramos, David	University of Bristol
Birattari, Mauro	Université Libre De Bruxelles

15:30-16:30 WePI3T11.16

A Comprehensive Modeling and Scheduling Approach for Allocating Distributed Multi-Robot Software to the Edge/Cloud, pp. 5799-5806.

Zhang, Yongzhou	Karlsruhe University of Applied Sciences
Mirus, Florian	Intel Labs
Pasch, Frederik	Intel
Scholl, Kay-Ulrich	Intel
Wurll, Christian	Karlsruhe University of Applied Sciences
Hein, Björn	Karlsruhe University of Applied Sciences

15:30-16:30 WePI3T11.17

Frontier-Based Exploration for Multi-Robot Rendezvous in Communication-Restricted Unknown Environments, pp. 5807-5812. Attachment

Tellaroli, Mauro	Università Degli Studi Di Milano
Luperto, Matteo	Università Degli Studi Di Milano
Antonazzi, Michele	University of Milan
Basilico, Nicola	University of Milan

WePI3T12 Room 12

Simulators, Datasets and Benchmarks (Teaser Session)

Chair: Nguyen, Anh University of Liverpool

Co-Chair: Vinciarelli, Alessandro	University of Glasgow

15:30-16:30	WePI3T12.1

Robot Generating Data for Learning Generalizable Visual Robotic Manipulation, pp. 5813-5820. Attachment

Li, Yunfei	Tsinghua University
Yuan, Ying	Tsinghua University
Cui, Jingzhi	Tsinghua University
Huan, Haoran	Tsinghua University
Fu, Wei	Tsinghua University
Gao, Jiaxuan	Tsinghua University
Xu, Zekai	Shanghai JiaoTong University
Wu, Yi	Tsinghua University

15:30-16:30	WePI3T12.2

HabiCrowd: A High Performance Simulator for Crowd-Aware Visual Navigation, pp. 5821-5827. Attachment

Vuong, An Dinh	MBZUAI
Nguyen, Tien Toan	FPT Software
Vu, Minh Nhat	TU Wien, Austria
Huang, Baoru	Imperial College London
Binh, Huynh Thi Thanh	School of Information and Communication Technology (Hanoi Univer
Vo, Thieu	Ton Duc Thang University
Nguyen, Anh	University of Liverpool

15:30-16:30	WePI3T12.3

Exploring 3D Human Pose Estimation and Forecasting from the Robot's Perspective: The HARPER Dataset, pp. 5828-5835. Attachment

Avogaro, Andrea	University of Verona
Toaiari, Andrea	University of Verona
Cunico, Federico	University of Verona
Xu, Xiangmin	University of Glasgow
Dafas, Haralambos	University of Glasgow
Vinciarelli, Alessandro	University of Glasgow
Li, Liying Emma	University of Glasgow
Cristani, Marco	University of Verona

15:30-16:30	WePI3T12.4

UMAD: University of Macau Anomaly Detection Benchmark Dataset, pp. 5836-5843. Attachment

Li, Dong	University of Macau
Chen, Lineng	Nanjing University of Science and Technology
Xu, Chengzhong	University of Macau
Kong, Hui	University of Macau

15:30-16:30	WePI3T12.5

VRSO: Visual-Centric Reconstruction for Static Object Annotation, pp. 5844-5851. Attachment

Yu, Chenyao	Soochow University
Cai, Yingfeng	Tongji University
Zhang, Jiaxin	Soochow University
Sui, Wei	Soochow University
Kong, Hui	University of Macau
Yang, Cong	Soochow University

15:30-16:30	WePI3T12.6

SpectralWaste Dataset: Multimodal Data for Waste Sorting Automation, pp. 5852-5858. Attachment

Casao, Sara	Unversity of Zaragoza
Peña, Fernando	Universidad De Zaragoza
Sabater, Alberto	Universidad De Zaragoza
Castillón, Rosa	Universidad De Zaragoza
Suárez, Darío	Universidad De Zaragoza
Montijano, Eduardo	Universidad De Zaragoza
Murillo, Ana Cristina	University of Zaragoza

15:30-16:30	WePI3T12.7

FEDORA: A Flying Event Dataset for Reactive BehAvior, pp. 5859-5866.

Joshi, Amogh	Purdue University

Ponghiran, Wachirawit	Purdue University
Kosta, Adarsh Kumar	Purdue University
Nagaraj, Manish	Purdue University
Roy, Kaushik	Purdue University

15:30-16:30 WePI3T12.8

Nerve Block Target Localization and Needle Guidance for Autonomous Robotic Ultrasound Guided Regional Anesthesia, pp. 5867-5872. Attachment

Tyagi, Abhishek	Asian Institute of Gastroenterology, Hyderabad
Tyagi, Abhay	St. Elizabeth's Medical Center, Boston University
Kaur, Manpreet	Milton S Hershey Medical Center, Penn State Health
Aggarwal, Richa	All India Institute of Medical Sciences, New Delhi
Soni, Kapil Dev	All India Institute of Medical Sciences, New Delhi
Sivaswamy, Jayanthi	IIIT-Hyderabad
Trikha, Anjan	Milton S Hershey Medical Center, Penn State Health

15:30-16:30 WePI3T12.9

Skin the Sheep Not Only Once: Reusing Various Depth Datasets to Drive the Learning of Optical Flow, pp. 5873-5879. Attachment

Huang, Sheng Chi	National Yang Ming Chiao Tung University
Chiu, Wei-Chen	National Chiao Tung University

15:30-16:30 WePI3T12.10

Deformable Objects Perception Is Just a Few Clicks Away – Dense Annotations from Sparse Inputs, pp. 5880-5887. Attachment

Caporali, Alessio	University of Bologna
Galassi, Kevin	Università Di Bologna
Pantano, Matteo	Siemens AG
Palli, Gianluca	University of Bologna

15:30-16:30 WePI3T12.11

Subtle-Diff: A Dataset for Precise Recognition of Subtle Differences among Visually Similar Objects, pp. 5888-5894. Attachment

Matsuzawa, Fumiya	National Institute of Advanced Industrial Science and Technology
Qiu, Yue	National Institute of Advanced Industrial Science and Technology
Sun, Yanjun	Keio University
Iwata, Kenji	AIST
Kataoka, Hirokatsu	National Institute of Advanced Industrial Science and Technology
Satoh, Yutaka	AIST

15:30-16:30 WePI3T12.12

HS3-Bench: A Benchmark and Strong Baseline for Hyperspectral Semantic Segmentation in Driving Scenarios, pp. 5895-5901.

Theisen, Nick	University Koblenz-Landau
Bartsch, Robin	University Koblenz
Paulus, Dietrich	Universtät Koblenz-Landau
Neubert, Peer	University of Koblenz

15:30-16:30 WePI3T12.13

Enhancing Nighttime UAV Tracking with Light Distribution Suppression, pp. 5902-5909.

Yao, Liangliang	Tongji University
Fu, Changhong	Tongji University
Wang, Yiheng	Tongji University
Zuo, Haobo	University of Hong Kong
Lu, Kunhan	Tongji University

15:30-16:30 WePI3T12.14

Pre-Training on Synthetic Driving Data for Trajectory Prediction, pp. 5910-5917.

Li, Yiheng	University of California, Berkeley
Zhao, Zhihao	University of California, Los Angeles
Xu, Chenfeng	University of California, Berkeley
Tang, Chen	University of California Berkeley
Li, Chenran	University of California, Berkeley
Ding, Mingyu	UC Berkeley
Tomizuka, Masayoshi	University of California
Zhan, Wei	Univeristy of California, Berkeley

15:30-16:30 WePI3T12.15

MQE: Unleashing the Power of Interaction with Multi-Agent Quadruped Environment, pp. 5918-5924. Attachment

Xiong, Ziyan	Tsinghua University
Chen, Bo	Beijing University of Posts and Telecommunications
Huang, Shiyu	Zhipu AI
Tu, Wei-Wei	4Paradigm
He, Zhaofeng	Beijing University of Posts and Telecommunications
Gao, Yang	Tsinghua University

15:30-16:30 WePI3T12.16

A Scalable Platform for Robot Learning and Physical Skill Data Collection, pp. 5925-5932. Attachment

Schneider, Samuel	TUM
Wu, Yansong	Technische Universität München
Wu, Fan	Technical University of Munich
Johannsmeier, Lars	Franka Robotics GmbH
Haddadin, Sami	Technical University of Munich

WeCT1 Room 1

Best Application Papers (ICROS) (Regular session)

Chair: Oh, Sehoon DGIST

16:30-16:45 WeCT1.1

Barely-Visible Surface Crack Detection for Wind Turbine Sustainability, pp. 5933-5939.

Agrawal, Sourav	Zeitview
Corley, Isaac	University of Texas at San Antonio
Wallace, Conor	Zeitview
Vaughn, Clovis	Zeitview
Lwowski, Jonathan	The University of Texas at San Antonio

16:45-17:00 WeCT1.2

SCANet: Correcting LEGO Assembly Errors with Self-Correct Assembly Network, pp. 5940-5947. Attachment

Wan, Yuxuan	Southeast University
Zhou, Kaichen	University of Oxford
Chen, Jinhong	Peking University
Dong, Hao	Peking University

17:00-17:15 WeCT1.3

Toward Perpetual Occlusion-Aware Observation of Comb States in Living Honeybee Colonies, pp. 5948-5955.

Blaha, Jan	CTU FEE, Departement of Computer Science
Vintr, Tomas	FEE, Czech Technical University in Prague
Mikula, Jan	Czech Technical University in Prague
Janota, Jiří	Faculty of Electrical Engineering in Prague
Rouček, Tomáš	Czech Technical University in Prague
Ulrich, Jiri	Faculty of Electrical Engineering, Czech Technical University In
Rekabi Bana, Fatemeh	Durham University
Fedotoff, Laurenz Alexander	Karl-Franzens-University Graz, Institute of Biology, Artificial
Stefanec, Martin	University of Graz
Schmickl, Thomas	University of Graz
Arvin, Farshad	Durham University
Kulich, Miroslav	Czech Technical University in Prague
Krajnik, Tomas	Czech Technical University

17:15-17:30 WeCT1.4

ProSIP: Probabilistic Surface Interaction Primitives for Learning of Robotic Cleaning of Edges, pp. 5956-5963. Attachment

Unger, Christoph	TU Wien
Hartl-Nesic, Christian	TU Wien
Vu, Minh Nhat	TU Wien, Austria
Kugi, Andreas	TU Wien

WeCT2 Room 2

Best Entertainment and Amusement Papers (JTCF) (Regular session)

Chair: Sugano, Shigeki — Waseda University

16:30-16:45 — WeCT2.1

Flying Robotics Art: ROS-Based Drone Draws the Record-Breaking Mural, pp. 5964-5969. Attachment

Korigodskii, Andrei — Lomonosov Moscow State University, Sverk Ltd
Kalachev, Oleg — Copter Express Technologies Ltd
Vasiunik, Artem — NUST MISiS, Cognitive Pilot
Urvantsev, Matvei — Sverk Ltd
Bondar, Georgii — NUST MISiS

16:45-17:00 — WeCT2.2

An Intelligent Robotic System for Perceptive Pancake Batter Stirring and Precise Pouring, pp. 5970-5977. Attachment

Luo, Xinyuan — University of Illinois at Urbana Champaign
Jin, Shengmiao — University of Illinois Urbana-Champaign
Huang, Hung-Jui — Carnegie Mellon University
Yuan, Wenzhen — University of Illinois

17:00-17:15 — WeCT2.3

Low-Cost Air Hockey Robot Using a Five-Bar Linkage Mechanism Driven by Position-Control Servomotors, pp. 5978-5985. Attachment

Shinjo, Mirai — University of Toronto
Beltran-Hernandez, Cristian Camilo — OMRON SINIC X Corporation
Hamaya, Masashi — OMRON SINIC X Corporation
Tanaka, Kazutoshi — OMRON SINIC X Corporation

17:15-17:30 — WeCT2.4

Robot Synesthesia: A Sound and Emotion Guided Robot Painter, pp. 5986-5992.

Misra, Vihaan — Carnegie Mellon University
Schaldenbrand, Peter — Carnegie Mellon University
Oh, Jean — Carnegie Mellon University

WeCT3 — Room 3
Force and Tactile Sensing (Regular session)

Chair: Matsubara, Takamitsu — Nara Institute of Science and Technology

16:30-16:45 — WeCT3.1

Optical-Waveguide Based 3-Axial Tactile Sensor for Minimally Invasive Surgical Instruments, N/A

Li, Yue — King's College London
Gaozhang, Wenlong — University College London
Hu, Jian — Institute of Automation, Chinese Academy of Sciences
Cao, Danqian — King's Collge London
Dasgupta, Prokar — King's College London
Liu, Hongbin — Hong Kong Institute of Science & Innovation, Chinese Academy Of

16:45-17:00 — WeCT3.2

Incipient Slip Detection by Vibration Injection into Soft Sensor, N/A

Komeno, Naoto — Nara Institute of Science and Technology
Matsubara, Takamitsu — Nara Institute of Science and Technology

17:00-17:15 — WeCT3.3

Fiber-Optic Force Sensing of Modular Robotic Skin for Remote and Autonomous Robot Control (I), N/A

Lee, Sudong — EPFL (École Polytechnique Fédérale De Lausanne)
Kim, Jae In — Seoul National University
Baek, Youngjoon — Seoul National University
Chang, Dongjune — Arizona State University
Lee, Jeongseob — Seoul National University
Park, Young Soo — Argonne National Laboratory
Lee, Dongjun — Seoul National University
Park, Yong-Lae — Seoul National University

17:15-17:30 — WeCT3.4

VTTB: A Visuo-Tactile Learning Approach for Robot-Assisted Bed Bathing, N/A

Gu, Yijun — Imperial College London
Demiris, Yiannis — Imperial College London

WeCT4	Room 4
Soft Sensors and Actuators I (Regular session)	
Chair: Yun, Dongwon	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Co-Chair: Khan, Kamran	Khalifa University of Science and Technology
16:30-16:45	WeCT4.1
A Two-Chamber Soft Actuator with an Expansion Limit Line for Force Enhancement, N/A	
Yoon, Jingon	Daegu Gyeongbuk Institute of Science and Technology (DGIST), Dae
Yang, Junmo	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Yun, Dongwon	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
16:45-17:00	WeCT4.2
Rapid De-Electroadhesion with Exponential Decay Alternating Voltages, N/A	
Yan, Peinan	Shanghai Jiao Tong University
Zou, Jiang	Shanghai Jiao Tong University
Guo, Jianglong	Harbin Institute of Technology (Shenzhen)
Leng, Jinsong	Harbin Institute of Technology
Gu, Guoying	Shanghai Jiao Tong University
17:00-17:15	WeCT4.3
How Fast Can a Robotic Drummer Beat Using Dielectric Elastomer Actuators?, N/A	
Wakle, Sudhir	Indian Institute of Technology Kanpur and National Yang Ming Chi
Lin, Tze-Han	National Yang Ming Chiao Tung University, Taiwan
Huang, Shu	Industrial Technology Research Institute, Taiwan
Basu, Sumit	Indian Institute of Technology Kanpur
Lau, Gih Keong	National Yang Ming Chiao Tung University
17:15-17:30	WeCT4.4
Variable Stiffness, Sensing, and Healing in FESTO's FinRay Gripper: An Industry-Driven Design (I), N/A	
Kashef Tabrizian, Seyedreza	Vrije Universiteit Brussel
Terryn, Seppe	Vrije Universiteit Brussel (VUB)
Brauchle, Daniel	FESTO
Seyler, Jan Reinke	Festo SE & Co. KG
Brancart, Joost	Vrije Universiteit Brussel (VUB)
Van Assche, Guy	Vrije Universiteit Brussel (VUB)
Vanderborght, Bram	Vrije Universiteit Brussel

WeCT5	Room 5
Dynamics (Regular session)	
Chair: Behl, Madhur	University of Virginia
Co-Chair: Della Santina, Cosimo	TU Delft
16:30-16:45	WeCT5.1
Deep Dynamics: Vehicle Dynamics Modeling with a Physics-Constrained Neural Network for Autonomous Racing, N/A	
Chrosniak, John	University of Virginia
Ning, Jingyun	University of Virginia
Behl, Madhur	University of Virginia
16:45-17:00	WeCT5.2
A Monte Carlo Approach to Koopman Direct Encoding and Its Application to the Learning of Neural-Network Observables, N/A	
Nozawa, Itta	Sumitomo Heavy Industries, Ltd
Kamienski, Emily	Massachusetts Institute of Technology
O'Neill, Cormac	Massachusetts Institute of Technology
Asada, Harry	MIT
17:00-17:15	WeCT5.3
Breaking Symmetries Leads to Diverse Quadrupedal Gaits, N/A	
Ding, Jiayu	Syracuse University
Gan, Zhenyu	Syracuse University

17:15-17:30 WeCT5.4

Input Decoupling of Lagrangian Systems Via Coordinate Transformation: General Characterization and Its Application to Soft Robotics (I), N/A

Pustina, Pietro	Sapienza University of Rome
Della Santina, Cosimo	TU Delft
Boyer, Frédéric	Ecole Des Mines De Nantes
De Luca, Alessandro	Sapienza University of Rome
Renda, Federico	Khalifa University of Science and Technology

WeCT6 Room 6

Aerial Systems: Applications I (Regular session)

Chair: Hamaza, Salua	TU Delft
Co-Chair: Mounsef, Jinane	Rochester Institute of Technology

16:30-16:45 WeCT6.1

Thrust Microstepping Via Acceleration Feedback in Quadrotor Control for Aerial Grasping of Dynamic Payload, N/A

Kumar, Ashish	Indian Institute of Technology, Kanpur
Behera, Laxmidhar	IIT Kanpur

16:45-17:00 WeCT6.2

ALBERO: Agile Landing on Branches for Environmental Robotics Operations, N/A

Zheng, Liming	Delft University of Technology
Hamaza, Salua	TU Delft

17:00-17:15 WeCT6.3

Assessment and Modeling of the Aerodynamic Ground Effect of a Fully-Actuated Hexarotor with Tilted Propellers, N/A

Garofano-Soldado, Ambar	University of Seville
Gonzalez-Morgado, Antonio	Universidad De Sevilla
Heredia, Guillermo	University of Seville
Ollero, Anibal	AICIA. G41099946

17:15-17:30 WeCT6.4

Image-Based Time-Varying Contact Force Control of Aerial Manipulator Using Robust Impedance Filter, N/A

Byun, Jeonghyun	Seoul National University
Kim, Junha	Seoul National University
Eom, Dohyun	Seoul National University
Lee, Dongjae	Seoul National University
Kim, Changhyeon	Seoul National University
Kim, H. Jin	Seoul National University

WeCT7 Room 7

Medical Robotics I (Regular session)

Chair: Nasseri, M. Ali	Technische Universitaet Muenchen
Co-Chair: Tamadazte, Brahim	CNRS

16:30-16:45 WeCT7.1

Automatic Spinal Canal Breach Detection During Pedicle Screw Placement, N/A

Leblanc, Lilyan	Sorbonne Université
Saghbini, Elie	ISIR, Sorbonne Université, CNRS UMR 7222, INSERM U1150
Da Silva, Jimmy	Sorbonne Université, CNRS, INSERM, ISIR-Agathe
Harle, Antoine	ISIR, UMR 7222 Sorbonne University, CNRS, ERL AGATHE, U1150 INSE
Vafadar, Saman	ISIR, UMR 7222 Sorbonne University, CNRS, ERL AGATHE, U1150 INSE
Chandanson, Thibault	SpineGuard
Vialle, Raphael	ISIR, Sorbonne Université, CNRS UMR 7222, INSERM U1150
Morel, Guillaume	Sorbonne Université, CNRS, INSERM
Tamadazte, Brahim	CNRS

16:45-17:00 WeCT7.2

EyeLS: Shadow-Guided Instrument Landing System for Intraocular Target Approaching in Robotic Eye Surgery, N/A

Yang, Junjie	TUM
Zhao, Zhihao	Technische Universität München
Shen, Siyuan	Technical University of Munich
Zapp, Daniel	Klinikum Rechts Der Isar Der TU München
Maier, Mathias	Klinikum Rechts Der Isar Der TU München
Huang, Kai	Sun Yat-Sen University
Navab, Nassir	TU Munich
Nasseri, M. Ali	Technische Universitaet Muenchen

17:00-17:15 WeCT7.3

Robot-Assisted Deep Venous Thrombosis Ultrasound Examination Using Virtual Fixture (I), N/A

Huang, Dianye	Technical University of Munich
Yang, Chenguang	University of Liverpool
Zhou, Mingchuan	Zhejiang University
Karlas, Angelos	TranslaTUM, Technical University of Munich
Navab, Nassir	TU Munich
Jiang, Zhongliang	Technical University of Munich

17:15-17:30 WeCT7.4

Enhancing Elderly Mobility: A Sturdy, Two-Body Robot for Handlebar Placement in Any Location, N/A

Bolli, Roberto	MIT
Asada, Harry	MIT

WeCT8 Room 8

Localization II (Regular session)

Chair: Lima, Pedro U.	Instituto Superior Técnico - Institute for Systems and Robotics

16:30-16:45 WeCT8.1

Spatial Graph-Based Localization and Navigation on Scaleless Floorplan, N/A

Ewe, Zu Lin	National Taiwan University
Chang, Fu-Hao	National Taiwan University
Huang, Yi-Shiang	National Taiwan University
Fu, Li-Chen	National Taiwan University

16:45-17:00 WeCT8.2

Enhancing VIO Robustness under Sudden Lighting Variation: A Learning-Based IMU Dead-Reckoning for UAV Localization, N/A

Yang, Daolong	Beihang University
Haoyuan, Liu	Beihang University
Jin, XueYing	Beihang University
Chen, Jiawei	Beihang University
Wang, Chengcai	Beihang University
Ding, Xilun	Beijing University of Aeronautics & Astronautics(BUAA)
Xu, Kun	Beihang University

17:00-17:15 WeCT8.3

Vision-Based Topological Localization for MAVs, N/A

Felicioni, Simone	University of Perugia - Department of Engineering
Rizzo, Biagio Maria	Università Degli Studi Di Perugia
Tortorici, Claudio	Technology Innovation Institute
Costante, Gabriele	University of Perugia

17:15-17:30 WeCT8.4

GEERS: Georeferenced Enhanced EKF Using Point Cloud Registration and Segmentation, N/A

Bettencourt, Rui	Institute for Systems and Robotics / Instituto Superior Técnico
Lewis, John	Instituto Superior Técnico, Lisboa
Serra, Rodrigo	Institute for Systems and Robotics / Instituto Superior Técnico
Basiri, Meysam	Instituto Superior Técnico
Vale, Alberto	Instituto Superior Técnico
Lima, Pedro U.	Instituto Superior Técnico - Institute for Systems and Robotics

WeCT9	Room 9
Motion and Path Planning II (Regular session)	
Co-Chair: Siegwart, Roland	ETH Zurich
16:30-16:45	WeCT9.1
Planning with Purpose: Task-Specific Trajectory Optimization, N/A	
Pei, Yinan	Amazon
Ivanov, Yuri	Amazon
16:45-17:00	WeCT9.2
Safe Low-Altitude Navigation in Steep Terrain with Fixed-Wing Aerial Vehicles, N/A	
Lim, Jaeyoung	ETH Zurich
Achermann, Florian	ETH Zurich, ASL
Girod, Rik	ETH Zürich
Lawrance, Nicholas	CSIRO Data61
Siegwart, Roland	ETH Zurich
17:00-17:15	WeCT9.3
Biased-MPPI: Informing Sampling-Based Model Predictive Control by Fusing Ancillary Controllers, N/A	
Trevisan, Elia	Delft University of Technology
Alonso-Mora, Javier	Delft University of Technology
17:15-17:30	WeCT9.4
CCTV-Informed Human-Aware Robot Navigation in Crowded Indoor Environments, N/A	
Kim, Mincheul	Korea Advanced Institute of Science and Technology
Kwon, Youngsun	Electronics and Telecommunications Research Institute
Lee, Sebin	KAIST
Yoon, Sung-eui	KAIST

WeCT10	Room 10
Deep Learning for Vision (Regular session)	
Chair: Cui, Zhenchao	Hebei University
Co-Chair: Nava, Mirko	IDSIA
16:30-16:45	WeCT10.1
*OKR-Net: Overlapping Keypoints Registration Network for Large-Scale LiDAR Point Clouds**. N/A	
Wang, Zijian	Southeast University
Xu, Xiaosu	Southeast University
Yao, Yiqing	Southeast University
Li, Nuo	Southeast University
Liu, Yehao	Southeast University
16:45-17:00	WeCT10.2
Self-Supervised Learning of Visual Robot Localization Using LED State Prediction As a Pretext Task, N/A	
Nava, Mirko	IDSIA
Carlotti, Nicholas	Dalle Molle Institute for Artificial Intelligence (IDSIA)
Crupi, Luca	IDSIA USI-SUPSI
Palossi, Daniele	ETH Zurich
Giusti, Alessandro	IDSIA USI-SUPSI
17:00-17:15	WeCT10.3
FGDSNet: A Lightweight Hand Gesture Recognition Network for Human Robot Interaction, N/A	
Zhou, Guoyu	Hebei University
Cui, Zhenchao	Hebei University
Qi, Jing	Beihang University
17:15-17:30	WeCT10.4
Adaptive Robot Traversability Estimation Based on Self-Supervised Online Continual Learning in Unstructured Environments, N/A	
Yoon, Hyung-Suk	Seoul National University
Hwang, Ji-Hoon	Seoul National University
Kim, Chan	Seoul National University
Son, E-In	Seoul National University
Yoo, Se-Wook	Seoul National University

Seo, Seung-Woo — Seoul National University

WeCT11 — Room 11

Multi-Robot Systems II (Regular session)

Chair: Sun, Guibin — Beihang University

Co-Chair: Parasuraman, Ramviyas — University of Georgia

16:30-16:45 — WeCT11.1

MARRGM: Learning Framework for Multi-Agent Reinforcement Learning Via Reinforcement Recommendation and Group Modification, N/A

Wu, Peiliang — Yanshan University

Tian, Liqiang — Yanshan University

Zhang, Qian — Nankai University

Mao, BingYi — Yanshan University

Chen, Wenbai — Beijing Information Science and Technology

16:45-17:00 — WeCT11.2

MCCA: A Decentralized Method for Collision and Deadlock Avoidance with Nonholonomic Robots, N/A

Zheng, Ruochen — Megvii Automation & Robotics

Li, Siyu — Megvii Automation and Robotics

17:00-17:15 — WeCT11.3

Online Path Repair: Adapting to Robot Failures in Multi-Robot Aerial Surveys, N/A

Clark, Jaden — Stanford University

Shah, Kunal — Stanford University

Schwager, Mac — Stanford University

17:15-17:30 — WeCT11.4

HMA-SAR: Multi-Agent Search and Rescue for Unknown Located Dynamic Targets in Completely Unknown Environments, N/A

Cao, Xiao — University of Hong Kong

Li, Mingyang — The University of Hong Kong

Tao, Yuting — Hong Kong University

Lu, Peng — The University of Hong Kong

WeCT12 — Room 12

Reinforcement Learning III (Regular session)

Chair: Kelly, Jonathan — University of Toronto

16:30-16:45 — WeCT12.1

Adaptive Curriculum Learning with Successor Features for Imbalanced Compositional Reward Functions, N/A

Szoke, Laszlo — Budapest University of Technology and Economics, Robert Bosch Kf

Shperberg, Shahaf — Ben-Gurion University of the Negev

Holtz, Jarrett — University of Texas at Austin

Allievi, Alessandro Gabriele — Bosch

16:45-17:00 — WeCT12.2

Learning Locomotion for Quadruped Robots Via Distributional Ensemble Actor-Critic, N/A

Li, Sicen — Harbin Engineering University

Pang, YiMing — Harbin Engineering University

Bai, Panju — Harbin Engineering University

Li, Jiawei — Harbin Engineering University

Liu, Zhaojin — Harbin Engineering University

Hu, Shihao — Harbin Engineering University

Wang, Li-Quan — Harbin Engineering University

Wang, Gang — Harbin Engineering University

17:00-17:15 — WeCT12.3

An End-To-End Deep Reinforcement Learning Based Modular Task Allocation Framework for Autonomous Mobile Systems (I), N/A

Ma, Song — University College London

Ruan, Jingqing — Chinese Academy of Sciences

Du, Yali — King's College London

Bucknall, Richard — University College London

Liu, Yuanchang	University College London

17:15-17:30 WeCT12.4

*Multi-Camera Unified Pre-Training Via 3D Scene Reconstruction**. N/A

Min, Chen	Chinese Academy of Sciences
Xiao, Liang	Defense Innovation Institute
Zhao, Dawei	DII
Nie, Yiming	National Innovation Institute of Defense Technology
Dai, Bin	National Innovation Institute of Defense Technology

WeCT13 Room 13

Human-Centered Robotics (Regular session)

Chair: Hasegawa, Yasuhisa	Nagoya University

16:30-16:45 WeCT13.1

A Whole-Body Integrated AVATAR System: Implementation of Telepresence with Intuitive Control and Immersive Feedback (I), N/A

Park, Sungman	UNIST
Junsoo, Kim	UNIST, Ulsan, Korea
Lee, Hojae	Ulsan National Institute of Science & Technology
Jo, Minwoong	Korea, UNIST
Gong, Dohoon	UNIST
Ju, Dawon	UNIST
Won, Dami	UNIST
Kim, Sihyeon	UNIST
Oh, Jinhyeok	UNIST
Jang, Hun	Ulsan National Institute of Science and Technology
Bae, Joonbum	Korea University

16:45-17:00 WeCT13.2

Real-Time Spatiotemporal Assistance for Micromanipulation Using Imitation Learning, N/A

Mori, Ryoya	Nagoya University
Aoyama, Tadayoshi	Nagoya University
Kobayashi, Taisuke	National Institute of Informatics
Sakamoto, Kazuya	Nagoya University
Takeuchi, Masaru	Nagoya University
Hasegawa, Yasuhisa	Nagoya University

17:00-17:15 WeCT13.3

MAVERIC: A Data-Driven Approach to Personalized Autonomous Driving (I), N/A

Schrum, Mariah	Georgia Institute of Technology
Sumner, Emily	Toyota Research Institute
Gombolay, Matthew	Georgia Institute of Technology
Best, Andrew	Toyota Research Institute

17:15-17:30 WeCT13.4

Field Experiments on the Effects of Multiple-Robot Expressions for Robot Influence in Recommendation Situations, N/A

Hatano, Yota	Osaka University
Baba, Jun	CyberAgent, Inc
Nakanishi, Junya	Osaka Univ
Yoshikawa, Yuichiro	Osaka University
Ishiguro, Hiroshi	Osaka University

WeDT1 Room 1

Sponsored Award Papers (Regular session)

Chair: Hamaza, Salua	TU Delft

17:30-17:45 WeDT1.1

An Autonomous, 3D Printed, Waterjet-Powered, Open-Source Robotic Trimaran for Environmental Inspection and Monitoring, pp. 6359-6366. Attachment

O'Brien, Reuben	The University of Auckland
Lambrechtse-Reid, Martin	The University of Auckland
Liarokapis, Minas	The University of Auckland

17:45-18:00 WeDT1.2

Revolutionizing Battery Disassembly: The Design and Implementation of a Battery Disassembly Autonomous Mobile Manipulator Robot(BEAM-1), pp. 6367-6374. Attachment

Peng, Yanlong	Shanghai Jiao Tong University
Wang, Zhigang	Intel Labs China
Zhang, Yisheng	Shanghai Jiao Tong University
Zhang, Shengmin	Shanghai Jiao Tong University
Cai, Nan	Kunming University of Science and Technology
Wu, Fan	Beijing University of Technology
Chen, Ming	Shanghai Jiao Tong University

18:00-18:15 WeDT1.3

Spatio-Temporal Consistent Mapping of Growing Plants for Agricultural Robots in the Wild, pp. 6375-6382.

Lobefaro, Luca	University of Bonn
Malladi, Meher Venkata Ramakrishna	University of Bonn
Guadagnino, Tiziano	University of Bonn
Stachniss, Cyrill	University of Bonn

18:15-18:30 WeDT1.4

Safe and Efficient Auto-Tuning to Cross Sim-To-Real Gap for Bipedal Robot, pp. 6383-6389. Attachment

Du, Yidong	Beijing Institute of Technology
Chen, Xuechao	Beijing Insititute of Technology
Yu, Zhangguo	Beijing Institute of Technology
Zhang, YuanXi	Beijing Institute of Technology
Zhou, Zishun	Beijing Institute of Technology
Zhang, Jindai	Beijing Institute of Technology
Zhang, Jintao	Beijing Institute of Technology
Liu, Botao	Beijing Institute of Technology
Huang, Qiang	Beijing Institute of Technology

WeDT2 Room 2

Marine Robotics I (Regular session)

Chair: Yamashita, Atsushi	The University of Tokyo
Co-Chair: Gao, Zhi	Temasek Laboratories @ NUS

17:30-17:45 WeDT2.1

Swift: Transition Characterization and Motion Analysis of a Multimodal Underwater Vehicle, N/A

Zhou, Hexiong	Shanghai Jiao Tong University
Cao, Junjun	Shanghai Jiao Tong University
Fu, Jian	Shanghai Jiao Tong University
Zeng, Zheng	Shanghai Jiao Tong University
Yao, Baoheng	Shanghai Jiaotong University
Mao, Zhihua	Shanghai Jiao Tong University
Lian, Lian	Shanghai Jiaotong University

17:45-18:00 WeDT2.2

Acoustic-N-Point for Solving 2D Forward Looking Sonar Pose Estimation, N/A

Wang, Yusheng	The University of Tokyo
Ji, Yonghoon	JAIST
Tsuchiya, Hiroshi	Wakachiku Construction Co., Ltd
Ota, Jun	The University of Tokyo
Asama, Hajime	The University of Tokyo
Yamashita, Atsushi	The University of Tokyo

18:00-18:15 WeDT2.3

WaterFormer: Global-Local Transformer for Underwater Image Enhancement with Environment Adaptor (I), N/A

Wen, Junjie	The Chinese University of Hong Kong
Cui, Jinqiang	Peng Cheng Laboratory
Yang, Guidong	The Chinese University of Hong Kong
Zhao, Benyun	The Chinese University of Hong Kong
Zhai, Yu	The Chinese University of Hong Kong
Gao, Zhi	Temasek Laboratories @ NUS

Dou, Lihua	Beijing Institue of Technology
Chen, Ben M.	Chinese University of Hong Kong

18:15-18:30 WeDT2.4

An Autonomous Underwater Architecture for Long-Term Deep-Ocean Inspection with Opportunistic (Re)planning (I), N/A

Tosello, Elisa	Fondazione Bruno Kessler
Bonel, Paolo	Saipem SpA
Buranello, Alberto	Saipem SpA
Carraro, Marco	Univ. of Padua
Cimatti, Alessandro	IRST - Istituto Per La Ricerca Scientifica E Tecnologica
Granelli, Lorenzo	SAIPEM SpA
Panjkovic, Stefan	Fondazione Bruno Kessler
Micheli, Andrea	Fondazione Bruno Kessler

WeDT3 Room 3

Deep Learning in Grasping and Manipulation I (Regular session)

Chair: Walas, Krzysztof, Tadeusz	Poznan University of Technology

17:30-17:45 WeDT3.1

Deformable Linear Objects Manipulation with Online Model Parameters Estimation, N/A

Caporali, Alessio	University of Bologna
Kicki, Piotr	Poznan University of Technology
Galassi, Kevin	Università Di Bologna
Zanella, Riccardo	Universita' Degli Studi Di Bologna
Walas, Krzysztof, Tadeusz	Poznan University of Technology
Palli, Gianluca	University of Bologna

17:45-18:00 WeDT3.2

TraKDis: A Transformer-Based Knowledge Distillation Approach for Visual Reinforcement Learning with Application to Cloth Manipulation, N/A

Chen, Wei	Imperial College London
Rojas, Nicolas	The AI Institute

18:00-18:15 WeDT3.3

Learning to Place Unseen Objects Stably Using a Large-Scale Simulation, N/A

Noh, Sangjun	Gwangju Institute of Science and Technology
Kang, Raeyoung	Gwangju Institute of Science and Technology
Kim, Taewon	Gwangju Institute of Science and Technology
Back, Seunghyeok	Gwangju Institute of Science and Technology
Bak, Seongho	Gwangju Institute of Science and Technology
Lee, Kyoobin	Gwangju Institute of Science and Technology

18:15-18:30 WeDT3.4

CenterGrasp: Object-Aware Implicit Representation Learning for Simultaneous Shape Reconstruction and 6-DoF Grasp Estimation, N/A

Chisari, Eugenio	University of Freiburg
Heppert, Nick	University of Freiburg
Welschehold, Tim	Albert-Ludwigs-Universität Freiburg
Burgard, Wolfram	University of Technology Nuremberg
Valada, Abhinav	University of Freiburg

WeDT4 Room 4

Soft Sensors and Actuators II (Regular session)

Chair: Wurdemann, Helge Arne	University College London
Co-Chair: Mintchev, Stefano	ETH Zurich

17:30-17:45 WeDT4.1

Multidirectional Bending Soft Pneumatic Actuator with Fishbone-Like Strain-Limiting Layer for Dexterous Manipulation, N/A

Yang, Xinyu	Shanghai Jiao Tong University
Zhang, Ningbin	Shanghai Jiao Tong University
Huang, Xinjia	Shanghai Jiao Tong University
Bian, Rong	Shanghai Jiaotong University

Feng, Miao	Shanghai Jiao Tong University
Zhu, Xiangyang	Shanghai Jiao Tong University
Gu, Guoying	Shanghai Jiao Tong University

17:45-18:00 WeDT4.2

Vine-Like, Power Soft Gripper Based on Euler's Belt Theory, N/A

Kodama, Hiroto	Tokyo Institute of Technology
Ide, Tohru	Tokyo Institute of Technology
Feng, Yunhao	Tokyo Institute of Technology
Nabae, Hiroyuki	Tokyo Institute of Technology
Suzumori, Koichi	Tokyo Institute of Technology

18:00-18:15 WeDT4.3

Self-Sensing Origami-Inspired Soft Twisting Actuators and Its Application in Soft Robots, N/A

Yang, Yang	Nanjing University of Information Science and Technology
Yan, Shaoyang	Nanjing University of Information Science and Technology
Xie, Yuan	Nanjing University of Information Science and Technology
Wang, Yuchao	Nanjing University of Information Science and Technology
Liu, Jia	Nanjing University of Information Science & Technology
Li, Yunquan	South China University of Technology
Zhou, Jianshu	The Chinese University of Hong Kong

18:15-18:30 WeDT4.4

Novel Design of a Pneumatic Longitudinal Actuator for Both Extending and Contracting Motions, N/A

Tago, Yasuka	Waseda University
Satake, Yuki	Ritsumeikan University
Ishii, Hiroyuki	Waseda University

WeDT5 Room 5

Kinematics (Regular session)

Chair: Laha, Riddhiman	Technical University of Munich
Co-Chair: Mueller, Andreas	Johannes Kepler University

17:30-17:45 WeDT5.1

Enhanced Dexterity Maps (EDM): A New Map for Manipulator Capability Analysis, N/A

Yao, Haowen	Technical Univerity of Munich
Laha, Riddhiman	Technical University of Munich
Figueredo, Luis	University of Nottingham (UoN)
Haddadin, Sami	Technical University of Munich

17:45-18:00 WeDT5.2

An Inverse Kinematics Algorithm with Smooth Task Switching for Redundant Robots, N/A

Gamper, Hannes	CERN - European Organization for Nuclear Research
Rodrigo Perez, Laura	CERN
Mueller, Andreas	Johannes Kepler University
Díaz Rosales, Alejandro	CERN; Delft University of Technology
Di Castro, Mario	CERN, European Organization for Nuclear Research

18:00-18:15 WeDT5.3

Globally Optimal Inverse Kinematics As a Non-Convex Quadratically Constrained Quadratic Program, N/A

Votroubek, Tomáš	Czech Technical University in Prague, Faculty of Electrical Engi
Kroupa, Tomas	Czech Technical University in Prague

18:15-18:30 WeDT5.4

Kinematics-Informed Neural Networks: Enhancing Generalization Performance of Soft Robot Model Identification, N/A

Yoon, Taerim	Korea University
Chai, Yoonbyung	Korea University
Jang, Yeonwoo	Ulsan National Institute of Science and Technology (UNIST)
Lee, Hajun	Ulsan National Institute of Science and Technology
Kim, Junghyo	Ulsan National Institute of Science and Technology
Kwon, Jaewoon	NAVER LABS
Kim, Jiyun	Ulsan National Institute of Science and Technology
Choi, Sungjoon	Korea University

WeDT6 Room 6

Aerial Systems: Applications II (Regular session)

Chair: Saska, Martin — Czech Technical University in Prague
Co-Chair: Gao, Fei — Zhejiang University

17:30-17:45 WeDT6.1

Energy-Aware Multi-UAV Coverage Mission Planning with Optimal Speed of Flight, N/A

Datsko, Denys — Czech Technical University in Prague
Nekovar, Frantisek — Czech Technical University in Prague
Penicka, Robert — Czech Technical University in Prague
Saska, Martin — Czech Technical University in Prague

17:45-18:00 WeDT6.2

High-Speed Detector for Low-Powered Devices in Aerial Grasping, N/A

Kumar, Ashish — Indian Institute of Technology, Kanpur
Behera, Laxmidhar — IIT Kanpur

18:00-18:15 WeDT6.3

Autonomous Landing on a Moving Platform Using Vision-Based Deep Reinforcement Learning, N/A

Ladosz, Pawel — University of Manchester
Mammadov, Meraj — Ulsan National Institute of Science and Technology
Shin, Heejung — Ulsan National Institute of Science and Technology
Shin, Woojae — Ulsan National Institute of Science and Technology
Oh, Hyondong — UNIST

18:15-18:30 WeDT6.4

Impact-Aware Planning and Control for Aerial Robots with Suspended Payloads (I), N/A

Wang, Haokun — The Hong Kong University of Science and Technology
Li, Haojia — The Hong Kong University of Science and Technology
Zhou, Boyu — Sun Yat-Sen University
Gao, Fei — Zhejiang University
Shen, Shaojie — Hong Kong University of Science and Technology

WeDT7 Room 7

Surgical Robotics I (Regular session)

Chair: Hollis, Ralph — Carnegie Mellon University
Co-Chair: Fiorini, Paolo — University of Verona

17:30-17:45 WeDT7.1

A Novel Miniature Flexible Instrument with Unfolding and Decoupling Design for Endoscopic Surgery, N/A

Zhang, Chi — Tianjin University
Wang, Yi — Tianjin University
Liang, Tao — Tianjin University
Kong, Kang — Tianjin University
Yao, Qiwen — Tianjin University
Zuo, Siyang — Tianjin University

17:45-18:00 WeDT7.2

DaFoEs: Mixing Datasets towards the Generalization of Vision-State Deep-Learning Force Estimation in Minimally Invasive Robotic Surgery, N/A

De Iturrate Reyzabal, Mikel — King's College London
Chen, Mingcong — City University of Hong Kong
Huang, Wei — CAIR
Ourselin, Sebastien — University College London
Liu, Hongbin — Hong Kong Institute of Science & Innovation, Chinese Academy Of

18:00-18:15 WeDT7.3

FNPG-NH: A Reinforcement Learning Framework for Flexible Needle Path Generation with Nonholonomic Constraints, N/A

Shah, Mukund — IIT Madras
Patel, Niravkumar — Indian Institute of Technology Madras

18:15-18:30 WeDT7.4

Wheelchair Maneuvering with a Single-Spherical-Wheeled Balancing Mobile Manipulator, pp. 6583-6589. Attachment

Dai, Cunxi	Carnegie Mellon University
Liu, Xiaohan	Carnegie Mellon University
Shu, Roberto	Carnegie Mellon University
Hollis, Ralph	Carnegie Mellon University

WeDT8 Room 8

Localization III (Regular session)

Chair: Lima, Pedro U. — Instituto Superior Técnico - Institute for Systems and Robotics

17:30-17:45 WeDT8.1

Autonomous Vehicle Localization without Prior High-Definition Map (I), N/A

Lee, Sangmin	Korea Advanced Institute of Science and Technology
Ryu, Jee-Hwan	Korea Advanced Institute of Science and Technology

17:45-18:00 WeDT8.2

Forward Prediction of Target Localization Failure through Pose Estimation Artifact Modelling, N/A

Windsor, Morgan	Queensland University of Technology
Fontan, Alejandro	Queensland University of Technology
Pivonka, Peter	Queensland University of Technology
Milford, Michael J	Queensland University of Technology

18:00-18:15 WeDT8.3

Geo-Localization Based on Dynamically Weighted Factor-Graph, N/A

Muñoz-Bañón, Miguel Ángel	University of Alicante
Olivas, Alejandro	University of Alicante
Velasco Sánchez, Edison Patricio	Universidad De Alicante
Candelas, Francisco A.	University of Alicante
Torres Medina, Fernando	Instituto Universitario De Investigación Informática (IUII). Uni

18:15-18:30 WeDT8.4

Triplet-Graph: Global Metric Localization Based on Semantic Triplet Graph for Autonomous Vehicles, N/A

Ma, Weixin	The Hong Kong Polytechnic University
Huang, Shoudong	University of Technology, Sydney
Sun, Yuxiang	City University of Hong Kong

WeDT9 Room 9

Motion and Path Planning III (Regular session)

Co-Chair: Siegwart, Roland — ETH Zurich

17:30-17:45 WeDT9.1

An Efficient Linear Programming-Based Time-Optimal Feedrate Planning Considering Kinematic and Dynamics Constraints of Robots, N/A

Liu, Guanghui	Shenyang University of Technology
Li, Qiang	Shenzhen Technology University
Yang, Bohan	Shenyang Institute of Automation, Chinese Academy of Sciences
Zhang, Hualiang	Shenyang Institute of Automation, Chinese Academy of Sciences
Fang, Lijin	Northeastern University

17:45-18:00 WeDT9.2

Model-Based Trajectory Planning of a Hybrid Robot for Powerline Inspection, N/A

Li, Zhishuo	Chinese Academy of Sciences
Tian, Yunong	Institute of Automation, Chinese Academy of Sciences
Yang, Guodong	Institute of Automation, Chinese Academy of Sciences
Zhang, Yanfeng	Institute of Automation, Chinese Academy of Sciences
Li, En	Institute of Automation, Chinese Academy of Sciences
Liang, Zize	Institute of Automation, Chinese Academy of Sciences
Tan, Min	Institute of Automation, Chinese Academy of Sciences

18:00-18:15 WeDT9.3

Geometry-Aware Safety-Critical Local Reactive Controller for Robot Navigation in Unknown and Cluttered Environments, N/A

Li, Yulin	Hong Kong University of Science and Technology(HKUST)
Tang, Xindong	Hong Kong Baptist University
Chen, Kai	The Hong Kong University of Science and Technology

Zheng, Chunxin	The Hong Kong University of Science and Technology(Guangzhou)
Liu, Haichao	The Hong Kong University of Science and Technology
Ma, Jun	The Hong Kong University of Science and Technology

18:15-18:30 WeDT9.4

GMPC: Geometric Model Predictive Control for Wheeled Mobile Robot Trajectory Tracking, N/A

Tang, Jiawei	Hong Kong University of Science and Technology
Wu, Shuang	Huawei
Lan, Bo	The Hong Kong University of Science and Technology
Dong, Yahui	The Hong Kong University of Science and Technology
Jin, Yuqiang	Zhejiang University of Technology
Tian, Guangjian	Huawei
Zhang, Wen-An	Zhejiang University of Technology, China
Shi, Ling	The Hong Kong University of Science and Technology

WeDT10 Room 10

Machine Learning for Vision (Regular session)

Chair: Sugiura, Komei — Keio University

17:30-17:45 WeDT10.1

Mobile-Seed: Joint Semantic Segmentation and Boundary Detection for Mobile Robots, N/A

Liao, Martin	Wuhan University
Kang, Shuhao	Technical University of Munich
Jianping, Li	Nanyang Technological University
Liu, Yang	King's College of London
Liu, Yun	Agency for Science, Technology and Research (A*STAR)
Dong, Zhen	Wuhan University
Yang, Bisheng	Wuhan University
Chen, Xieyuanli	National University of Defense Technology

17:45-18:00 WeDT10.2

Exploring Recurrent Long-Term Temporal Fusion for Multi-View 3D Perception, N/A

Han, Chunrui	MEGVII Technolegy
Yang, Jinrong	Huazhong University of Science and Technology
Sun, Jianjian	Megvii Technology
Ge, Zheng	Waseda University
Dong, Runpei	Xi'an Jiaotong University
Zhou, Hongyu	MEGVII Technology
Mao, Weixin	Waseda University
Peng, Yuang	Tsinghua University
Li, Xiaoping	Huazhong University of Science and Technology
Zhang, Xiangyu	Megvii Technology

18:00-18:15 WeDT10.3

SACNet: A Scattered Attention-Based Network with Feature Compensator for Visual Localization, N/A

Wang, Ke	Harbin Institute of Technology
Jiang, Zhiqiang	Harbin Institute of Technology
Dai, Kun	HIT
Xie, Tao	Harbin Institute of Technology
Jin, Ducheng	Harbin Institute of Technology
Li, Ruifeng	Harbin Institute of Technology
Zhao, Lijun	Harbin Institute of Technology
Chen, Xiao	Wuhu HIT Robot Industry Technology Research Institute

18:15-18:30 WeDT10.4

Learning-To-Rank Approach for Identifying Everyday Objects Using a Physical-World Search Engine, N/A

Kaneda, Kanta	Keio University
Nagashima, Shunya	Keio University
Korekata, Ryosuke	Keio University
Kambara, Motonari	Keio University
Sugiura, Komei	Keio University

WeDT11 Room 11

Multi-Robot Systems III (Regular session)

Chair: Alzugaray, Ignacio — Imperial College London

Co-Chair: Ferrante, Eliseo — Vrije Universiteit Amsterdam

17:30-17:45 WeDT11.1

Distributed Simultaneous Localisation and Auto-Calibration Using Gaussian Belief Propagation, N/A

Murai, Riku — Imperial College London

Alzugaray, Ignacio — Imperial College London

Kelly, Paul H J — Imperial College London

Davison, Andrew J — Imperial College London

17:45-18:00 WeDT11.2

*Distributed Optimization Methods for Multi-Robot Systems: Part I — a Tutorial (I)**. N/A

Shorinwa, Ola — Stanford University

Halsted, Trevor — Stanford University

Yu, Javier — Stanford University

Schwager, Mac — Stanford University

18:00-18:15 WeDT11.3

Distributed Optimization Methods for Multi-Robot Systems: Part II — a Survey (I), N/A

Shorinwa, Ola — Stanford University

Halsted, Trevor — Stanford University

Yu, Javier — Stanford University

Schwager, Mac — Stanford University

18:15-18:30 WeDT11.4

Fast Swarming of UAVs in GNSS-Denied Feature-Poor Environments without Explicit Communication, N/A

Horyna, Jiri — Czech Technical University in Prague

Kratky, Vit — Czech Technical University in Prague

Pritzl, Vaclav — Czech Technical University in Prague

Baca, Tomas — Czech Technical University in Prague FEE

Ferrante, Eliseo — Vrije Universiteit Amsterdam

Saska, Martin — Czech Technical University in Prague

WeDT12 Room 12

Imitation Learning I (Regular session)

Chair: Ogata, Tetsuya — Waseda University

17:30-17:45 WeDT12.1

Uncertainty-Aware Haptic Shared Control with Humanoid Robots for Flexible Object Manipulation, N/A

Hara, Takumi — Kyoto University

Sato, Takashi — Kyoto University

Ogata, Tetsuya — Waseda University

Awano, Hiromitsu — Kyoto University

17:45-18:00 WeDT12.2

Multi-Task Adaptive Gating Network for Trajectory Distilled Control Prediction, N/A

Azam, Shoaib — Aalto University

Kyrki, Ville — Aalto University

18:00-18:15 WeDT12.3

Leveraging Demonstrator-Perceived Precision for Safe Interactive Imitation Learning of Clearance-Limited Tasks, N/A

Oh, Hanbit — National Institute of Advanced Industrial Science and Technology

Matsubara, Takamitsu — Nara Institute of Science and Technology

18:15-18:30 WeDT12.4

MoVEInt: Mixture of Variational Experts for Learning Human-Robot Interactions from Demonstrations, N/A

Prasad, Vignesh — TU Darmstadt

Kshirsagar, Alap — Technische Universität Darmstadt

Koert, Dorothea — Technische Universitaet Darmstadt

Stock-Homburg, Ruth — Technical University of Darmstadt

Peters, Jan — Technische Universität Darmstadt

WeDT13 Room 13

Sensor Fusion I (Regular session)

Chair: Pb, Sujit — IISER Bhopal

17:30-17:45 WeDT13.1

Co-Occ: Coupling Explicit Feature Fusion with Volume Rendering Regularization for Multi-Modal 3D Semantic Occupancy Prediction, N/A

Pan, Jingyi — The Hong Kong University of Science and Technology (Guangzhou)
Wang, Zipeng — HKUST(GZ)
Wang, Lin — HKUST

17:45-18:00 WeDT13.2

Visual-Force-Tactile Fusion for Gentle Intricate Insertion Tasks, N/A

Jin, Piaopiao — Zhejiang University
Huang, Bidan — Tencent
Lee, Wangwei — Tencent RoboticsX Lab
Li, Tiefeng — Zhejiang University
Yang, Wei — Zhejiang University

18:00-18:15 WeDT13.3

LIV-GaussMap: LiDAR-Inertial-Visual Fusion for Real-Time 3D Radiance Field Map Rendering, N/A

Hong, Sheng — Hong Kong University of Science and Technology
He, Junjie — Xi'an Jiaotong University
Zheng, Xinhu — The HongKong University of Science and Technology (Guangzhou)
Liu, Kangcheng — ETH Zurich
Zheng, Chunran — The University of Hong Kong
Shen, Shaojie — Hong Kong University of Science and Technology

18:15-18:30 WeDT13.4

Event and Frame-Based Visual-Inertial Odometry with Adaptive Filtering Based on 8-DOF Warping Uncertainty, N/A

Lee, Min Seok — Seoul National University
Jung, Jaehyung — Technical University of Munich
Kim, Ye Jun — Hyundai Motor Group
Park, Chan Gook — Seoul National University

WeF4O Auditorium

Forum 4 - Robotics in Africa (Forum)

Chair: Ekenna, Chinwe — University at Albany

15:30-18:30 WeF4O.1

*Robotics in Africa Forum**. N/A

Ekenna, Chinwe — University at Albany
Mbanisi, Kenechukwu Churchill — Worcester Polytechnic Institute (WPI)
Adebola, Simeon Oluwafunmilore — University of California, Berkeley
Taddese, Addisu — Vanderbilt University

WeF5O Room 17/18

Forum 5 - Robotics & AI in the UAE: Research Innovation and Entrepreneurship (Forum)

Chair: McCarthy, Thomas Gerard — ASPIRE UAE

15:30-18:30 WeF5O.1

*Robotics & AI in the UAE: Research Innovation and Entrepreneurship**. N/A

McCarthy, Thomas Gerard — ASPIRE UAE

Thursday October 17, 2024

ThPI4T1	Room 1
Legged Robot Systems I (Teaser Session)	
Chair: Zhao, Ding	Carnegie Mellon University
Co-Chair: Zou, Ting	Memorial University

09:00-10:00 ThPI4T1.1

Explosive Legged Robotic Hopping: Energy Accumulation and Power Amplification Via Pneumatic Augmentation, pp. 6794-6801.

Chen, Yifei	Southern University of Science and Technology
Arturo, Gamboa-Gonzalez	University of Wisconsin-Madison
Wehner, Michael	University of Wisconsin, Madison
Xiong, Xiaobin	University of Wisconsin Madison

09:00-10:00 ThPI4T1.2

Real-Time Perceptive Motion Control Using Control Barrier Functions with Analytical Smoothing for Six-Wheeled-Telescopic-Legged Robot Tachyon 3, pp. 6802-6809. Attachment

Takasugi, Noriaki	Sony Group Corporation
Kinoshita, Masaya	Sony Group Corporation
Kamikawa, Yasuhisa	Sony Group Corporation
Tsuzaki, Ryoichi	Sony Group Corporation
Sakamoto, Atsushi	Sony Group Corporation
Kai, Toshimitsu	Sony Group Corporation
Kawanami, Yasunori	Sony Group Corporation

09:00-10:00 ThPI4T1.3

State Estimation Transformers for Agile Legged Locomotion, pp. 6810-6817. Attachment

Yu, Chen	Center for Robotics and Biosystems
Yang, Yichu	ByteDance
Liu, Tianlin	Peking University
You, Yangwei	Xiaomi
Zhou, Mingliang	Beijing Xiaomi Mobile Software Co., Ltd
Xiang, Diyun	XIAOMI

09:00-10:00 ThPI4T1.4

The Design of the Barkour Benchmark for Robot Agility, pp. 6818-6825. Attachment

Yu, Wenhao	Google
Caluwaerts, Ken	Google
Iscen, Atil	Google
Kew, J. Chase	Google Robotics
Zhang, Tingnan	Google
Freeman, Daniel	Google LLC
Lee, Lisa	Google
Saliceti, Stefano	Google DeepMind
Zhuang, Vincent	Google DeepMind
Batchelor, Nathan	Google DeepMind
Bohez, Steven	DeepMind
Casarini, Federico	Google DeepMind
Chen, Jose Enrique	DeepMind
Coumans, Erwin	Google Inc
Dostmohamed, Adil	Google DeepMind
Dulac-Arnold, Gabriel	Google
Escontrela, Alejandro	Google
Frey, Erik	Google DeepMind
Hafner, Roland	Google DeepMind
Jain, Deepali	Robotics at Google
Jyenis, Bauyrjan	Google
Kuang, Yuheng	Google DeepMind
Lee, Edward	Google
Nachum, Ofir	Google
Oslund, Kenneth	Google
Romano, Francesco	DeepMind

Sadeghi, Fereshteh	University of Washington
Tabanpour, Baruch	Google DeepMind
Zheng, Daniel	Google DeepMind
Neunert, Michael	Google
Hadsell, Raia	DeepMind
Heess, Nicolas	Google Deepmind
Nori, Francesco	Google DeepMind
Seto, Jeff	Google DeepMind
Parada, Carolina	Google
Sindhwani, Vikas	Google Brain, NYC
Vanhoucke, Vincent	Google
Tan, Jie	Google
Lee, Kuang-Huei	Google

09:00-10:00 ThPI4T1.5

Task-Space Riccati Feedback Based Whole Body Control for Underactuated Legged Locomotion, pp. 6826-6831. Attachment

Yang, Shunpeng	Hong Kong University of Science and Technology
Hong, Zejun	Southern University of Science and Technology
Li, Sen	Department of Civil and Environment Engineering, Hong Kong Univ
Wensing, Patrick M.	University of Notre Dame
Zhang, Wei	Southern University of Science and Technology
Chen, Hua	Zhejiang University

09:00-10:00 ThPI4T1.6

*SLIP Embodied Robust Quadruped Robot Control**. pp. 14219-14224.

Hong, Jin song	DGIST
Yeo, Changmin	DGIST
Bae, Sangjin	Daegu Gyeongbuk Institute of Science & Technology
Hong, Jeongwoo	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Oh, Sehoon	DGIST

09:00-10:00 ThPI4T1.7

Enhancing Leg Odometry in Legged Robots with Learned Contact Bias: An LSTM Recurrent Neural Network Approach, pp. 6832-6839. Attachment

Gu, Yaru	Memorial University of Newfoundland
Liu, Ze	Simon Fraser University
Zou, Ting	Memorial University

09:00-10:00 ThPI4T1.8

Distilling Reinforcement Learning Policies for Interpretable Robot Locomotion: Gradient Boosting Machines and Symbolic Regression, pp. 6840-6847. Attachment

Acero, Fernando	University College London
Li, Zhibin (Alex)	University College London

09:00-10:00 ThPI4T1.9

Dynamic Object Catching with Quadruped Robot Front Legs, pp. 6848-6855. Attachment

Schakkal, André	EPFL
Bellegarda, Guillaume	EPFL
Ijspeert, Auke	EPFL

09:00-10:00 ThPI4T1.10

Improving Legged Robot Locomotion by Quantifying Morphological Computation, pp. 6856-6863.

Chandiramani, Vijay	University of Bristol
Hauser, Helmut	University of Bristol
Conn, Andrew	University of Bristol

09:00-10:00 ThPI4T1.11

Harnessing Natural Oscillations for High-Speed, Efficient Asymmetrical Locomotion in Quadrupedal Robots, pp. 6864-6869. Attachment

Cheng, Jing	Syracuse University
Alqaham, Yasser G.	Syracuse University
Gan, Zhenyu	Syracuse University

09:00-10:00 ThPI4T1.12

Learning Safe Locomotion for Quadrupedal Robots by Derived-Action Optimization, pp. 6870-6876. Attachment

Zhu, Deye	Zhejiang University
Zhu, Chengrui	Zhejiang University
Zhang, Zhen	Zhejiang University
Xin, Shuo	Zhejiang University
Liu, Yong	Zhejiang University

09:00-10:00 ThPI4T1.13

LocoMan: Advancing Versatile Quadrupedal Dexterity with Lightweight Loco-Manipulators, pp. 6877-6884. Attachment

Lin, Changyi	Carnegie Mellon University
Liu, Xingyu	Carnegie Mellon University
Yang, Yuxiang	Robotics at Google
Niu, Yaru	Carnegie Mellon University
Yu, Wenhao	Google
Zhang, Tingnan	Google
Tan, Jie	Google
Boots, Byron	University of Washington
Zhao, Ding	Carnegie Mellon University

09:00-10:00 ThPI4T1.14

Versatile Locomotion Skills for Hexapod Robots, pp. 6885-6892. Attachment

Qu, Tomson	University of California, Berkeley
Li, Dichen	University of California, Berkeley
Zakhor, Avideh	University of California, Berkeley
Yu, Wenhao	Google
Zhang, Tingnan	Google

09:00-10:00 ThPI4T1.15

Modeling and Analysis of Passive Quadruped Walker with Compliant Torso on Low-Friction Environment, pp. 6893-6898. Attachment

Xiang, Yuxuan	Japan Advanced Institute of Science and Technology
Zheng, Yanqiu	Ritsumeikan University
Asano, Fumihiko	Japan Advanced Institute of Science and Technology

09:00-10:00 ThPI4T1.16

Leveraging Symmetry in RL-Based Legged Locomotion Control, pp. 6899-6906. Attachment

Su, Zhi	Tsinghua University
Huang, Xiaoyu	Georgia Institute of Technology
Ordonez Apraez, Daniel Felipe	Italian Institute of Technology
Li, Yunfei	Tsinghua University
Li, Zhongyu	University of California, Berkeley
Liao, Qiayuan	University of California, Berkeley
Pontil, Massimiliano	Department of Computer Science, University College London
Semini, Claudio	Istituto Italiano Di Tecnologia
Turrisi, Giulio	Istituto Italiano Di Tecnologia
Wu, Yi	Tsinghua University
Sreenath, Koushil	University of California, Berkeley

ThPI4T2 Room 2

Robotics in Healthcare III (Teaser Session)

Chair: Stilli, Agostino	University College London
Co-Chair: Tamadazte, Brahim	CNRS

09:00-10:00 ThPI4T2.1

Optimizing Base Placement of Surgical Robot: Kinematics Data-Driven Approach by Analyzing Working Pattern, pp. 6907-6914.

Yoon, Jeonghyeon	DGIST
Park, Junhyun	DGIST
Park, Hyojae	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Lee, Hakyoon	DGIST
Lee, Sang Won	Daegu Gyeongbuk Institute of Science and Technology
Hwang, Minho	Daegu Gyeongbuk Instituute of Science and Technology (DGIST)

09:00-10:00 ThPI4T2.2

2mm Diameter Continuum Robot Tools for Suturing in Open Spina Bifida Repair, pp. 6915-6922. Attachment

Law, Arion	University of Toronto
Nimal, Nillan	University of Toronto
Kang, Paul Hoseok	University of Toronto
Gondokaryono, Radian	University of Toronto
Drake, James	Hospital for Sick Children, University of Toronto
Van Mieghem, Tim	Sinai Health
Looi, Thomas	Hospital for Sick Children

09:00-10:00 ThPI4T2.3

BronchoCopilot: Towards Autonomous Robotic Bronchoscopy Via Multimodal Reinforcement Learning, pp. 6923-6930. Attachment

Zhao, Jianbo	Institute of Automation, Chinese Academy of Sciences
Chen, Hao	University of Chinese Academy of Sciences
Tian, Qingyao	University of Chinese Academy of Sciences
Chen, Jian	Hong Kong Institute of Science and Innovation, Chinese Academy O
Yang, Bingyu	Institute of Automation, Chinese Academy of Sciences； Sch
Zhang, Zihui	Institute of Automation, Chinese Academy of Sciences
Liu, Hongbin	Hong Kong Institute of Science & Innovation, Chinese Academy Of

09:00-10:00 ThPI4T2.4

Autonomous Guidewire Navigation in Dynamic Environments, pp. 6931-6938. Attachment

Scarponi, Valentina	Inria, University of Strasbourg
Lecomte, François	INRIA
Duprez, Michel	Inria
Nageotte, Florent	University of Strasbourg
Cotin, Stephane	INRIA

09:00-10:00 ThPI4T2.5

Towards a Surgeon-In-The-Loop Ophthalmic Robotic Apprentice Using Reinforcement and Imitation Learning, pp. 6939-6946.

Gomaa, Amr	DFKI, Saarland Informatics Campus
Mahdy, Bilal	DFKI, Saarland Informatics Campus
Kleer, Niko	DFKI, Saarland Informatics Campus
Krüger, Antonio	DFKI, Saarland Informatics Campus

09:00-10:00 ThPI4T2.6

Pedicle Drilling Planning Transfer for Spine Surgery Using Functional Map Correspondences, pp. 6947-6952. Attachment

Leblanc, Lilyan	Sorbonne Université
Vialle, Raphael	ISIR, Sorbonne Université, CNRS UMR 7222, INSERM U1150
de Farias, Cristiana	University of Birmingham
Saghbiny, Elie	ISIR, UMR 7222 Sorbonne University, CNRS, ERL AGATHE, U1150 INSE
Marturi, Naresh	University of Birmingham
Tamadazte, Brahim	CNRS

09:00-10:00 ThPI4T2.7

SURESTEP: An Uncertainty-Aware Trajectory Optimization Framework to Enhance Visual Tool Tracking for Robust Surgical Automation, pp. 6953-6960. Attachment

Shinde, Nikhil	University of California San Diego
Chiu, Zih-Yun	University of California, San Diego
Richter, Florian	University of California, San Diego
Lim, Jason	University of Nevada, Reno
Zhi, Yuheng	University of California, San Diego
Herbert, Sylvia	UC San Diego (UCSD)
Yip, Michael C.	University of California, San Diego

09:00-10:00 ThPI4T2.8

SeeBelow: Sub-Dermal 3D Reconstruction of Tumors with Surgical Robotic Palpation and Tactile Exploration, pp. 6961-6968. Attachment

Uppuluri, Raghava	Purdue University
Bhattacharjee, Abhinaba	Purdue University
Anwar, Sohel	Indiana University Purdue University Indianapolis
She, Yu	Purdue University

09:00-10:00 ThPI4T2.9

SuFIA: Language-Guided Augmented Dexterity for Robotic Surgical Assistants, pp. 6969-6976. Attachment

Moghani, Masoud	University of Toronto
Doorenbos, Lars	University of Bern
Panitch, William	University of California, Berkeley
Huver, Sean	NVIDIA
Azizian, Mahdi	Intuitive Surgical
Goldberg, Ken	UC Berkeley
Garg, Animesh	Georgia Institute of Technology

09:00-10:00 ThPI4T2.10

FBG-Based Shape-Sensing to Enable Lateral Deflection Methods of Autonomous Needle Insertion, pp. 6977-6982.

Lezcano, Dimitri A.	Johns Hopkins University
Iordachita, Ioan Iulian	Johns Hopkins University
Kim, Jin Seob	Johns Hopkins University

09:00-10:00 ThPI4T2.11

DESectBot Design and Validation of a Novel Two-Segment Decoupled Continuum Robotic System for Endoscopic Submucosal Dissection, pp. 6983-6989. Attachment

Liu, Wenjie	Tongji University
Shao, Yuancheng	City University of Macau
Zhang, Yao	KU Leuven
Chen, Zixi	Scuola Superiore Sant'Anna
Wu, Di	KU Leuven
Chen, Yuqiao	Zhuhai Institute of Advanced Technology
Stefanini, Cesare	Scuola Superiore Sant'Anna
Ling, Li	Suzhou Ultimage Health Technology Co., Ltd
Qi, Peng	Tongji University

09:00-10:00 ThPI4T2.12

Bifurcation Identification for Ultrasound-Driven Robotic Cannulation, pp. 6990-6996. Attachment

Morales, Cecilia	Carnege Mellon University
Srikanth, Dhruv	Carnegie Mellon University
Good, Jack	Carnegie Mellon University
Dufendach, Keith	University of Pittsburgh Medical Center
Dubrawski, Artur	Carnegie Mellon University

09:00-10:00 ThPI4T2.13

A 6-DOF Double-Layer Programmable Remote Center of Motion Robot for Vitreoretinal Surgery, pp. 6997-7002. Attachment

Wang, Chenyu	Chonnam National University
Ko, Seong Young	Chonnam National University

09:00-10:00 ThPI4T2.14

Miniaturisation and Evaluation of the SoftSCREEN System in Colon Phantoms, pp. 7003-7010. Attachment

Consumi, Vanni	UCL University College London
Dei, Neri Niccolò	Scuola Superiore Sant'Anna
Ciuti, Gastone	Scuola Superiore Sant'Anna
Stoyanov, Danail	University College London
Stilli, Agostino	University College London

ThPI4T3 Room 3

Human-Robot Interaction (HRI) I (Teaser Session)

Chair: Zhang, Yunbo	Rochester Institute of Technology
Co-Chair: Li, Xiang	Tsinghua University

09:00-10:00 ThPI4T3.1

Driving Animatronic Robot Facial Expression from Speech, pp. 7011-7018. Attachment

Li, Boren	BIGAI
Li, Hang	Beijing Institute for General Artificial Intelligence
Liu, Hangxin	Beijing Institute for General Artificial Intelligence (BIGAI)

09:00-10:00 ThPI4T3.2

Pseudo-Domain Adversarial Networks with Electrical Impedance Tomography for Electrode Offset Error, pp. 7019-7025.

Xu, Gengchen	University of Science and Technology of China
Chen, Haofeng	University of Science and Technology of China

Yang, Xuanxuan	Chinese Academy of Sciences
Ma, Gang	University of Science and Technology of China
Wang, Xiaojie	Chinese Academy of Sciences

09:00-10:00 ThPI4T3.3

A Voxel-Enabled Robotic Assistant for Omnidirectional Conveyance, pp. 7026-7031. Attachment

Carvajal, Michael Angelo	Northeastern University
Mabulu, Katiso	Northeastern University
Lalji, Muneer	Northeastern University
Flanagan, James	Northeastern University
Hibbard, Sam	Northeastern University
Luo, Rui	Northeastern University
Chinthapatla, Tanav	Northeastern University
Bettadpur, Rohan	Northeastern University
Bazzi, Salah	Northeastern University
Zolotas, Mark	Toyota Research Institute
Kloeckl, Kristian	Northeastern University
Padir, Taskin	Northeastern University

09:00-10:00 ThPI4T3.4

RobotGraffiti: An AR Tool for Semi-Automated Construction of Workcell Models to Optimize Robot Deployment, pp. 7032-7038. Attachment

Zielinski, Krzysztof	University of Southern Denmark / Universal Robots A/S
Penning, Ryan	University of Wisconsin-Madison
Blumberg, Bruce	Universal Robots A/S
Schlette, Christian	University of Southern Denmark (SDU)
Mikkel, Kjærgaard	University of Southern Denmark

09:00-10:00 ThPI4T3.5

Bridging the Gap to Natural Language-Based Grasp Predictions through Semantic Information Extraction, pp. 7039-7046.

Kleer, Niko	DFKI, Saarland Informatics Campus
Feick, Martin	DFKI, Saarland Informatics Campus
Gomaa, Amr	DFKI, Saarland Informatics Campus
Feld, Michael	German Research Center for Artificial Intelligence (DFKI), Saarb
Krüger, Antonio	DFKI, Saarland Informatics Campus

09:00-10:00 ThPI4T3.6

REPeat: A Real2Sim2Real Approach for Pre-Acquisition of Soft Food Items in Robot-Assisted Feeding, pp. 7047-7054. Attachment

Ha, Nayoung	Cornell University
Ye, Ruolin	Cornell University
Liu, Ziang	Cornell University
Sinha, Shubhangi	Cornell University
Bhattacharjee, Tapomayukh	Cornell University

09:00-10:00 ThPI4T3.7

DiaGBT: An Explainable and Evolvable Robot Control Framework Using Dialogue Generative Behavior Trees, pp. 7055-7061. Attachment

Liang, Jinde	University of Electronic Science and Technology of China
Chang, Yuan	National University of Defense Technology
Wang, Qian	National University of Defense Technology
Wang, Yanzhen	School of Computer, National University of Defense Technology
Yi, Xiaodong	National Innovation Institute of Defense Technology

09:00-10:00 ThPI4T3.8

RADAR: Robotics Assembly by Demonstration Via Augmented Reality, pp. 7062-7069. Attachment

Yang, Wenhao	Lamar University
Bai, Shi	IServe Robotics
Zhang, Yunbo	Rochester Institute of Technology

09:00-10:00 ThPI4T3.9

Collaborative Conversation in Safe Multimodal Human-Robot Collaboration, pp. 7070-7076. Attachment

Ferrari, Davide	University of Modena and Reggio Emilia
Pupa, Andrea	University of Modena and Reggio Emilia
Secchi, Cristian	Univ. of Modena & Reggio Emilia

09:00-10:00 ThPI4T3.10

Visual Attention Based Cognitive Human–Robot Collaboration for Pedicle Screw Placement in Robot-Assisted Orthopedic Surgery, pp. 7077-7083. Attachment

Chen, Chen — Tsinghua University
Zou, Qikai — Tsinghua University
Song, Yuhang — Harbin Institute of Technology
Yu, Mingrui — Tsinghua University
Zhu, Senqiang — Midea Group
Song, Shiji — Tsinghua University
Li, Xiang — Tsinghua University

09:00-10:00 ThPI4T3.11

DECAF: A Discrete-Event Based Collaborative Human-Robot Framework for Furniture Assembly, pp. 7084-7090. Attachment

Giacomuzzo, Giulio — University of Padova
Terreran, Matteo — University of Padova
Jain, Siddarth — Mitsubishi Electric Research Laboratories (MERL)
Romeres, Diego — Mitsubishi Electric Research Laboratories

09:00-10:00 ThPI4T3.12

Open Human-Robot Collaboration Using Decentralized Inverse Reinforcement Learning, pp. 7091-7097. Attachment

Sengadu Suresh, Prasanth — University of Georgia
Jain, Siddarth — Mitsubishi Electric Research Laboratories (MERL)
Doshi, Prashant — University of Georgia
Romeres, Diego — Mitsubishi Electric Research Laboratories

09:00-10:00 ThPI4T3.13

GOMA: Proactive Embodied Cooperative Communication Via Goal-Oriented Mental Alignment, pp. 7098-7105. Attachment

Ying, Lance — Harvard University
Jha, Kunal — Dartmouth College
Aarya, Shivam — Johns Hopkins University
Tenenbaum, Joshua — Massachusetts Institute of Technology
Torralba, Antonio — MIT
Shu, Tianmin — Massachusetts Institute of Technology

09:00-10:00 ThPI4T3.14

SiSCo: Signal Synthesis for Effective Human-Robot Communication Via Large Language Models, pp. 7106-7113. Attachment

Sonawani, Shubham — Arizona State University
Weigend, Fabian Clemens — Arizona State University
Ben Amor, Heni — Arizona State University

09:00-10:00 ThPI4T3.15

Inferring Belief States in Partially-Observable Human-Robot Teams, pp. 7114-7121. Attachment

Kolb, Jack — Georgia Institute of Technology
Feigh, Karen — Georgia Institute of Technology

09:00-10:00 ThPI4T3.16

Design and Development of a Work Cell with a One-Handed Soldering Tool for Enhanced Human-Robot Collaboration, pp. 7122-7129.

Suppaadirek, Natchanon — Kyushu Institute of Technology
Sonnic, Maximilien — Kyutech
Duran Jimenez, Raul Ariel — Kyutech
Shibata, Tomohiro — Kyushu Institute of Technology

09:00-10:00 ThPI4T3.17

CoBOS: Constraint-Based Online Scheduler for Human-Robot Collaboration, pp. 7130-7136. Attachment

Ionova, Marina — Czech Technical University in Prague
Behrens, Jan Kristof — Czech Technical University in Prague, CIIRC

ThPI4T4 Room 4
Robot Vision II (Teaser Session)

Chair: Zeng, Long — Tsinghua University
Co-Chair: Oishi, Takeshi — The University of Tokyo

09:00-10:00 ThPI4T4.1

Coarse-To-Fine Detection of Multiple Seams for Robotic Welding, pp. 7137-7143.

Wei, Pengkun — Shandong University
Cheng, Shuo — Shandong University
Li, Dayou — School of Control Science and Engineering, Shandong Universisty
Song, Ran — Shandong University
Zhang, Yipeng — University of California Los Angeles
Zhang, Wei — Shandong University

09:00-10:00 ThPI4T4.2

Finetuning Pre-Trained Model with Limited Data for LiDAR-Based 3D Object Detection by Bridging Domain Gaps, pp. 7144-7150. Attachment

Jang, Jiyun — Korea University
Chang, Mincheol — Korea University
Park, Jongwon — Hyundai Motor Company
Kim, Jinkyu — Korea University

09:00-10:00 ThPI4T4.3

Active Neural Mapping at Scale, pp. 7151-7158. Attachment

Kuang, Zijia — Tsinghua University
Yan, Zike — Tsinghua University
Zhao, Hao — Tsinghua University
Zhou, Guyue — Tsinghua University
Zha, Hongbin — Peking University

09:00-10:00 ThPI4T4.4

Self-Supervised Monocular Depth Estimation with Effective Feature Fusion and Self Distillation, pp. 7159-7165.

Liu, ZhenFei — Shenzhen Institute of Advanced Technology, Chinese Academy of Sc
Song, Chengqun — Shenzhen Institutes of Advanced Technology, Chinese Academy of S
Cheng, Jun — Shenzhen Institutes of Advanced Technology
Luo, Jiefu — Shenzhen Institute of Advanced Technology, Chinese Academy of Sc
Wang, Xiaoyang — Shenzhen Institute of Advanced Technology Chinese Academy of Sci

09:00-10:00 ThPI4T4.5

*UW-SDF: Exploiting Hybrid Geometric Priors for Neural SDF Reconstruction from Underwater Multi-View Monocular Images**. pp. 14248-14255

Chen, Zeyu — Tsinghua University
Tang, Jingyi — Tsinghua University
Wang, Gu — Tsinghua University
Li, Shengquan — Pengcheng Lab
Li, Xinghui — Tsinghua University
Ji, Xiangyang — Tsinghua University
Li, Xiu — Tsinghua University

09:00-10:00 ThPI4T4.6

PS6D: Point Cloud Based Symmetry-Aware 6D Object Pose Estimation in Robot Bin-Picking, pp. 7166-7173. Attachment

Yang, Yifan — Nankai University
Cui, Zhihao — Mech-Mind Robotics
Zhang, Qianyi — Nankai University
Liu, Jingtai — Nankai University

09:00-10:00 ThPI4T4.7

DuCAS: A Knowledge-Enhanced Dual-Hand Compositional Action Segmentation Method for Human-Robot Collaborative Assembly, pp. 7174-7179.

Zheng, Hao — The University of Auckland
Lee, Regina — The University of Auckland
Liang, Huachang — The University of Auckland
Lu, Yuqian — The University of Auckland
Xu, Xun — University of Auckland

09:00-10:00 ThPI4T4.8

ParametricNet+: A 6DoF Pose Estimation Network with Sparse Keypoint Recovery for Parametric Shapes in Stacked Scenarios, pp. 7180-7187.

Xie, Yihan	Tsinghua University
Lv, Weijie	Tsinghua University
Zhang, Xinyu	Tsinghua University
Chen, YiHong	Tsinghua University
Zeng, Long	Tsinghua University

09:00-10:00 ThPI4T4.9

Towards Intelligent Robotic Sole Deburring: From Burrs Identification to Path Planning, pp. 7188-7194. Attachment

Tafuro, Alessandra	Politecnico Di MIlano
Cacciani, Luigi	Politecnico Di Milano
Zanchettin, Andrea Maria	Politecnico Di Milano
Rocco, Paolo	Politecnico Di Milano

09:00-10:00 ThPI4T4.10

REF^2-NeRF: Reflection and Refraction Aware Neural Radiance Field, pp. 7195-7202. Attachment

Kim, Wooseok	The University of Tokyo
Fukiage, Taiki	NTT Communication Science Laboratories
Oishi, Takeshi	The University of Tokyo

09:00-10:00 ThPI4T4.11

Bidirectional Partial-To-Full Non-Rigid Point Set Registration with Non-Overlapping Filtering, pp. 7203-7210.

Yu, Hao	Shandong University
Liu, Mingyang	Shandong University
Song, Rui	Shandong University
Li, Yibin	Shandong University
Meng, Max Q.-H.	The Chinese University of Hong Kong
Min, Zhe	University College London

09:00-10:00 ThPI4T4.12

Vertebrea-Based Global X-Ray to CT Registration for Thoracic Surgeries, pp. 7211-7218. Attachment

Liu, Lilu	Zhejiang University
Jiao, Yanmei	Hangzhou Normal University
An, Zhou	Zhejiang University
Ma, Honghai	Zhejiang University
Zhou, Chunlin	Zhejiang University
Lu, Haojian	Zhejiang University
Hu, Jian	The First Affiliated Hospital, College of Medicine, Zhejiang Uni
Xiong, Rong	Zhejiang University
Wang, Yue	Zhejiang University

09:00-10:00 ThPI4T4.13

Shadow Maintenance for Automatic Light-Probe Control in Ophthalmic Surgeries Using Only 2D Information, pp. 7219-7225. Attachment

Yang, Junjie	TUM
Inagaki, Satoshi	NSK.Ltd
Zhao, Zhihao	Technische Universität München
Zapp, Daniel	Klinikum Rechts Der Isar Der TU München
Maier, Mathias	Klinikum Rechts Der Isar Der TU München
Huang, Kai	Sun Yat-Sen University
Navab, Nassir	TU Munich
Nasseri, M. Ali	Technische Universitaet Muenchen

09:00-10:00 ThPI4T4.14

Tracking Tumors under Deformation from Partial Point Clouds Using Occupancy Networks, pp. 7226-7233.

Henrich, Pit	FAU Erlangen-Nürnberg, Germany
Liu, Jiawei	Johns Hopkins University
Ge, Jiawei	Johns Hopkins University
Schmidgall, Samuel	Johns Hopkins University
Shepard, Lauren	Department of Urology, Johns Hopkins University
Ghazi, Ahmed	University of Rochester Medical Center
Mathis-Ullrich, Franziska	Friedrich-Alexander-University Erlangen-Nurnberg (FAU)
Krieger, Axel	Johns Hopkins University

09:00-10:00 ThPI4T4.15

OBHMR: Robust Partial-To-Full Generalized Point Set Registration with Overlap-Guided Bidirectional Hybrid Mixture

Model, pp. 7234-7241.

Du, Xinzhe	Shandong University
Zhang, Zhengyan	Harbin Institute of Technology, Shenzhen
Zhang, Ang	The Chinese University of Hong Kong
Song, Rui	Shandong University
Li, Yibin	Shandong University
Meng, Max Q.-H.	The Chinese University of Hong Kong
Min, Zhe	University College London

09:00-10:00 ThPI4T4.16

Visuo-Tactile Zero-Shot Object Recognition with Vision-Language Model, pp. 7242-7249. Attachment

Ueda, Shiori	Keio University
Hashimoto, Atsushi	Omron Sinic X
Hamaya, Masashi	OMRON SINIC X Corporation
Tanaka, Kazutoshi	OMRON SINIC X Corporation
Saito, Hideo	Keio University

ThPI4T5 Room 5

Deep Learning IV (Teaser Session)

Co-Chair: Triebel, Rudolph — German Aerospace Center (DLR)

09:00-10:00 ThPI4T5.1

Depth Helps: Improving Pre-Trained RGB-Based Policy with Depth Information Injection, pp. 7250-7255. Attachment

Pang, Xincheng	Renmin University of China
Xia, Wenke	Renmin University of China
Wang, Zhigang	Shanghai AI Laboratory
Zhao, Bin	Northwestern Polytechnical University
Hu, Di	Renmin University of China
Wang, Dong	Shanghai Artificial Intelligence Laboratory
Li, Xuelong	Northwestern Polytechnical University

09:00-10:00 ThPI4T5.2

OPG-Policy: Occluded Push-Grasp Policy Learning with Amodal Segmentation, pp. 7256-7262. Attachment

Ding, Hao	Sun Yat-Sen University
Zeng, Yiming	Sun Yat-Sen University
Wan, Zhaoliang	Sun Yat-Sen University
Cheng, Hui	Sun Yat-Sen University

09:00-10:00 ThPI4T5.3

Behavior-Actor: Behavioral Decomposition and Efficient-Training for Robotic Manipulation, pp. 7263-7268. Attachment

Jiang, Wenyi	Georgia Institute of Technology
Xv, Baowei	Mech-Mind Robotics Technologies Ltd
Cui, Zhihao	Mech-Mind Robotics

09:00-10:00 ThPI4T5.4

RPMArt: Towards Robust Perception and Manipulation for Articulated Objects, pp. 7269-7276. Attachment

Wang, Junbo	Shanghai Jiao Tong University
Liu, Wenhai	Shanghai Jiao Tong University
Yu, Qiaojun	Shanghai Jiao Tong University
You, Yang	Stanford University
Liu, Liu	Hefei University of Technology
Wang, Weiming	Shanghai Jiao Tong University
Lu, Cewu	ShangHai Jiao Tong University

09:00-10:00 ThPI4T5.5

PreAfford: Universal Affordance-Based Pre-Grasping for Diverse Objects and Environments, pp. 7277-7284. Attachment

Ding, Kairui	Tsinghua University
Chen, Boyuan	Tsinghua University
Wu, Ruihai	Peking University
Li, Yuyang	Tsinghua University
Zhang, Zongzheng	Tsinghua University
Gao, Huan-ang	Tsinghua University
Li, Siqi	Zhejiang University
Zhu, Yixin	Peking University

Zhou, Guyue	Tsinghua University
Dong, Hao	Peking University
Zhao, Hao	Tsinghua University

09:00-10:00 ThPI4T5.6

A Contact Model Based on Denoising Diffusion to Learn Variable Impedance Control for Contact-Rich Manipulation, pp. 7285-7292. Attachment

Okada, Masashi	Panasonic Holdings Corporation
Komatsu, Mayumi	Panasonic Corp
Taniguchi, Tadahiro	Ritsumeikan University

09:00-10:00 ThPI4T5.7

GraspContrast: Self-Supervised Contrastive Learning with False Negative Elimination for 6-DoF Grasp Detection, pp. 7293-7299. Attachment

Wang, Wenshuo	National University of Singapore
Zhu, Haiyue	Agency for Science, Technology and Research (A*STAR)
Ang Jr, Marcelo H	National University of Singapore

09:00-10:00 ThPI4T5.8

Reinforcement Learning for Active Search and Grasp in Clutter, pp. 7300-7305. Attachment

Pitcher, Thomas	University of Queensland
Förster, Julian	ETH Zurich
Chung, Jen Jen	The University of Queensland

09:00-10:00 ThPI4T5.9

SculptDiff: Learning Robotic Clay Sculpting from Humans with Goal Conditioned Diffusion Policy, pp. 7306-7313. Attachment

Bartsch, Alison	Carnegie Mellon University
Car, Arvind	Carnegie Mellon University
Avra, Charlotte	Carnegie Mellon University
Barati Farimani, Amir	Carnegie Mellon University

09:00-10:00 ThPI4T5.10

Inverse Kinematics for Neuro-Robotic Grasping with Humanoid Embodied Agents, pp. 7314-7321. Attachment

Habekost, Jan-Gerrit	University of Hamburg
Gäde, Connor	University of Hamburg
Allgeuer, Philipp	University of Hamburg
Wermter, Stefan	University of Hamburg

09:00-10:00 ThPI4T5.11

RT-Grasp: Reasoning Tuning Robotic Grasping Via Multi-Modal Large Language Model, pp. 7322-7329. Attachment

Xu, Jinxuan	Rutgers University
Jin, Shiyu	Baidu
Lei, Yutian	Baidu
Zhang, Yuqian	Rutgers University
Zhang, Liangjun	Baidu

09:00-10:00 ThPI4T5.12

A Learning-Based Controller for Multi-Contact Grasps on Unknown Objects with a Dexterous Hand, pp. 7330-7336. Attachment

Winkelbauer, Dominik	DLR
Triebel, Rudolph	German Aerospace Center (DLR)
Bäuml, Berthold	Technical University of Munich

09:00-10:00 ThPI4T5.13

Gradual Receptive Expansion Using Vision Transformer for Online 3D Bin Packing, pp. 7337-7342. Attachment

Kang, Minjae	Seoul National University (SNU)
Kee, Hogun	Seoul National University
Park, Yoseph	Seoul National University
Kim, Junseok	Seoul National University
Jeong, Jaeyeon	Seoul National University
Cheon, Geunje	Seoul National University
Lee, Jaewon	Seoul National University
Oh, Songhwai	Seoul National University

09:00-10:00 ThPI4T5.14

Constrained 6-DoF Grasp Generation on Complex Shapes for Improved Dual-Arm Manipulation, pp. 7343-7349.

Attachment

Singh, Gaurav	IIIT Hyderabad
Kalwar, Sanket	International Institute of Information Technology, Hyderabad
Karim, Md Faizal	IIIT Hyderabad
Sen, Bipasha	Massachusetts Institute of Technology
Govindan, Nagamanikandan	International Institute of Information Technology Hyderabad
Sridhar, Srinath	Brown University
Krishna, Madhava	IIIT Hyderabad

09:00-10:00 ThPI4T5.15

Leveraging Simulation-Based Model Preconditions for Fast Action Parameter Optimization with Multiple Models, pp. 7350-7357. Attachment

Seker, Muhammet Yunus	Carnegie Mellon University
Kroemer, Oliver	Carnegie Mellon University

09:00-10:00 ThPI4T5.16

Open6DOR: Benchmarking Open-Instruction 6-DoF Object Rearrangement and a VLM-Based Baseline, pp. 7358-7365. Attachment

Ding, Yufei	Peking University
Geng, Haoran	Peking University
Xu, Chaoyi	BAAI
Fang, Xiaomeng	Beijing Academy of Artificial Intelligence
Zhang, Jiazhao	Peking University
Wei, Songlin	Soochow University
Zhang, Zhizheng	University of Science and Technology of China
Wang, He	Peking University

ThPI4T6 Room 6

Learning III (Teaser Session)

Chair: Wang, Peng — Manchester Metropolitan University

09:00-10:00 ThPI4T6.1

Proposal and Demonstration of a Robot Behavior Planning System Utilizing Video with Open Source Models in Real-World Environments, pp. 7366-7373. Attachment

Akutsu, Yuki	Osaka University
Yoshida, Takahiro	Osaka University
Kato, Yuki	Osaka University
Sueoka, Yuichiro	Osaka Univ
Osuka, Koichi	Osaka University

09:00-10:00 ThPI4T6.2

Robot Shape and Location Retention in Video Generation Using Diffusion Models, pp. 7374-7381.

Wang, Peng	Manchester Metropolitan University
Guo, Zhihao	Manchester Metropolitan University
Sait, Abdul Latheef	JD Sports Fashion PLC
Pham, Minh Huy	Manchester Metropolitan University

09:00-10:00 ThPI4T6.3

SceneSense: Diffusion Models for 3D Occupancy Synthesis from Partial Observation, pp. 7382-7389. Attachment

Reed, Alec	University of Colorado Boulder
Crowe, Brendan	University of Colorado Boulder
Albin, Doncey	University of Colorado - Boulder
Achey, Lorin	University of Colorado Boulder
Hayes, Bradley	University of Colorado Boulder
Heckman, Christoffer	University of Colorado at Boulder

09:00-10:00 ThPI4T6.4

How Physics and Background Attributes Impact Video Transformers in Robotic Manipulation: A Case Study on Planar Pushing, pp. 7390-7397. Attachment

Jin, Shutong	KTH Royal Institute of Technology
Wang, Ruiyu	KTH Royal Institute of Technology
Zahid, Muhammad	KTH Royal Institute of Technology
Pokorny, Florian T.	KTH Royal Institute of Technology

09:00-10:00 ThPI4T6.5

Lightweight Fisheye Object Detection Network with Transformer-Based Feature Enhancement for Autonomous Driving, pp. 7398-7404.

Cao, Hu	Technical University of Munich
Li, Yanpeng	Technical University of Munich
Liu, Yinlong	University of Macau
Li, Xinyi	Technical University of Munich
Chen, Guang	Tongji University
Knoll, Alois	Tech. Univ. Muenchen TUM

09:00-10:00 ThPI4T6.6

DiffusionNOCS: Managing Symmetry and Uncertainty in Sim2Real Multi-Modal Category-Level Pose Estimation, pp. 7405-7412. Attachment

Ikeda, Takuya	Woven by Toyota, Inc
Zakharov, Sergey	Toyota Research Institute
Ko, Tianyi	Woven by Toyota, Inc
Irshad, Muhammad Zubair	Georgia Institute of Technology
Lee, Robert	Australian Centre for Robotic Vision
Liu, Katherine	Toyota Research Institute
Ambrus, Rares	Toyota Research Institute
Nishiwaki, Koichi	Woven by Toyota

09:00-10:00 ThPI4T6.7

3DR-DIFF: Blind Diffusion Inpainting for 3D Point Cloud Reconstruction and Segmentation, pp. 7413-7420.

Kariyawasam Thanthrige, Yasas Mahima	University of New South Wales
Perera, Asanka	University of Southern Queensland
Anavatti, Sreenatha	University of New South Wales
Garratt, Matthew	UNSW Australia, Canberra

09:00-10:00 ThPI4T6.8

A Lightweight De-Confounding Transformer for Image Captioning in Wearable Assistive Navigation Device, pp. 7421-7427. Attachment

Cao, Zhengcai	Harbin Institute of Technology
Xia, Ji	Beijing University of Chemical Technology
Shi, Yinbin	Beijing University of Chemical Technology
Zhou, MengChu	New Jersey Institute of Technology

09:00-10:00 ThPI4T6.9

Temporal Attention for Cross-View Sequential Image Localization, pp. 7428-7435.

Yuan, Dong	QUT Centre for Robotics, Queensland University of Technology
Maire, Frederic	Queensland University of Technology
Dayoub, Feras	The University of Adelaide

09:00-10:00 ThPI4T6.10

Fine-Tuning the Diffusion Model and Distilling Informative Priors for Sparse-View 3D Reconstruction, pp. 7436-7443.

Tang, Jiadong	Beijing Institute of Technology
Gao, Yu	Beijing Institude of Technology
Jiang, Tianji	Beijing Institute of Technology
Yang, Yi	Beijing Institute of Technology
Fu, Mengyin	Beijing Institute of Technology

09:00-10:00 ThPI4T6.11

Multi-Fingered Dragging of Unknown Objects and Orientations Using Distributed Tactile Information through Vision-Transformer and LSTM, pp. 7444-7451.

Ueno, Takahisa	Waseda University
Funabashi, Satoshi	Waseda University
Ito, Hiroshi	Hitachi, Ltd
Schmitz, Alexander	Waseda University
Kulkarni, Shardul	Waseda University
Ogata, Tetsuya	Waseda University
Sugano, Shigeki	Waseda University

09:00-10:00 ThPI4T6.12

Diff-Control: A Stateful Diffusion-Based Policy for Imitation Learning, pp. 7452-7459.

Liu, Xiao	Arizona State University
Zhou, Yifan	Arizona State University
Weigend, Fabian Clemens	Arizona State University

Sonawani, Shubham	Arizona State University
Ikemoto, Shuhei	Kyushu Institute of Technology
Ben Amor, Heni	Arizona State University

09:00-10:00 ThPI4T6.13

Off-Dynamics Conditional Diffusion Planners, pp. 7460-7467. Attachment

Ng, Wen Zheng Terence	Nanyang Technological University
Chen, Jianda	Nanyang Technological University
Zhang, Tianwei	Nanyang Technological University

09:00-10:00 ThPI4T6.14

Predictive Coding for Decision Transformer, pp. 7468-7475.

Luu, Tung	Korea Advanced Institute of Science and Technology
Lee, Donghoon	Korea Advanced Institute of Science & Technology
Yoo, Chang D.	KAIST

09:00-10:00 ThPI4T6.15

Steering Decision Transformers Via Temporal Difference Learning, pp. 7476-7482.

Hsu, Hao-Lun	Duke University
Bozkurt, Alper Kamil	Duke University
Dong, Juncheng	Duke University
Gao, Qitong	Duke University
Tarokh, Vahid	Duke University
Pajic, Miroslav	Duke University

ThPI4T7 Room 7

Perception II (Grasping and Manipulation) (Teaser Session)

Chair: Lee, Chun-Yi	National Taiwan University
Co-Chair: Doulgeri, Zoe	Aristotle University of Thessaloniki

09:00-10:00 ThPI4T7.1

Precise Pick-And-Place Using Score-Based Diffusion Networks, pp. 7483-7490. Attachment

Guo, Shih-Wei	National Tsing Hua University
Hsiao, Tsu-Ching	National Tsing Hua University
Liu, Yu-Lun	National Yang Ming Chiao Tung University
Lee, Chun-Yi	National Tsing Hua University

09:00-10:00 ThPI4T7.2

Language-Driven Grasp Detection with Mask-Guided Attention, pp. 7491-7497. Attachment

Van Vo, Tuan	FPT Software
Vu, Minh Nhat	TU Wien, Austria
Huang, Baoru	Imperial College London
Vuong, An Dinh	MBZUAI
Le, Ngan	University of Arkansas
Vo, Thieu	Ton Duc Thang University
Nguyen, Anh	University of Liverpool

09:00-10:00 ThPI4T7.3

HyperTaxel: Hyper-Resolution for Taxel-Based Tactile Signals through Contrastive Learning, pp. 7498-7505. Attachment

Li, Hongyu	Brown University
Dikhale, Snehal	Honda Research Institute USA
Cui, Jinda	Honda Research Institute USA, Inc
Iba, Soshi	Honda Research Institute USA
Jamali, Nawid	Honda Research Institute USA, Inc

09:00-10:00 ThPI4T7.4

OVGNet: An Unified Visual-Linguistic Framework for Open-Vocabulary Robotic Grasping, pp. 7506-7512. Attachment

Li, Meng	Beihang University
Zhao, Qi	Beihang University
Lyu, Shuchang	Beihang University
Wang, Chunlei	School of Electronic and Information Engineering, Beihang Univer
Ma, Yujing	SenseTime
Cheng, Guangliang	University of Liverpool
Yang, Chenguang	University of Liverpool

09:00-10:00 ThPI4T7.5

Raising Body Ownership in End-To-End Visuomotor Policy Learning Via Robot-Centric Pooling, pp. 7513-7519. Attachment

Zhuang, Zheyu	KTH Royal Institute of Technology
Kyrki, Ville	Aalto University
Kragic, Danica	KTH

09:00-10:00 ThPI4T7.6

A Direct Semi-Exhaustive Search Method for Robust, Partial-To-Full Point Cloud Registration, pp. 7520-7526.

Cheng, Richard	California Institute of Technology
Papazov, Chavdar	Technische Universitaet Muenchen
Helmick, Daniel	Toyota Research Institute
Tjersland, Mark	Toyota Research Institute

09:00-10:00 ThPI4T7.7

3D Affordance Keypoint Detection for Robotic Manipulation, pp. 7527-7533. Attachment

Liu, Zhiyang	National University of Singapore
Zhao, Ruiteng	National University of Singapore
Zhou, Lei	National University of Singapore
Yuan, Chengran	National Universtiy of Singapore
Wu, Yuwei	National University of Singapore
Guo, Sheng	National University of Singapore
Zhang, Zhengshen	National University of Singapore
Liu, Chenchen	National University of Singapore
Ang Jr, Marcelo H	National University of Singapore
Tay, Francis	NUS

09:00-10:00 ThPI4T7.8

SAID-NeRF: Segmentation-AIDed NeRF for Depth Completion of Transparent Objects, pp. 7534-7541. Attachment

Ummadisingu, Avinash	Preferred Networks, Inc
Choi, Jongkeum	The University of Tokyo
Yamane, Koki	University of Tsukuba
Masuda, Shimpei	Preferred Networks, Inc / University of Tsukuba
Fukaya, Naoki	Preferred Networks, Inc
Takahashi, Kuniyuki	Preferred Networks, Inc

09:00-10:00 ThPI4T7.9

Learning a Pre-Grasp Manipulation Policy to Effectively Retrieve a Target in Dense Clutter, pp. 7542-7548. Attachment

Kiatos, Marios	Aristotle University of Thessaloniki
Koutras, Leonidas	Aristotle University of Thessaloniki
Sarantopoulos, Iason	Aristotle University of Thessaloniki
Doulgeri, Zoe	Aristotle University of Thessaloniki

09:00-10:00 ThPI4T7.10

Active Pose Refinement for Textureless Shiny Objects Using the Structured Light Camera, pp. 7549-7556.

Yang, Jun	University of Toronto
Yao, Jian	Epson Canada
Waslander, Steven Lake	University of Toronto

09:00-10:00 ThPI4T7.11

Potential Field-Based Online Path Planning for Robust Cable Routing, pp. 7557-7563.

Monguzzi, Andrea	Leonardo, Innovation Labs
Mantegna, Niccolò	Politecnico Di Milano
Zanchettin, Andrea Maria	Politecnico Di Milano
Rocco, Paolo	Politecnico Di Milano

09:00-10:00 ThPI4T7.12

DITTO: Demonstration Imitation by Trajectory Transformation, pp. 7564-7571. Attachment

Heppert, Nick	University of Freiburg
Argus, Maximilian	University of Freiburg
Welschehold, Tim	Albert-Ludwigs-Universität Freiburg
Brox, Thomas	University of Freiburg
Valada, Abhinav	University of Freiburg

09:00-10:00 ThPI4T7.13

Estimating Perceptual Uncertainty to Predict Robust Motion Plans, pp. 7572-7578.

Gupta, Arjun	UIUC
Zhang, Michelle	University of Illinois Urbana-Champaign
Gupta, Saurabh	UIUC

09:00-10:00 ThPI4T7.14

ManipVQA: Injecting Robotic Affordance and Physically Grounded Information into Multi-Modal Large Language Models, pp. 7579-7586.

Huang, Siyuan	Shanghai Jiao Tong University
Ponomarenko, Iaroslav	Peking University
Jiang, Zhengkai	Tencent
Li, Xiaoqi	Peking University
Hu, Xiaobin	Technical University of Munich
Gao, Peng	Shanghai AI Lab
Li, Hongsheng	Chinese University of Hong Kong
Dong, Hao	Peking University

09:00-10:00 ThPI4T7.15

MV-ROPE: Multi-View Constraints for Robust Category-Level Object Pose and Size Estimation, pp. 7587-7594. Attachment

Yang, Jiaqi	ShanghaiTech University
Chen, Yucong	ShanghaiTech University
Meng, Xiangting	ShanghaiTech University
Yan, Chenxin	Shanghaitech University
Li, Min	ShanghaiTech University
Cheng, Ran	Midea Robozone
Lige, Liu	Midea Group
Sun, Tao	Massachusetts Institute of Technology
Kneip, Laurent	ShanghaiTech University

09:00-10:00 ThPI4T7.16

Interactive Learning of Physical Object Properties through Robot Manipulation and Database of Object Measurements, pp. 7595-7602. Attachment

Kružliak, Andrej	Czech Technical University in Prague
Hartvich, Jiri	Czech Technical University in Prague
Patni, Shubhan	Ceske Vysoke Uceni Technicke V Praze, FEL
Rustler, Lukas	Ceske Vysoke Uceni Technicke V Praze, FEL
Behrens, Jan Kristof	Czech Technical University in Prague, CIIRC
Abu-Dakka, Fares	New York University Abu Dhabi
Mikolajczyk, Krystian	Imperial College London
Kyrki, Ville	Aalto University
Hoffmann, Matej	Czech Technical University in Prague, Faculty of Electrical Engi

ThPI4T8 Room 8

Robot Motion Planning III (Teaser Session)

Chair: Choset, Howie	Carnegie Mellon University
Co-Chair: Bera, Aniket	Purdue University

09:00-10:00 ThPI4T8.1

Semantic Belief Behavior Graph: Enabling Autonomous Robot Inspection in Unknown Environments, pp. 7603-7609. Attachment

Ginting, Muhammad Fadhil	Stanford University
Fan, David D	NASA Jet Propulsion Laboratory
Kim, Sung-Kyun	NASA Jet Propulsion Laboratory, Caltech
Kochenderfer, Mykel	Stanford University
Agha-mohammadi, Ali-akbar	NASA-JPL, Caltech

09:00-10:00 ThPI4T8.2

GESCE: Graph-Based Ergodic Search in Cluttered Environments, pp. 7610-7615. Attachment

Shirose, Burhanuddin	Carnegie Mellon University
Johnson, Adam	Carnegie Mellon University
Vundurthy, Bhaskar	Carnegie Mellon University
Choset, Howie	Carnegie Mellon University
Travers, Matthew	Carnegie Mellon University

09:00-10:00 ThPI4T8.3

PAAMP: Polytopic Action-Set and Motion Planning for Long Horizon Dynamic Motion Planning Via Mixed Integer Linear Programming, pp. 7616-7623. Attachment

Jaitly, Akshay — Worcester Polytechnic Institute
Farzan, Siavash — California Polytechnic State University

09:00-10:00 ThPI4T8.4

VLPG-Nav: Object Navigation Using Visual Language Pose Graph and Object Localization Probability Maps, pp. 7624-7631. Attachment

Arul, Senthil Hariharan — University of Maryland, College Park
Kumar, Dhruva — Amazon Lab126
Sugirtharaj, Vivek — Amazon
Kim, Richard — Amazon, Lab126
Qi, Xuewei — Toyota Research Labs
Madhivanan, Rajasimman — Amazon.com
Sen, Arnab — Amazon
Manocha, Dinesh — University of Maryland

09:00-10:00 ThPI4T8.5

Valuing Attrition in a Fleet of Robots Used As Path-Based Sensors for Gathering Information in a Communications Restricted Environment, pp. 7632-7639.

McGuire, Loy — U.S. Naval Research Laboratory
Otte, Michael W. — University of Maryland
Sofge, Donald — Naval Research Laboratory

09:00-10:00 ThPI4T8.6

An Efficient Coverage Method for Irregularly Shaped Terrains, pp. 7640-7646.

Tang, Yuxuan — Beijing Institute of Technology
Wu, Qizhen — Beihang University
Zhu, Chunli — Beijing Institute of Technology
Chen, Lei — Beijing Institute of Technology

09:00-10:00 ThPI4T8.7

HP3: Hierarchical Prediction-Pretrained Planning for Unprotected Left Turn, pp. 7647-7654.

Ou, Zhihao — Fudan University
Wang, Zhibo — Fudan University
Hua, Yue — Fudan University
Dou, Jinsheng — Mogo Auto Intelligence and Telematics Information Technology Co
Feng, Di — Mogo Auto Intelligence and Telematics Information Technology Co
Pu, Jian — Fudan University

09:00-10:00 ThPI4T8.8

A Geometry-Based Approach for Support-Free Additive Manufacturing of Structures with Large Overhang Angles and Closed Features, pp. 7655-7662.

Liu, Jitian — Johns Hopkins University
Cohen, Zachary — United States Naval Academy
Kim, Jin Seob — Johns Hopkins University
Armand, Mehran — Johns Hopkins University
Kutzer, Michael Dennis Mays — United States Naval Academy

09:00-10:00 ThPI4T8.9

Adaptive Planning with Generative Models under Uncertainty, pp. 7663-7669.

Jutras-Dube, Pascal — Purdue University
Zhang, Ruqi — Purdue University
Bera, Aniket — Purdue University

09:00-10:00 ThPI4T8.10

Model Predictive Trees: Sample-Efficient Receding Horizon Planning with Reusable Tree Search, pp. 7670-7677. Attachment

Lathrop, John — California Institute of Technology
Riviere, Benjamin — California Institute of Technology
Alindogan, Jedidiah — California Institute of Technology
Chung, Soon-Jo — Caltech

09:00-10:00 ThPI4T8.11

Practical Framework for Path Representation and Following Control in Mobile Industrial Robots, pp. 7678-7685.

Attachment

Koh, Youngil	Robot Center, Samsung Research, Samsung Electronics
Kim, WooJeong	Samsung Electronics
Choi, MidEum	Samsung Electronics

09:00-10:00 ThPI4T8.12

AMCO: Adaptive Multimodal Coupling of Vision and Proprioception for Quadruped Robot Navigation in Outdoor Environments, pp. 7686-7693. Attachment

Elnoor, Mohamed	University of Maryland
Kulathun Mudiyanselage, Kasun Weerakoon	University of Maryland, College Park
Sathyamoorthy, Adarsh Jagan	University of Maryland
Guan, Tianrui	University of Maryland
Rajagopal, Vignesh	University of Maryland, College Park
Manocha, Dinesh	University of Maryland

09:00-10:00 ThPI4T8.13

When, What, and with Whom to Communicate: Enhancing RL-Based Multi-Robot Navigation through Selective Communication, pp. 7694-7701. Attachment

Arul, Senthil Hariharan	University of Maryland, College Park
Bedi, Amrit Singh	University of Maryland, College Park
Manocha, Dinesh	University of Maryland

09:00-10:00 ThPI4T8.14

Context-Generative Default Policy for Bounded Rational Agent, pp. 7702-7708. Attachment

Pushp, Durgakant	Indiana University Bloomington
Xu, Junhong	Indiana University
Chen, Zheng	Indiana University Bloomington
Liu, Lantao	Indiana University

09:00-10:00 ThPI4T8.15

Multi-Fidelity Reinforcement Learning for Minimum Energy Trajectory Planning, pp. 7709-7716. Attachment

de Castro, Luke	Massachusetts Institute of Technology
Ryou, Gilhyun	Massachusetts Institute of Technology
Ohn, Hyungseuk	Hyundai Motor Company
Karaman, Sertac	Massachusetts Institute of Technology

ThPI4T9 Room 9

Navigation III (Teaser Session)

Chair: Taniguchi, Tadahiro — Ritsumeikan University

09:00-10:00 ThPI4T9.1

PathFormer: A Transformer-Based Framework for Vision-Centric Autonomous Navigation in Off-Road Environments, pp. 7717-7724.

Hassan, Bilal	Khalifa University, Abu Dhabi
Abdel Madjid, Nadya	Khalifa University
Kashwani, Fatima	Khalifa University
Alansari, Mohamad	Khalifa University
Khonji, Majid	Khalifa University
Dias, Jorge	Khalifa University

09:00-10:00 ThPI4T9.2

Enhanced Language-Guided Robot Navigation with Panoramic Semantic Depth Perception and Cross-Modal Fusion, pp. 7725-7732. Attachment

Wang, Liuyi	Tongji University
Tang, Jiagui	Tongji University
He, Zongtao	Tongji University
Dang, Ronghao	Tongji University
Liu, Chengju	Tongji University
Chen, Qijun	Tongji University

09:00-10:00 ThPI4T9.3

SWIFT: Strategic Weather-Informed Image-Based Forecasting for Trajectories, pp. 7733-7740. Attachment

Xia, Youya	Cornell University
Nino, Jose	Cornell University
Han, Yutao	Cornell University

Campbell, Mark	Cornell University

09:00-10:00 ThPI4T9.4

Multiple Visual Features in Topological Map for Vision-And-Language Navigation, pp. 7741-7748.

Liu, Ruonan	Shanghai Jiao Tong University
Kong, Ping	Tianjin University
Zhang, Weidong	Shanghai JiaoTong University

09:00-10:00 ThPI4T9.5

MG-VLN: Benchmarking Multi-Goal and Long-Horizon Vision-Language Navigation with Language Enhanced Memory Map, pp. 7749-7756.

Zhang, Junbo	Tsinghua University
Ma, Kaisheng	Tsinghua University

09:00-10:00 ThPI4T9.6

Real-Time Bird's-Eye-View Panoptic Segmentation for Monocular-Based Indoor Navigation, pp. 7757-7763. Attachment

Kim, Dawit	NAVER LABS
Koo, Jungmo	NAVER LABS
Yun, Jongseob	NAVER LABS
Park, Soonyong	NAVER LABS

09:00-10:00 ThPI4T9.7

Perception-Aware Full Body Trajectory Planning for Autonomous Systems Using Motion Primitives, pp. 7764-7771.

Kuhne, Moritz	German Aerospace Center (DLR)
Giubilato, Riccardo	German Aerospace Center (DLR)
Schuster, Martin J.	German Aerospace Center (DLR)
Roa, Maximo A.	German Aerospace Center (DLR)

09:00-10:00 ThPI4T9.8

Asynchronous Event-Inertial Odometry Using a Unified Gaussian Process Regression Framework, pp. 7772-7777. Attachment

Li, Xudong	Northwestern Polytechnical University
Wang, Zhixiang	Northwestern Polytechnical University
Liu, Zihao	Northwestern Polytechnical University
Zhang, Yizhai	Northwestern Polytechnical University
Zhang, Fan	Northwestern Polytechnical Univeristy
Yao, Xiuming	Beijing Jiaotong University
Huang, Panfeng	Northwestern Polytechnical University

09:00-10:00 ThPI4T9.9

Environmental and Behavioral Imitation for Autonomous Navigation, pp. 7778-7785. Attachment

Aoki, Junki	Ricoh Company, Ltd
Sasaki, Fumihiro	Ricoh Company, LTD
Matsumoto, Kohei	Kyushu University
Yamashina, Ryota	Ricoh Company, Ltd
Kurazume, Ryo	Kyushu University

09:00-10:00 ThPI4T9.10

DiPPeST: Diffusion-Based Path Planner for Synthesizing Trajectories Applied on Quadruped Robots, pp. 7786-7792. Attachment

Stamatopoulou, Maria	University College London
Liu, Jianwei	University College London
Kanoulas, Dimitrios	University College London

09:00-10:00 ThPI4T9.11

IN-Sight: Interactive Navigation through Sight, pp. 7793-7799. Attachment

Schoch, Philipp	ETH Zurich
Yang, Fan	ETH Zurich
Ma, Yuntao	ETH
Leutenegger, Stefan	Technical University of Munich
Hutter, Marco	ETH Zurich
Leboutet, Quentin	Intel Labs

09:00-10:00 ThPI4T9.12

Active Human Pose Estimation Via an Autonomous UAV Agent, pp. 7800-7807.

Chen, Jingxi	University of Maryland
He, Botao	University of Maryland

Singh, Chahat Deep	University of Maryland, College Park
Fermuller, Cornelia	University of Maryland
Aloimonos, Yiannis	University of Maryland

09:00-10:00 ThPI4T9.13

Embodiment: Self-Supervised Depth Estimation Based on Camera Models, pp. 7808-7815.

Zhang, Jinchang	University of Georgia
Kamsani, Praveen Kumar Reddy	University of Georgia
Wong, Xue Iuan	University at Buffalo
Aloimonos, Yiannis	University of Maryland
Lu, Guoyu	University of Georgia

09:00-10:00 ThPI4T9.14

Object Instance Retrieval in Assistive Robotics: Leveraging Fine-Tuned SimSiam with Multi-View Images Based on 3D Semantic Map, pp. 7816-7823. Attachment

Sakaguchi, Taichi	Ritsumeikan University
Taniguchi, Akira	Ritsumeikan University
Hagiwara, Yoshinobu	Ritsumeikan University
El Hafi, Lotfi	Ritsumeikan University
Hasegawa, Shoichi	Ritsumeikan University
Taniguchi, Tadahiro	Ritsumeikan University

09:00-10:00 ThPI4T9.15

Enhancing Reinforcement Learning in Sensor Fusion: A Comparative Analysis of Cubature and Sampling-Based Integration Methods for Rover Search Planning, pp. 7824-7829.

Ewers, Jan-Hendrik	University of Glasgow
Swinton, Sarah	University of Glasgow
Anderson, Dave	University of Glasgow
McGookin, Euan William	University of Glasgow
Thomson, Douglas	University of Glasgow

ThPI4T10 Room 10

Simultaneous Localization and Mapping (SLAM) IV (Teaser Session)

Chair: Maragos, Petros	National Technical University of Athens
Co-Chair: Fu, Chunyun	Chongqing University

09:00-10:00 ThPI4T10.1

RaNDT SLAM: Radar SLAM Based on Intensity-Augmented Normal Distributions Transform, pp. 7830-7837.

Hilger, Maximilian	Technical University of Munich
Mandischer, Nils	University of Augsburg
Corves, Burkhard	RWTH Aachen University

09:00-10:00 ThPI4T10.2

DNS-SLAM: Dense Neural Semantic-Informed SLAM, pp. 7838-7845. Attachment

Li, Kunyi	Technical University of Munich
Niemeyer, Michael	Google
Navab, Nassir	TU Munich
Tombari, Federico	Technische Universität München

09:00-10:00 ThPI4T10.3

V3D-SLAM: Robust RGB-D SLAM in Dynamic Environments with 3D Semantic Geometry Voting, pp. 7846-7852. Attachment

Dang, Tuan	University Taxes at Arlington
Nguyen, Khang	University of Texas at Arlington
Huber, Manfred	University of Texas at Arlington

09:00-10:00 ThPI4T10.4

NDT-Map-Code: A 3D Global Descriptor for Real-Time Loop Closure Detection in Lidar SLAM, pp. 7853-7860.

Liao, Lizhou	Chongqing University
Yan, Wenlei	ChongQing University
Sun, Li	University of Sheffield
Bai, Xinhui	NIO
You, Zhenxing	Autonomous Driving Division of NIO Inc
Yuan, Hongyuan	Autonomous Driving Division of NIO Inc
Fu, Chunyun	Chongqing University

09:00-10:00 ThPI4T10.5

SR-LIO: LiDAR-Inertial Odometry with Sweep Reconstruction, pp. 7861-7868.

Yuan, Zikang	Huazhong University, Wuhan, 430073, China
Lang, Fengtian	Huazhong University of Science and Technology
Xu, Tianle	Huazhong University of Science and Technology
Yang, Xin	Huazhong University of Science and Technology

09:00-10:00 ThPI4T10.6

SMORE-SLAM: Semantic Monocular SLAM with Scale Correction and Reverse Loop Utilization in Outdoor Environments, pp. 7869-7876. Attachment

Chen, Yushi	Beijing University of Posts and Telecommunications
Zhao, Fang	Beijing University of Posts and Telecommunications
Zhuge, Yue	Institute of Computing Technology, Chinese Academy of Sciences;
Liu, Junxiong	Beijing University of Posts and Telecommunications
Yan, Jiaquan	Beijing University of Posts and Telecommunications
Luo, Haiyong	Institute of Computing Technology, Chinese Academy of Sciences

09:00-10:00 ThPI4T10.7

Sharing Attention Mechanism in V-SLAM: Relative Pose Estimation with Messenger Tokens on Small Datasets, pp. 7877-7883.

Dai, Dun	Beihang Univeristy
Quan, Quan	Beihang University
Cai, Kai-Yuan	Beijing University of Aeronautics and Astronautics

09:00-10:00 ThPI4T10.8

MCGMapper: Light-Weight Incremental Structure from Motion and Visual Localization with Planar Markers and Camera Groups, pp. 7884-7891. Attachment

Xie, Yusen	The Hong Kong University of Science and Technology (Guangzhou)
Huang, Zhenmin	The Hong Kong University of Science and Technology
Chen, Kai	The Hong Kong University of Science and Technology
Zhu, Lei	The Hong Kong University of Science and Technology (Guangzhou)
Ma, Jun	The Hong Kong University of Science and Technology

09:00-10:00 ThPI4T10.9

SDPL-SLAM: Introducing Lines in Dynamic Visual SLAM and Multi-Object Tracking, pp. 7892-7898.

Manetas, Argyris	National Technical University of Athens
Mermigkas, Panagiotis	National Technical University of Athens
Maragos, Petros	National Technical University of Athens

09:00-10:00 ThPI4T10.10

Semantic SLAM Fusing Moving Constraint for Dynamic Objects under Indoor Environments, pp. 7899-7906. Attachment

Yang, Zhenyuan	Singapore University of Technology and Design
Rishan Sachinthana, Wijenayaka Kankanamge	Singapore University of Technology and Design
Samarakoon Mudiyanselage, Bhagya Prasangi Samarakoon	Singapore University of Technology and Design
Elara, Mohan Rajesh	Singapore University of Technology and Design

09:00-10:00 ThPI4T10.11

C3P-VoxelMap: Compact, Cumulative and Coalescible Probabilistic Voxel Mapping, pp. 7907-7914.

Yang, Xu	Deptrum
Li, Wenhao	Deptrum
Ge, Qijie	Deptrum
Suo, Lulu	Deptrum
Tang, Weijie	Deptrum
Wei, Zhengyu	Deptrum
Huang, Longxiang	Deptrum
Wang, Bo	Deptrum

09:00-10:00 ThPI4T10.12

CurricularVPR: Curricular Contrastive Loss for Visual Place Recognition, pp. 7915-7920.

Zhang, Dongshuo	Nanyang Technological University
Chen, Nanhua	Beijing Institute of Technology
Wu, Meiqing	Nanyang Technological University
Lam, Siew Kei	Nanyang Technological University

09:00-10:00 ThPI4T10.13

GV-Bench: Benchmarking Local Feature Matching for Geometric Verification of Long-Term Loop Closure Detection, pp. 7921-7927.

Yu, Jingwen	The Hong Kong University of Science and Technology, Southern Uni
Ye, Hanjing	Southern University of Science and Technology
Jiao, Jianhao	University College London
Tan, Ping	Simon Fraser University
Zhang, Hong	SUSTech

09:00-10:00 ThPI4T10.14

Ternary-Type Opacity and Hybrid Odometry for RGB NeRF-SLAM, pp. 7928-7935.

Lin, Junru	University of Toronto
Nachkov, Asen	INSAIT, Sofia University
Peng, Songyou	ETH Zurich and Max Planck Institute for Intelligent Systems
Van Gool, Luc	ETH Zurich
Paudel, Danda Pani	ETH Zurich

09:00-10:00 ThPI4T10.15

AVM-SLAM: Semantic Visual SLAM with Multi-Sensor Fusion in a Bird's Eye View for Automated Valet Parking, pp. 7936-7942.

Li, Ye	University of Chinese Academy of Sciences, Beijing 100049, China
Yang, Wenchao	GWM
Lin, Dekun	Chengdu Institute of Computer Applications, Chinese Academy of S
Wang, Qianlei	University of Chinese Academy of Sciences
Cui, Zhe	Chengdu Information Technology of Chinese Academy of Sciences Co
Qin, Xiaolin	Chengdu Institute of Computer Applications, Chinese Academy of S

ThPI4T11 Room 11

Multi-Robot Systems and Swarms III (Teaser Session)

Chair: Bezzo, Nicola	University of Virginia
Co-Chair: Akesson, Knut	Chalmers University of Technology

09:00-10:00 ThPI4T11.1

A Collaborative Stereo Camera with Two UAVs for Long-Distance Mapping of Urban Buildings, pp. 7943-7950. Attachment

Wang, Zhaoying	Shanghai Jiao Tong University
Dong, Wei	Shanghai Jiao Tong University

09:00-10:00 ThPI4T11.2

A Cooperative Recovery Framework for Resilient Multi-Robot Swarm Operations under Loss of Localization in Unknown Environments, pp. 7951-7957. Attachment

Bonczek, Paul	University of Virginia
Bezzo, Nicola	University of Virginia

09:00-10:00 ThPI4T11.3

Towards the New Generation of Smart Home-Care with Cloud-Based Internet of Humans and Robotic Things, pp. 7958-7965.

Zhang, Dandan	Imperial College London
Zheng, Jin	University of Bristol

09:00-10:00 ThPI4T11.4

CollabLoc: Collaborative Information Sharing for Real-Time Multiuser Visual Localization System, pp. 7966-7973.

Yu, Teng-Te	National Yang Ming Chiao Tung University
Lau, Yo-Chung	National Taiwan University, Taipei, Taiwan
Wang, Kai-Li	National Yang Ming Chiao Tung University
Chen, Kuan-Wen	National Yang Ming Chiao Tung University

09:00-10:00 ThPI4T11.5

Blending Distributed NeRFs with Tri-Stage Robust Pose Optimization, pp. 7974-7980. Attachment

Ye, Baijun	Tsinghua University
Liu, Caiyun	Institute for AI Industry Research, Tsinghua University
Xiaoyu, Ye	Beijing Institute of Technology, AIR Tsinghua University

Chen, Yuantao	Xi'an University of Architecture and Technology
Wang, Yuhai	University of Southern California
Yan, Zike	Tsinghua University
Shi, Yongliang	Tsinghua University
Zhao, Hao	Tsinghua University
Zhou, Guyue	Tsinghua University

09:00-10:00 ThPI4T11.6

P4: Pruning and Prediction-Based Priority Planning, pp. 7981-7988. Attachment

Yang, Rui	University of California, Riverside
Gupta, Rajiv	University of California Riverside

09:00-10:00 ThPI4T11.7

Multi-Agent Teamwise Cooperative Path Finding and Traffic Intersection Coordination, pp. 7989-7994. Attachment

Ren, Zhongqiang	Shanghai Jiao Tong University
Cai, Yilin	Georgia Institute of Technology
Wang, Hesheng	Shanghai Jiao Tong University

09:00-10:00 ThPI4T11.8

Optimal and Bounded Suboptimal Any-Angle Multi-Agent Pathfinding, pp. 7995-8000. Attachment

Yakovlev, Konstantin	Federal Research Center for Computer Science and Control of Russ
Andreychuk, Anton	Peoples' Friendship University of Russia (RUDN University)
Stern, Roni	Ben Gurion University of the Negev, Palo Alto Research Center (P

09:00-10:00 ThPI4T11.9

Bird's-Eye-View Trajectory Planning of Multiple Robots Using Continuous Deep Reinforcement Learning and Model Predictive Control, pp. 8001-8007. Attachment

Ceder, Kristian	Chalmers University of Technology
Zhang, Ze	Chalmers University of Technology
Burman, Adam	Chalmers University of Technology
Kuangaliyev, Ilya	Chalmers University of Technology
Mattsson, Krister	Chalmers University of Technology
Nyman, Gabriel	Chalmers University of Technology
Petersén, Arvid	Chalmers University of Technology
Wisell, Lukas	Chalmers University of Technology
Akesson, Knut	Chalmers University of Technology

09:00-10:00 ThPI4T11.10

Dual-Process Optimization for Multi-Vehicle Route Planning and Parts Collection Sequencing, pp. 8008-8015.

Higa, Ryota	NEC Corporation, National Institute of Advanced Industrial Scien
Kato, Takuro	National Institute of Advanced Industrial Science and Technology
Ho, Florence	NEC Corporation, National Institute of Advanced Industrial Scien

09:00-10:00 ThPI4T11.11

Path Re-Planning with Stochastic Obstacle Modeling: A Monte Carlo Tree Search Approach, pp. 8016-8021. Attachment

Trotti, Francesco	University of Verona
Farinelli, Alessandro	University of Verona
Muradore, Riccardo	University of Verona

09:00-10:00 ThPI4T11.12

A Decentralized Partially Observable Markov Decision Process for Dynamic Obstacle Avoidance and Complete Area Coverage Using Multiple Reconfigurable Robots, pp. 8022-8029. Attachment

Pey, Javier Jia Jie	Singapore University of Technology and Design
Samarakoon Mudiyanselage, Bhagya Prasangi Samarakoon	Singapore University of Technology and Design
Muthugala Arachchige, Viraj Jagathpriya Muthugala	Singapore University of Technology and Design
Elara, Mohan Rajesh	Singapore University of Technology and Design

09:00-10:00 ThPI4T11.13

CASRL: Collision Avoidance with Spiking Reinforcement Learning among Dynamic, Decision-Making Agents, pp. 8030-8037. Attachment

Zhang, Chengjun	ZhejiangLab
Yip, Ka-Wa	Zhejiang Lab
Yang, Bo	Zhejiang Lab
Zhang, Zhiyong	Zhejiang Lab
Yuan, Mengwen	Zhejianglab

Yan, Rui	Zhejiang University of Technology
Tang, Huajin	Zhejiang University, China

09:00-10:00 ThPI4T11.14

Mastering Scene Rearrangement with Expert-Assisted Curriculum Learning and Adaptive Trade-Off Tree-Search, pp. 8038-8045. Attachment

Wang, Zan	Beijing Institute of Technology
Wang, Hanqing	Beijing Institute of Technology
Liang, Wei	Beijing Institute of Technology

09:00-10:00 ThPI4T11.15

Ensembling Prioritized Hybrid Policies for Multi-Agent Pathfinding, pp. 8046-8053.

Tang, Huijie	KAIST
Berto, Federico	KAIST
Park, Jinkyoo	Korea Advanced Institute of Science and Technology

09:00-10:00 ThPI4T11.16

Hierarchical Search-Based Cooperative Motion Planning, pp. 8054-8061. Attachment

Wu, Yuchen	Zhejiang University
Yang, Yifan	ZheJiang University
Xu, Gang	Zhejiang University
Cao, Junjie	Institute of Cyber Systems and Control, Zhejiang University
Chen, Yansong	Zhejiang University
Wen, Licheng	Shanghai AI Laboratory
Liu, Yong	Zhejiang University

ThPI4T12 Room 12

Aerial Systems I (Teaser Session)

Chair: Liu, Song	ShanghaiTech University
Co-Chair: Hamaza, Salua	TU Delft

09:00-10:00 ThPI4T12.1

Streamlining Forest Wildfire Surveillance: AI-Enhanced UAVs Utilizing the FLAME Aerial Video Dataset for Lightweight and Efficient Monitoring, pp. 8062-8067.

Zhao, Lemeng	Center for Applied Statistics and School of Statistics, Renmin U
Hu, Junjie	The Chinese University of Hong Kong, Shenzhen
Bi, Jianchao	Gaoling School of Artificial Intelligence, Renmin University Of
Bai, Yanbing	Center for Applied Statistics, School of Statistics, Renmin Univ
Erick, Mas	International Research Institute of Disaster Science(IRIDeS), To
Koshimura, Shunichi	International Research Institute of Disaster Science, Tohoku Uni

09:00-10:00 ThPI4T12.2

Reconfigurable Multi-Rotor for High-Precision Physical Interaction, pp. 8068-8073. Attachment

Taylor, Joshua	National University of Singapore (NUS)
Nursultan, Imanberdiyev	Agency for Science, Technology and Research (A*STAR)
Chuah, Meng Yee (Michael)	Agency for Science, Technology and Research (A*STAR)
Yau, Wei-Yun	I2R
Sartoretti, Guillaume Adrien	National University of Singapore (NUS)
Camci, Efe	Institute for Infocomm Research

09:00-10:00 ThPI4T12.3

Time-Varying Control Barrier Function for Safe and Precise Landing of a UAV on a Moving Target, pp. 8074-8079. Attachment

Sankaranarayanan, Viswa Narayanan	Lulea University of Techonology
Saradagi, Akshit	Luleå University of Technology, Luleå, Sweden
Satpute, Sumeet	Luleå University of Technology
Nikolakopoulos, George	Luleå University of Technology

09:00-10:00 ThPI4T12.4

VRExplorer: An Efficient View-Region Based Autonomous Exploration Method in Unknown Environments for UAV, pp. 8080-8086. Attachment

Xu, Kai	Sun Yat-Sen University
Zheng, Lanxiang	Sun Yat-Sen University
Wei, Mingxin	Sun Yat-Sen University
Cheng, Hui	Sun Yat-Sen University

09:00-10:00 ThPI4T12.5

Autonomous Power Line Tracking with mmWave Radar, pp. 8087-8093. Attachment

Malle, Nicolaj — University of Southern Denmark
Ebeid, Emad — University of Southern Denmark

09:00-10:00 ThPI4T12.6

Data-Driven System Identification of Quadrotors Subject to Motor Delays, pp. 8094-8101. Attachment

Eschmann, Jonas — New York University
Albani, Dario — Technology Innovation Institute
Loianno, Giuseppe — New York University

09:00-10:00 ThPI4T12.7

Tactile Odometry in Aerial Physical Interaction, pp. 8102-8109. Attachment

Schuster, Micha — TU Dresden
Bredenbeck, Anton — TU Delft
Beitelschmidt, Michael — TU Dresden, Institute of Solid Mechanics
Hamaza, Salua — TU Delft

09:00-10:00 ThPI4T12.8

Online Rotor Fault Detection and Isolation for Vertical Takeoff and Landing Vehicles, pp. 8110-8117.

Lian, Jiaqi — University of Pennsylvania
Gandhi, Neeraj — University of Pennsylvania
Wang, Yifan — University of Pennsylvania
Phan, Linh Thi Xuan — University of Pennsylvania / Roblox

09:00-10:00 ThPI4T12.9

ROG-Map: An Efficient Robocentric Occupancy Grid Map for Large-Scene and High-Resolution LiDAR-Based Motion Planning, pp. 8118-8124. Attachment

Ren, Yunfan — The University of Hong Kong
Cai, Yixi — University of Hong Kong
Zhu, Fangcheng — The University of Hong Kong
Liang, Siqi — Harbin Institute of Technology, Shenzhen
Zhang, Fu — University of Hong Kong

09:00-10:00 ThPI4T12.10

DOB-Based Wind Estimation of a UAV Using Its Onboard Sensor, pp. 8125-8132. Attachment

Yu, Haowen — Sun Yat-Sen University
Liang, Xianqi — Sun Yat-Sen University
Lyu, Ximin — Sun Yat-Sen University

09:00-10:00 ThPI4T12.11

SwiftEagle: An Advanced Open-Source, Miniaturized FPGA UAS Platform with Dual DVS/Frame Camera for Cutting-Edge Low-Latency Autonomous Algorithms, pp. 8133-8139.

Vogt, Christian — ETH Zurich
Jost, Michael — ETH Zurich
Magno, Michele — ETH Zurich

09:00-10:00 ThPI4T12.12

Hardware-Software Co-Design for Path Planning by Drones, pp. 8140-8145. Attachment

Dube, Ayushi — Arizona State University
Patil, Omkar Deepak — Arizona State University
Singh, Gian — Arizona State University
Gopalan, Nakul — Arizona State University
Vrudhula, Sarma — Arizona State University

09:00-10:00 ThPI4T12.13

Attainable Force Approximation and Full-Pose Tracking Control of an Over-Actuated Thrust-Vectoring Modular Team UAV, pp. 8146-8151. Attachment

Chu, Yen-Cheng — National Taiwan University
Fang, Kai-Cheng — National Taiwan University
Lian, Feng-Li — National Taiwan University

09:00-10:00 ThPI4T12.14

Intention-Aware Planner for Robust and Safe Aerial Tracking, pp. 8152-8159. Attachment

Ren, Qiuyu — Zhejiang University
Yu, Huan — Zhejiang University
Dai, Jiajun — Zhejiang University

Zheng, Zhi	Zhejiang University
Meng, Jun	Zhejiang University
Xu, Li	Zhejiang University
Xu, Chao	Zhejiang University
Gao, Fei	Zhejiang University
Cao, Yanjun	Zhejiang University, Huzhou Institute of Zhejiang University

09:00-10:00 ThPI4T12.15

AGL-NET: Aerial-Ground Cross-Modal Global Localization with Varying Scales, pp. 8160-8167. Attachment

Guan, Tianrui	University of Maryland
Xian, Ruiqi	University of Maryland-College Park
Wang, Xijun	University of Maryland, College Park
Wu, Xiyang	University of Maryland
Elnoor, Mohamed	University of Maryland
Song, Daeun	University of Maryland
Manocha, Dinesh	University of Maryland

09:00-10:00 ThPI4T12.16

Data-Driven Modeling of Ground Effect for UAV Landing on a Vertical Oscillating Platform, pp. 8168-8173. Attachment

He, Binglin	ShanghaiTech University
Zhang, Heng	ShanghaiTech University
Lai, Baisheng	Alibaba Group
Liu, Song	ShanghaiTech University
Wang, Yang	Shanghaitech University

09:00-10:00 ThPI4T12.17

Small Multi-Rotor UAV Oriented Direct Thrust Sensor Based on Lightweight Barometers, pp. 8174-8181.

Jiang, Han	The State Key Laboratory of Robotics, Shenyang Institute of Auto
Chang, Yanchun	Shenyang Institute of Automation
Yang, Liying	Shenyang Institute of Automation
He, Yuqing	Shenyang Institute of Automation, Chinese Academy of Sciences

ThAT1 Room 1

SLAM I (Regular session)

Chair: Yuan, Shenghai — Nanyang Technological University

10:00-10:15 ThAT1.1

HI-SLAM: Monocular Real-Time Dense Mapping with Hybrid Implicit Fields, N/A

Zhang, Wei	University of Stuttgart
Sun, Tiecheng	UESTC
Wang, Sen	Techinische Universität München
Cheng, Qing	Technical University of Munich
Haala, Norbert	University of Stuttgart

10:15-10:30 ThAT1.2

ObVi-SLAM: Long-Term Object-Visual SLAM, N/A

Adkins, Amanda	University of Texas at Austin
Chen, Taijing	University of Texas at Austin
Biswas, Joydeep	University of Texas at Austin

10:30-10:45 ThAT1.3

Light-LOAM: A Lightweight LiDAR Odometry and Mapping Based on Graph-Matching, N/A

Yi, Shiquan	Northwestern Polytechnical University
Lyu, Yang	Northwestern Polytechnical University
Hua, Lin	Northwestern Polytechnical University
Pan, Quan	Northwestern Polytechnical University
Zhao, Chunhui	Northwestern Polytechnical University

10:45-11:00 ThAT1.4

Light-LOAM: A Lightweight LiDAR Odometry and Mapping Based on Graph-Matching, N/A

Yi, Shiquan	Northwestern Polytechnical University
Lyu, Yang	Northwestern Polytechnical University
Hua, Lin	Northwestern Polytechnical University
Pan, Quan	Northwestern Polytechnical University

Zhao, Chunhui	Northwestern Polytechnical University

ThAT2	Room 2
Marine Robotics II (Regular session)	
Co-Chair: Yamashita, Atsushi	The University of Tokyo

10:00-10:15	ThAT2.1

TransCODNet: Underwater Transparently Camouflaged Object Detection Via RGB and Event Frames Collaboration, N/A

Luo, Cai	UPC
Wu, Jihua	China University of Petroleum(East China)
Sun, Shixin	China University of Petroleum (East China)
Ren, Peng	China University of Petroleum（East China）

10:15-10:30	ThAT2.2

Multi-Robot Multimodal Deep Sea Surveys for Detailed Estimation of Manganese Crust Distribution (I), N/A

Neettiyath, Umesh	The University of Tokyo
Sugimatsu, Harumi	University of Tokyo
Koike, Tetsu	Kaiyo Engineering Co., Ltd
Kazunori, Nagano	University of Tokyo
Ura, Tamaki	The University of Tokyo
Thornton, Blair	University of Southampton

10:30-10:45	ThAT2.3

Underwater Vibration Adhesion by Frequency-Controlled Rigid Disc for Underwater Robotics Grasping, N/A

Sun, Yi	Shanghai University
Hu, Yangyi	Shanghai University
Yang, Yi	Shanghai University
Wang, Min	Shanghai University
Ding, Jiheng	Shanghai University
Pu, Huayan	Shanghai University
Jia, Wenchuan	Shanghai University

10:45-11:00	ThAT2.4

LodeStar: Maritime Radar Descriptor for Semi-Direct Radar Odometry, N/A

Jang, Hyesu	Seoul National University
Jung, Minwoo	Seoul National University
Jeon, Myung-Hwan	SNU
Kim, Ayoung	Seoul National University

ThAT3	Room 3
Multifingered Hands (Regular session)	
Chair: Watanabe, Tetsuyou	Kanazawa University

10:00-10:15	ThAT3.1

RESPRECT: Speeding-Up Multi-Fingered Grasping with Residual Reinforcement Learning, N/A

Ceola, Federico	Istituto Italiano Di Tecnologia
Rosasco, Lorenzo	Istituto Italiano Di Tecnologia & MassachusettsInstitute OfTechn
Natale, Lorenzo	Istituto Italiano Di Tecnologia

10:15-10:30	ThAT3.2

Fast In-Hand Slip Control on Unfeatured Objects with Programmable Tactile Sensing, N/A

Gloumakov, Yuri	University of California, Berkeley
Huh, Tae Myung	UC Berkeley
Stuart, Hannah	UC Berkeley

10:30-10:45	ThAT3.3

The Fingertip Manipulability Assessment of Tendon-Driven Multi-Fingered Hands, N/A

Li, Junnan	Technical University of Munich
Ganguly, Amartya	Technical University of Munich
Figueredo, Luis	University of Nottingham (UoN)
Haddadin, Sami	Technical University of Munich

10:45-11:00	ThAT3.4

Tactile Object Property Recognition Using Geometrical Graph Edge Features and Multi-Thread Graph Convolutional Network, N/A

Kulkarni, Shardul	Waseda University
Funabashi, Satoshi	Waseda University
Schmitz, Alexander	Waseda University
Ogata, Tetsuya	Waseda University
Sugano, Shigeki	Waseda University

ThAT4 Room 4

Soft Sensors and Actuators III (Regular session)

Co-Chair: Yun, Dongwon	Daegu Gyeongbuk Institute of Science and Technology (DGIST)

10:00-10:15 ThAT4.1

FOCWS: A High Sensitive Flexible Optical Curvature Sensor Inspired by Arthropod Sensory Systems, pp. 8279-8284. Attachment

Wei, Jiachen	University of Science and Technology Beijing
Li, Zhengwei	Institute of Automation, Chinese Academy of Sciences
Liu, Zeyu	Institute of Automation, Chinese Acadamy of Sciences
He, Wei	University of Science and Technology Beijing
Cheng, Long	Chinese Academy of Sciences
Liu, Yanhong	Zhengzhou University

10:15-10:30 ThAT4.2

Embedded Valves for Distributed Control of Soft Pneumatic Actuators, pp. 8285-8291. Attachment

Zuo, Runze	University of Michigan
Mehta, Mayank	University of Michigan
Han, Dong Heon	University of Michigan
Bruder, Daniel	University of Michigan

10:30-10:45 ThAT4.3

An Origami-Inspired Pneumatic Continuum Module with Active Variable Stiffness, pp. 8292-8297. Attachment

Li, Zhuowen	Shanghai Jiao Tong University
Chen, Huaiyuan	Shanghai Jiao Tong University
Xu, Fan	Shanghai Jiao Tong University
Wang, Hesheng	Shanghai Jiao Tong University

10:45-11:00 ThAT4.4

High-Frequency Capacitive Sensing for Electrohydraulic Soft Actuators, pp. 8298-8305. Attachment

Vogt, Michel Ryan	ETH Zürich
Eberlein, Maximilian	ETH Zurich
Christoph, Clemens Claudio	ETH Zürich
Baumann, Felix	ETH Zurich
Bourquin, Fabrice	ETH Zurich
Wende, Wim	ETH Zrich
Schaub, Fabio	ETH Zurich
Kazemipour, Amirhossein	ETH Zürich
Katzschmann, Robert Kevin	ETH Zurich

ThAT5 Room 5

Calibration and Identification II (Regular session)

Chair: Ganguly, Amartya	Technical University of Munich

10:00-10:15 ThAT5.1

Interactive Robot-Environment Self-Calibration Via Compliant Exploratory Actions, pp. 8306-8313. Attachment

Chanrungmaneekul, Podshara	Rice University
Ren, Kejia	Rice University
Grace, Joshua	Yale University
Dollar, Aaron	Yale University
Hang, Kaiyu	Rice University

10:15-10:30 ThAT5.2

3DGS-Calib: 3D Gaussian Splatting for Multimodal SpatioTemporal Calibration, pp. 8314-8320. Attachment

Herau, Quentin	Huawei, University of Burgundy

Bennehar, Moussab	Lirmm - Umr 5506
Moreau, Arthur	Huawei Noah's Ark Lab
Piasco, Nathan	Huawei Technologies France
Roldao, Luis	Huawei
Tsishkou, Dzmitry	Huawei Technologies
Migniot, Cyrille	U Bourgogne
Vasseur, Pascal	Université De Picardie Jules Verne
Demonceaux, Cédric	Université De Bourgogne

10:30-10:45 ThAT5.3

Automatic Spatial Calibration of Near-Field MIMO Radar with Respect to Optical Depth Sensors, pp. 8321-8328.
Attachment

Wirth, Vanessa	Friedrich-Alexander-Universität Erlangen-Nürnberg
Bräunig, Johanna	Friedrich-Alexander-Universität Erlangen-Nürnberg, Institute Of
Khouri, Danti	Friedrich-Alexander-Universität Erlangen-Nürnberg, Institute Of
Gutsche, Florian	Friedrich-Alexander-Universität Erlangen-Nürnberg, Visual Comput
Vossiek, Martin	University of Erlangen-Nürnberg
Weyrich, Tim	Friedrich-Alexander-Universität Erlangen-Nürnberg
Stamminger, Marc	Universität Erlangen-Nürnberg

10:45-11:00 ThAT5.4

Identification and Validation of the Dynamic Model of a Tendon-Driven Anthropomorphic Finger, pp. 8329-8336.
Attachment

Li, Junnan	Technical University of Munich
Chen, Lingyun	Technical University of Munich
Ringwald, Johannes	Technische Universität München
Pozo Fortunić, Edmundo	Technical University of Munich
Ganguly, Amartya	Technical University of Munich
Haddadin, Sami	Technical University of Munich

ThAT6 Room 6

Aerial Systems: Mechanics and Control (Regular session)

Chair: Loianno, Giuseppe	New York University
Co-Chair: Seneviratne, Lakmal	L. D. Seneviratne Is with Kings College London, UK, and Robotics Institute of Khalifa University, UAE

10:00-10:15 ThAT6.1

Full-Pose Trajectory Tracking of Overactuated Multi-Rotor Aerial Vehicles with Limited Actuation Abilities, N/A

Hamandi, Mahmoud	New York University Abu Dhabi
Al-Ali, Ismail	Khalifa University of Science and Technology
Seneviratne, Lakmal	L. D. Seneviratne Is with Kings College London, UK, and Robotics
Franchi, Antonio	University of Twente / Sapienza University of Rome
Zweiri, Yahya	Khalifa University

10:15-10:30 ThAT6.2

RGBlimp: Robotic Gliding Blimp - Design, Modeling, Development, and Aerodynamics Analysis, N/A

Cheng, Hao	Peking University
Sha, Zeyu	Peking University
Zhu, Yongjian	Peking University
Zhang, Feitian	Peking University

10:30-10:45 ThAT6.3

Efficient Optimization-Based Cable Force Allocation for Geometric Control of a Multirotor Team Transporting a Payload, N/A

Wahba, Khaled	Technical University of Berlin
Hoenig, Wolfgang	TU Berlin

10:45-11:00 ThAT6.4

From Propeller Damage Estimation and Adaptation to Fault Tolerant Control: Enhancing Quadrotor Resilience, N/A

Mao, Jeffrey	New York University
Yeom, Jennifer	New York University
Nair, Suraj	New York University

Loianno, Giuseppe	New York University

ThAT7	Room 7
Surgical Robotics II (Regular session)	
Chair: Korzeniowski, Przemyslaw	Sano Centre for Computational Medicine
Co-Chair: Song, Cheol	DGIST

10:00-10:15	ThAT7.1

Saturation in the Null-Space (SNS) for Tele-Operated Surgery: Prioritized Motion Control for RCM and Joint Limit Constraints, pp. 8369-8376. Attachment

Kana, Sreekanth	KARL STORZ VentureONE Pte. Ltd
Pérez Arias, Antonia	N/A
Kahlau, Robert	Undisclosed
Kanajar, Pavan	KARL STORZ VentureONE Germany GmbH
Sharma, Shashank	KARLSTORZ VentureONE Germany GmbH

10:15-10:30	ThAT7.2

FF-SRL: High Performance GPU-Based Surgical Simulation for Robot Learning, pp. 8377-8383.

Dall'Alba, Diego	University of Verona
Naskręt, Michał	SANO
Kamińska, Sabina	Sano - Centre for Computational Personalized Medicine
Korzeniowski, Przemyslaw	Sano Centre for Computational Medicine

10:30-10:45	ThAT7.3

An Online RCM Adjusting System for Robot-Assisted Retinal Surgeries, pp. 8384-8391. Attachment

Xia, Jun	Sun Yat-Sen University
Wang, Ting	The First Affiliated Hospital of Fujian Medical University
Ni, Huanqi	Sun Yat-Sen University
Li, Yanlin	Sun Yat-Sen University
Chen, Ruoxi	Southwest University
Nasseri, M. Ali	Technische Universitaet Muenchen
Lin, Haotian	Sun Yat-Sen University, Zhongshan Ophthalmic Center
Huang, Kai	Sun Yat-Sen University

10:45-11:00	ThAT7.4

An Optical Interferometer-Based Force Sensor System for Enhancing Precision in Epidural Injection Procedure, pp. 8392-8398.

Cho, Gichan	DGIST
Im, Jintaek	DGIST
Kwon, Hyun-Jung	Asan Medical Center
Song, Cheol	DGIST

ThAT8	Room 8
Localization IV (Regular session)	
Chair: Lee, Joo-Ho	Ritsumeikan University

10:00-10:15	ThAT8.1

Representing 3D Sparse Map Points and Lines for Camera Relocalization, pp. 8399-8406. Attachment

Bui, Bach-Thuan	Ritsumeikan University
Bui, Huy Hoang	Ritsumeikan University
Tran, Dinh Tuan	College of Information Science and Engineering, Ritsumeikan Univ
Lee, Joo-Ho	Ritsumeikan University

10:15-10:30	ThAT8.2

Pos2VPR: Fast Position Consistency Validation with Positive Sample Mining for Hierarchical Place Recognition, pp. 8407-8412.

Zou, Dehao	Northeastern University
Qian, Xiaolong	Northeastern University, China
Zhang, Yunzhou	Northeastern University
Zhao, Xinge	Northeastern University
Wang, Zhuo	Northeastern University

10:30-10:45	ThAT8.3

WSCLoc: Weakly-Supervised Sparse-View Camera Relocalization, pp. 8413-8419. Attachment

Wang, Jialu	Oxford
Zhou, Kaichen	University of Oxford
Markham, Andrew	Oxford University
Trigoni, Niki	University of Oxford

10:45-11:00 ThAT8.4

CRPlace: Camera-Radar Fusion with BEV Representation for Place Recognition, pp. 8420-8426.

Fu, Shaowei	University of Science and Technology of China
Duan, Yifan	University of Science and Technology of China
Li, Yao	University of Science and Technology of China
Meng, Chengzhen	University of Science and Technology of China
Wang, Yingjie	University of Science and Technology of China
Ji, Jianmin	University of Science and Technology of China
Zhang, Yanyong	University of Science and Technology of China

ThAT9 Room 9

Motion and Path Planning IV (Regular session)

Chair: Mueller, Andreas	Johannes Kepler University
Co-Chair: Trumpp, Raphael	Technical University of Munich

10:00-10:15 ThAT9.1

Online Multi-Agent Pickup and Delivery with Task Deadlines, pp. 8427-8433. Attachment

Makino, Hiroya	Toyota Central R&D Labs., Inc
Ito, Seigo	Toyota Central R&D Labs., Inc

10:15-10:30 ThAT9.2

MARPF: Multi-Agent and Multi-Rack Path Finding, pp. 8434-8440. Attachment

Makino, Hiroya	Toyota Central R&D Labs., Inc
Ohama, Yoshihiro	Toyota Central R&D Labs., Inc
Ito, Seigo	Toyota Central R&D Labs., Inc

10:30-10:45 ThAT9.3

Smooth Invariant Interpolation on Lie Groups with Prescribed Terminal Conditions for Robot Motion Planning and Modeling of Soft Robots, pp. 8441-8447. Attachment

Mueller, Andreas	Johannes Kepler University
Marauli, Tobias	Johannes Kepler University
Gattringer, Hubert	Johannes Kepler University Linz

10:45-11:00 ThAT9.4

RaceMOP: Mapless Online Path Planning for Multi-Agent Autonomous Racing Using Residual Policy Learning, pp. 8448-8455. Attachment

Trumpp, Raphael	Technical University of Munich
Javanmardi, Ehsan	The University of Tokyo
Nakazato, Jin	The University of Tokyo
Tsukada, Manabu	The University of Tokyo
Caccamo, Marco	Technical University of Munich

ThAT10 Room 10

Deep Learning for Visual Perception I (Regular session)

Chair: Bezerra, Ranulfo	Tohoku University

10:00-10:15 ThAT10.1

WidthFormer: Toward Efficient Transformer-Based BEV View Transformation, pp. 8456-8463.

Yang, Chenhongyi	University of Edinburgh
Lin, Tianwei	Horizon Robotics
Huang, Lichao	Horizon Robotics Inc
Crowley, Elliot J.	University of Edinburgh

10:15-10:30 ThAT10.2

ARDuP: Active Region Video Diffusion for Universal Policies, pp. 8464-8471. Attachment

Huang, Shuaiyi	University of Maryland, College Park
Levy, Mara	University of Maryland, College Park
Jiang, Zhenyu	The Unversity of Texas at Austin
Anandkumar, Anima	Caltech

Zhu, Yuke	The University of Texas at Austin
Fan, Linxi	Stanford University
Huang, De-An	NVIDIA
Shrivastava, Abhinav	University of Maryland, College Park

10:30-10:45 ThAT10.3

SNF-Feat: Semantic-Guided Negative-Sample-Free Representation Learning for Local Feature Extraction, pp. 8472-8479.

Zhou, Xun	Tongji University
Yan, Qingqing	Tongji University
Zhu, Minghao	Tongji University
Hu, Mengxian	Tongji University
Liu, Chengju	Tongji University
Chen, Qijun	Tongji University

10:45-11:00 ThAT10.4

MonoPlane: Exploiting Monocular Geometric Cues for Generalizable 3D Plane Reconstruction, pp. 8480-8487. Attachment

Zhao, Wang	Tsinghua University
Liu, Jiachen	Pennsylvania State University
Zhang, Sheng	Bytedance Inc
Li, Yishu	Tsinghua University
Chen, Sili	ByteDance
Huang, Sharon X.	The Pennsylvania State University
Liu, Yong-Jin	Tsinghua University
Guo, Hengkai	ByteDance AI Lab

ThAT11 Room 11

Multi-Robot Systems IV (Regular session)

Co-Chair: Saska, Martin — Czech Technical University in Prague

10:00-10:15 ThAT11.1

Real-Time Bandwidth-Efficient Occupancy Grid Map Synchronization for Multi-Robot Systems, pp. 8488-8495. Attachment

Shi, Liuyu	The University of Hong Kong
Yin, Longji	The University of Hong Kong
Kong, Fanze	The University of Hong Kong
Ren, Yunfan	The University of Hong Kong
Zhu, Fangcheng	The University of Hong Kong
Tang, Benxu	The University of Hong Kong
Zhang, Fu	University of Hong Kong

10:15-10:30 ThAT11.2

Adaptive Model Predictive Control for Differential-Algebraic Systems towards a Higher Path Accuracy for Physically Coupled Robots, pp. 8496-8502. Attachment

Ye, Xin	FZI Research Center for Information Technology
Handwerker, Karl	FZI Research Center for Information Technology
Hohmann, Sören	Institute of Control Systems, Karlsruhe Institute of Technology

10:30-10:45 ThAT11.3

Asynchronous Spatial-Temporal Allocation for Trajectory Planning of Heterogeneous Multi-Agent Systems, pp. 8503-8508. Attachment

Chen, Yuda	Peking University
Dong, Haoze	Peking University
Li, Zhongkui	Peking University

10:45-11:00 ThAT11.4

BuzzRacer: A Palm-Sized Autonomous Vehicle Platform for Testing Multi-Agent Adversarial Decision-Making, pp. 8509-8514. Attachment

Zhang, Zhiyuan	Georgia Institute of Technology
Tsiotras, Panagiotis	Georgia Tech

ThAT12 Room 12

Imitation Learning II (Regular session)

Chair: Ogata, Tetsuya — Waseda University

10:00-10:15 — ThAT12.1

Multi-Task Real-Robot Data with Gaze Attention for Dual-Arm Fine Manipulation, pp. 8515-8522. Attachment

Kim, Heecheol — The University of Tokyo
Ohmura, Yoshiyuki — The University of Tokyo
Kuniyoshi, Yasuo — The University of Tokyo

10:15-10:30 — ThAT12.2

Neural ODE-Based Imitation Learning (NODE-IL): Data-Efficient Imitation Learning for Long-Horizon Multi-Skill Robot Manipulation, pp. 8523-8529. Attachment

Zhao, Shiyao — University of Edinburgh
Xu, Yucheng — University of Edinburgh
Kasaei, Mohammadreza — University of Edinburgh
Khadem, Mohsen — University of Edinburgh
Li, Zhibin (Alex) — University College London

10:30-10:45 — ThAT12.3

Data Efficient Behavior Cloning for Fine Manipulation Via Continuity-Based Corrective Labels, pp. 8530-8537. Attachment

Deshpande, Abhay — University of Washington
Ke, Liyiming — University of Washington
Pfeifer, Quinn — University of Washington
Gupta, Abhishek — University of Washington
Srinivasa, Siddhartha — University of Washington

10:45-11:00 — ThAT12.4

From LLMs to Actions: Latent Codes As Bridges in Hierarchical Robot Control, pp. 8538-8545. Attachment

Shentu, Yide — University of California -- Berkeley
Wu, Shiyao — University of California, Berkeley
Rajeswaran, Aravind — Meta AI
Abbeel, Pieter — UC Berkeley

ThAT13 — Room 13

Sensor Fusion II (Regular session)

Chair: Naceri, Abdeldjallil — Technical University of Munich

10:00-10:15 — ThAT13.1

DeRO: Dead Reckoning Based on Radar Odometry with Accelerometers Aided for Robot Localization, pp. 8546-8553.

Do, Hoang Viet — Sejong University
Kim, Yong Hun — Sejong University
Lee, Joo Han — Sejong University
Lee, Min Ho — Sejong University
Song, Jin Woo — Sejong University

10:15-10:30 — ThAT13.2

GMMCalib: Extrinsic Calibration of LiDAR Sensors Using GMM-Based Joint Registration, pp. 8554-8561.

Tahiraj, Ilir — Technical University of Munich
Fent, Felix — TU Munich
Hafemann, Philipp — Technical University of Munich
Ye, Egon — BMW AG
Lienkamp, Markus — Technical University of Munich

10:30-10:45 — ThAT13.3

FlexLoc: Conditional Neural Networks for Zero-Shot Sensor Perspective Invariance in Object Localization with Distributed Multimodal Sensors, pp. 8562-8569. Attachment

Wu, Jason — University of California, Los Angeles
Wang, Ziqi — University of California, Los Angeles
Ouyang, Xiaomin — University of California, Los Angeles
Jeong, Ho Lyun — University of California, Los Angeles
Samplawski, Colin — University of Massachusetts Amherst
Kaplan, Lance — DEVCOM Army Research Laboratory
Marlin, Benjamin — UMass Amherst
Srivastava, Mani — UCLA

10:45-11:00 — ThAT13.4

VIVO: A Visual-Inertial-Velocity Odometry with Online Calibration in Challenging Condition, pp. 8570-8577. Attachment

Han, Fuzhang	Zhejiang University
Jia, Shenhan	Zhejiang University
Yu, Jiyu	Zhejiang University
Wei, Yufei	Zhejiang University
Huang, Wenjun	Zhejiang University
Wang, Yue	Zhejiang University
Xiong, Rong	Zhejiang University

ThAT14 Room 14

Transfer Learning (Regular session)

Chair: Saito, Namiko — The University of Edinburgh

10:00-10:15 ThAT14.1

Latent Object Characteristics Recognition with Visual to Haptic-Audio Cross-Modal Transfer Learning, pp. 8578-8585. Attachment

Saito, Namiko	The University of Edinburgh
Moura, Joao	The University of Edinburgh
Uchida, Hiroki	Waseda University
Vijayakumar, Sethu	University of Edinburgh

10:15-10:30 ThAT14.2

Cross-Architecture Auxiliary Feature Space Translation for Efficient Few-Shot Personalized Object Detection, pp. 8586-8593. Attachment

Barbato, Francesco	University of Padova
Michieli, Umberto	Samsung Research
Moon, Jijoong	Samsung Research Korea
Zanuttigh, Pietro	University of Padua
Ozay, Mete	Samsung Research

10:30-10:45 ThAT14.3

Sim2Real Transfer for Audio-Visual Navigation with Frequency-Adaptive Acoustic Field Prediction, pp. 8594-8601. Attachment

Chen, Changan	UT Austin
Ramos Chen, Jordi	The University of Texas at Austin
Tomar, Anshul	University of Texas at Austin
Grauman, Kristen	UT Austin and Facebook AI Research

10:45-11:00 ThAT14.4

Skill Transfer and Discovery for Sim-To-Real Learning: A Representation-Based Viewpoint, pp. 8602-8608. Attachment

Ma, Haitong	Harvard University
Ren, Zhaolin	Harvard University
Dai, Bo	Google Brain
Li, Na	Harvard University

ThBT1 Room 1

SLAM II (Regular session)

Chair: Yuan, Shenghai — Nanyang Technological University

11:00-11:15 ThBT1.1

Tracking by Detection: Robust Indoor RGB-D Odometry Leveraging Key Local Manhattan World, N/A

Zhou, Zhiyu	Wuhan University
Gao, Zhi	Temasek Laboratories @ NUS
Xu, Jingzhong	School of Remote Sensing and Information Engineering, Wuhan Univ

11:15-11:30 ThBT1.2

RSS: Robust Stereo SLAM with Novel Extraction and Full Exploitation of Plane Features, N/A

Wang, Haolin	Institute of Automation, Chinese Academy of Sciences
Wei, Hao	University of Chinese Academy of Sciences
Xu, Zewen	Institute of Automation, Chinese Academy of Science
Lv, Zeren	Beijing University of Chemical Technology
Zhang, Pengju	University of Chinese Academy of Sciences
An, Ning	China Coal Research Institute

Tang, Fulin	Institute of Automation, Chinese Academy of Sciences, University
Wu, Yihong	National Laboratory of Pattern Recognition, InstituteofAutomatio

11:30-11:45 ThBT1.3

*SemanticTopoLoop: Semantic Loop Closure with 3D Topological Graph Based on Quadric-Level Object Map**. N/A

Cao, Zhenzhong	Nankai University
Zhang, Qianyi	Nankai University
Guang, Jinzheng	Nankai University
Wu, Shichao	Nankai University
Hu, Zhengxi	Nankai University
Liu, Jingtai	Nankai University

11:45-12:00 ThBT1.4

SR-LIVO: LiDAR-Inertial-Visual Odometry and Mapping with Sweep Reconstruction, N/A

Yuan, Zikang	Huazhong University, Wuhan, 430073, China
Deng, Jie	Huazhong University of Science and Technology
Ming, Ruiye	Huazhong University of Science and Technology
Lang, Fengtian	Huazhong University of Science and Technology
Yang, Xin	Huazhong University of Science and Technology

ThBT2 Room 2

Marine Robotics III (Regular session)

Co-Chair: De Masi, Giulia — Khalifa University

11:00-11:15 ThBT2.1

Dynamic SpectraFormer for Ultra-High Resolution Underwater Image Enhancement, pp. 8633-8640.

Hu, Zhiqiang	Tokyo University of Science
Yu, Tao	Tokyo Institute of Technology
Huang, Shouren	Tokyo University of Science
Ishikawa, Masatoshi	University of Tokyo

11:15-11:30 ThBT2.2

QO-Net: Query Optimization Underwater Object Detection Network, pp. 8641-8648.

Tian, Jiandong	Chinese Academy of Science
Sun, Hongyang	Nanjing University of Posts and Telecommunications
Fan, Baojie	Nanjing University of Posts and Telecommunications
Xu, Hongxin	Delft University of Technology

11:30-11:45 ThBT2.3

Adaptive Multi-Altitude Search and Sampling of Sparsely Distributed Natural Phenomena, pp. 8649-8656.

Todd, Jessica	MIT
McCammon, Seth	Woods Hole Oceanographic Institution
Girdhar, Yogesh	Woods Hole Oceanographic Institution
Roy, Nicholas	Massachusetts Institute of Technology
Yoerger, Dana	Woods Hole Oceanographic Institution

11:45-12:00 ThBT2.4

Underwater Hyperspectral Imaging for Measuring Seafloor Reflectance, pp. 8657-8664. Attachment

Zhang, Hongjie	The University of Sydney
Billings, Gideon	University of Sydney, Australian Center for Field Robotics
Shields, Jackson	University of Sydney
Williams, Stefan Bernard	University of Sydney

ThBT3 Room 3

Grippers and Other End-Effectors (Regular session)

Co-Chair: Watanabe, Tetsuyou — Kanazawa University

11:00-11:15 ThBT3.1

Contact Representation in Robotic Mechanical Systems Employing Reduced Models, N/A

Raoofian, Ali	McGill University
Dai, Xu	McGill University
Kovecses, Jozsef	McGill University

11:15-11:30 ThBT3.2

G.O.G: A Versatile Gripper-On-Gripper Design for Bimanual Cloth Manipulation with a Single Robotic Arm, N/A

Lee, Dongmyoung	Imperial College London
Chen, Wei	Imperial College London
Chen, Xiaoshuai	Imperial College London
Rojas, Nicolas	The AI Institute

11:30-11:45 ThBT3.3

Single-Motor Robotic Gripper with Multi-Surface Fingers for Variable Grasping Configurations, N/A
Attachment

Nishimura, Toshihiro	Kanazawa University
Suzuki, Yosuke	Kanazawa University
Tsuji, Tokuo	Kanazawa University
Watanabe, Tetsuyou	Kanazawa University

ThBT4 Room 4

Flexible Robots (Regular session)

Chair: Kuntz, Alan — University of Utah

11:00-11:15 ThBT4.1

Dynamics-Based Trajectory Planning for Vibration Suppression of a Flexible Long-Reach Robotic Manipulator System, pp. 8689-8694. Attachment

Chen, Anthony Siming	The University of Manchester
Lopez Pulgarin, Erwin Jose	University of Bristol
Herrmann, Guido	University of Manchester
Lanzon, Alexander	The University of Manchester
Carrasco, Joaquin	The University of Manchester
Lennox, Barry	The University of Manchester
Carrera-Knowles, Benji	Jacobs
Brotherhood, John	Jacobs
Sakaue, Tomoki	Tokyo Electric Power Company Holdings, Inc
Kaiqiang, Zhang	UK Atomic Energy Authority

11:15-11:30 ThBT4.2

Strong Compliant Grasps Using a Cable-Driven Soft Gripper, pp. 8695-8702. Attachment

Xie, Gregory	MIT
Chin, Lillian	UT Austin
Kim, Byungchul	MIT
Holladay, Rachel	Massachusetts Institute of Technology
Rus, Daniela	MIT

11:30-11:45 ThBT4.3

Identification of Flexible Joint Robot Inertia Matrix Using Frequency Response Analysis, pp. 8703-8709. Attachment

Choi, Kiyoung	Deagu Gyeongbuk Institute of Science and Technology
Song, JunHo	Daegu Gyeongbuk Institute of Science and Technology
Yun, WonBum	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Lee, Deokjin	Daegu Gyeongbuk Institute of Science and Technology
Oh, Sehoon	DGIST

11:45-12:00 ThBT4.4

Exploring Modal Switch in Metamaterial-Based Robots, pp. 8710-8715.

Jordan, Britton	University of Utah
Esser, Daniel	Vanderbilt University
Kim, Jeonghyeon	Sogang University
Cho, Brian Y	University of Utah
Webster III, Robert James	Vanderbilt University
Kuntz, Alan	University of Utah

ThBT5 Room 5

Robot Estimation (Regular session)

Chair: Monje, Concepción A.	University Carlos III of Madrid
Co-Chair: Della Santina, Cosimo	TU Delft

11:00-11:15 ThBT5.1

Efficient Estimation of Frequency Response Functions of Industrial Robots Using the Local Rational Method, pp.

8716-8722.

Zimmermann, Stefanie Antonia	Linköping University
Moberg, Stig	ABB AB

11:15-11:30 ThBT5.2

A Robot Kinematics Model Estimation Using Inertial Sensors for On-Site Building Robotics, pp. 8723-8730. Attachment

Sato, Hiroya	The University of Tokyo
Makabe, Tasuku	The University of Tokyo
Yanokura, Iori	University of Tokyo
Yamaguchi, Naoya	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

11:30-11:45 ThBT5.3

Look Gauss, No Pose: Novel View Synthesis Using Gaussian Splatting without Accurate Pose Initialization, pp. 8731-8738. Attachment

Schmidt, Christian	RWTH Aachen University
Piekenbrinck, Jens	RWTH Aachen University
Leibe, Bastian	RWTH Aachen University

11:45-12:00 ThBT5.4

State Estimation of an Adaptive 3-Finger Gripper Using Recurrent Neural Networks, pp. 8739-8745. Attachment

Jonetzko, Yannick	TAMS / University of Hamburg
Naß, Theresa Alexandra Aurelia	University of Hamburg
Fiedler, Niklas	University of Hamburg
Zhang, Jianwei	University of Hamburg

ThBT6 Room 6

Aerial Systems: Perception and Autonomy I (Regular session)

Chair: Oh, Jean	Carnegie Mellon University
Co-Chair: Agarwal, Saurav	University of Pennsylvania

11:00-11:15 ThBT6.1

Visual Servoing NMPC Applied to UAVs for Photovoltaic Array Inspection, N/A

Velasco Sánchez, Edison Patricio	Universidad De Alicante
Recalde, Luis F.	Universidad Indoamérica
Guevara, Bryan S.	Universidad Nacional De San Juan
Varela-Aldás, José	Universidad Tecnológica Indoamérica
Candelas, Francisco A.	University of Alicante
Puente, Santiago	University of Alicante
Gandolfo, Daniel C.	Universidad Nacional De San Juan INAUT

11:15-11:30 ThBT6.2

SoRTS: Learned Tree Search for Long Horizon Social Robot Navigation, N/A

Navarro, Ingrid	Carnegie Mellon University
Patrikar, Jay	Carnegie Mellon University
Dantas, Joao	Institute for Advanced Studies
Baijal, Rohan	University of Washington
Higgins, Ian	Carnegie Mellon University
Scherer, Sebastian	Carnegie Mellon University
Oh, Jean	Carnegie Mellon University

11:30-11:45 ThBT6.3

Star-Searcher: A Complete and Efficient Aerial System for Autonomous Target Search in Complex Unknown Environments, N/A

Luo, Yiming	The University of Hong Kong
Zhuang, Zixuan	Sun Yat-Sen University
Pan, Neng	Zhejiang University
Feng, Chen	Hong Kong University of Science and Technology
Shen, Shaojie	Hong Kong University of Science and Technology
Gao, Fei	Zhejiang University
Cheng, Hui	Sun Yat-Sen University
Zhou, Boyu	Sun Yat-Sen University

11:45-12:00 ThBT6.4

3D Active Metric-Semantic SLAM, N/A

Tao, Yuezhan	University of Pennsylvania
Liu, Xu	University of Pennsylvania
Spasojevic, Igor	University of Pennsylvania
Agarwal, Saurav	University of Pennsylvania
Kumar, Vijay	University of Pennsylvania

ThBT7 Room 7

Human-Robot Interaction II (Regular session)

Chair: Leonetti, Matteo	King's College London
Co-Chair: Bera, Aniket	Purdue University

11:00-11:15 ThBT7.1

Probabilistic Inference of Human Capabilities from Passive Observations, pp. 8778-8784.

Tisnikar, Peter	King's College London
Canal, Gerard	King's College London
Leonetti, Matteo	King's College London

11:15-11:30 ThBT7.2

Using Augmented Reality in Human-Robot Assembly: A Comparative Study of Eye-Gaze and Hand-Ray Pointing Methods, pp. 8785-8792. Attachment

Tadeja, Slawomir Konrad	University of Cambridge
Zhou, Tianye	University of Cambridge
Capponi, Matteo	Politecnico Di Torino
Walas, Krzysztof, Tadeusz	Poznan University of Technology
Bohné, Thomas	University of Cambridge
Forni, Fulvio	University of Cambridge

11:30-11:45 ThBT7.3

TrustNavGPT: Trust-Driven Audio-Guided Robot Navigation under Uncertainty with Large Language Models, pp. 8793-8800. Attachment

Sun, Xingpeng	Purdue University
Zhang, Yiran	Purdue University
Tang, Xindi	Purdue University
Bedi, Amrit Singh	University of Maryland, College Park
Bera, Aniket	Purdue University

11:45-12:00 ThBT7.4

A Comparison of Audible, Visual, and Multi-Modal Communication for Multi-Robot Supervision and Situational Awareness, pp. 8801-8808.

Attfield, Richard	Monash University
Croft, Elizabeth	University of Victoria
Kulic, Dana	Monash University

ThBT8 Room 8

Localization V (Regular session)

Chair: Lee, Dongjun	Seoul National University

11:00-11:15 ThBT8.1

UWB-Based Localization System Considering Antenna Anisotropy and NLOS/Multipath Conditions, pp. 8809-8815.

Kim, Taekyun	Seoul National University
Yoon, Byoungkwon	Seoul National University
Lee, Dongjun	Seoul National University

11:15-11:30 ThBT8.2

SDFT: Structural Discrete Fourier Transform for Place Recognition and Traversability Analysis, pp. 8816-8823. Attachment

Umemura, Ayumi	Tohoku University
Sakurada, Ken	National Institute of Advanced Industrial Science and Technology
Onishi, Masaki	National Inst. of AIST
Yoshida, Kazuya	Tohoku University

11:30-11:45 ThBT8.3

CATOA: Cooperative Calibration of Timestamp Measurements for Distributed Multi-Robot Localization, pp. 8824-8829.

Wen, Feiyang	Tsinghua University

Zhao, Hanying	Tsinghua University
Jincheng, Yu	Tsinghua University
Cui, Shulin	Meituan
Shen, Yuan	Tsinghua University

11:45-12:00 ThBT8.4

Fast Global Point Cloud Registration Using Semantic NDT, pp. 8830-8837.

Schirmer, Robert	Robert Bosch GmbH
Vaskevicius, Narunas	Robert Bosch GmbH
Biber, Peter	Robert Bosch GmbH
Stachniss, Cyrill	University of Bonn

ThBT9 Room 9

Motion and Path Planning V (Regular session)

Chair: Ren, Zhongqiang	Shanghai Jiao Tong University
Co-Chair: Chamzas, Constantinos	Worcester Polytechnic Institute

11:00-11:15 ThBT9.1

Agile and Safe Trajectory Planning for Quadruped Navigation with Motion Anisotropy Awareness, pp. 8838-8845. Attachment

Zhang, Wentao	Huazhong University of Science and Technology
Xu, Shaohang	Huazhong University of Science and Technology
Cai, Peiyuan	Huazhong University of Science and Technology
Zhu, Lijun	Huazhong University of Science and Technology

11:15-11:30 ThBT9.2

A Mixed-Integer Conic Program for the Moving-Target Traveling Salesman Problem Based on a Graph of Convex Sets, pp. 8846-8852. Attachment

George Philip, Allen	Texas A&M University
Ren, Zhongqiang	Shanghai Jiao Tong University
Rathinam, Sivakumar	TAMU
Choset, Howie	Carnegie Mellon University

11:30-11:45 ThBT9.3

Expansion-GRR: Efficient Generation of Smooth Global Redundancy Resolution Roadmaps, pp. 8853-8859. Attachment

Zhong, Zhuoyun	Worcester Polytechnic Institute
Li, Zhi	Worcester Polytechnic Institute
Chamzas, Constantinos	Worcester Polytechnic Institute

11:45-12:00 ThBT9.4

Asymptotically Optimal Lazy Lifelong Sampling-Based Algorithm for Efficient Motion Planning in Dynamic Environments, pp. 8860-8866. Attachment

Huang, Lu	City University of Hongkong
Jing, Xingjian	City University of Hong Kong

ThBT10 Room 10

Deep Learning for Visual Perception II (Regular session)

Co-Chair: Kolyubin, Sergey	ITMO University

11:00-11:15 ThBT10.1

GenerOcc: Self-Supervised Framework of Real-Time 3D Occupancy Prediction for Monocular Generic Cameras, pp. 8867-8873. Attachment

Pan, Xianghui	Tongji University
Du, Jiayuan	Tongji University
Liu, Chengju	Tongji University
Chen, Qijun	Tongji University
Su, Shuai	Tongji University, China
Zong, Wenhao	DominantTech
Wang, Xiao	DominantTech

11:15-11:30 ThBT10.2

LiOn-XA: Unsupervised Domain Adaptation Via LiDAR-Only Cross-Modal Adversarial Training, pp. 8874-8880.

Kreutz, Thomas	Technical University Darmstadt
Lemke, Jens	Technical University of Darmstadt
Mühlhäuser, Max	Technical University of Darmstadt

Sanchez Guinea, Alejandro	TU Darmstadt

11:30-11:45 ThBT10.3

NeuSurfEmb: A Complete Pipeline for Dense Correspondence-Based 6D Object Pose Estimation without CAD Models, pp. 8881-8888. Attachment

Milano, Francesco	ETH Zurich
Chung, Jen Jen	The University of Queensland
Blum, Hermann	Uni Bonn | Lamarr Institute
Siegwart, Roland	ETH Zurich
Ott, Lionel	ETH Zurich

11:45-12:00 ThBT10.4

Recurrent Non-Rigid Point Cloud Registration, pp. 8889-8896. Attachment

Cao, Yue	ANU
Cheng, Ziang	The Australian National University
Li, Hongdong	Australian National University and NICTA

ThBT11 Room 11

Multi-Robot Systems V (Regular session)

Chair: Bera, Aniket	Purdue University
Co-Chair: Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

11:00-11:15 ThBT11.1

D3G: Learning Multi-Robot Coordination from Demonstrations, pp. 8897-8903. Attachment

Zhou, Yizhi	George Mason University
Jin, Wanxin	Arizona State University
Wang, Xuan	George Mason University

11:15-11:30 ThBT11.2

SiCP: Simultaneous Individual and Cooperative Perception for 3D Object Detection in Connected and Automated Vehicles, pp. 8904-8911.

Qu, Deyuan	University of North Texas
Chen, Qi	Toyota Motor North America, InfoTech Labs
Bai, Tianyu	University of North Texas
Lu, Hongsheng	Toyota Motor North America
Fan, Heng	University of North Texas
Zhang, Hao	University of Massachusetts Amherst
Fu, Song	University of North Texas
Yang, Qing	University of North Texas

11:30-11:45 ThBT11.3

Optimizing Crowd-Aware Multi-Agent Path Finding through Local Broadcasting with Graph Neural Networks, pp. 8912-8919. Attachment

Pham, Phu	Purdue University
Bera, Aniket	Purdue University

11:45-12:00 ThBT11.4

Inverse Submodular Maximization with Application to Human-In-The-Loop Multi-Robot Multi-Objective Coverage Control, pp. 8920-8927.

Shi, Guangyao	University of Southern California
Sukhatme, Gaurav	University of Southern California

ThBT12 Room 12

Learning from Humans (Regular session)

Co-Chair: Betz, Johannes	Technical University of Munich

11:00-11:15 ThBT12.1

Long-Horizon Visual Action Based Food Acquisition, pp. 8928-8934. Attachment

Bhaskar, Amisha	University of Maryland, College Park
Liu, Rui	University of Maryland
Sharma, Vishnu D.	University of Maryland
Shi, Guangyao	University of Southern California
Tokekar, Pratap	University of Maryland

11:15-11:30 ThBT12.2

Learning Bimanual Manipulation Policies for Bathing Bed-Bound People, pp. 8935-8942. Attachment

Gu, Yijun	Imperial College London
Demiris, Yiannis	Imperial College London

11:30-11:45 ThBT12.3

Learning Human-To-Humanoid Real-Time Whole-Body Teleoperation, pp. 8943-8950. Attachment

He, Tairan	Carnegie Mellon University
Luo, Zhengyi	Carnegie Mellon University
Xiao, Wenli	Carnegie Mellon University
Zhang, Chong	ETH Zurich
Kitani, Kris	Carnegie Mellon University
Liu, Changliu	Carnegie Mellon University
Shi, Guanya	Carnegie Mellon University

11:45-12:00 ThBT12.4

Translating Agent-Environment Interactions from Humans to Robots, pp. 8951-8958. Attachment

Shankar, Tanmay	Carnegie Mellon University
Chawla, Chaitanya	TU Munich, Carnegie Mellon University
Hassan, Almutwakel Khalid	Carnegie Mellon University
Oh, Jean	Carnegie Mellon University

ThBT13 Room 13

Sensor Fusion III (Regular session)

Co-Chair: Hosseinzadeh, Mehdi	The Australian Institute for Machine Learning (AIML) -- the University of Adelaide

11:00-11:15 ThBT13.1

Event-Free Moving Object Segmentation from Moving Ego Vehicle, pp. 8959-8964.

Zhou, Zhuyun	University of Burgundy (Université De Bourgogne), France
Wu, Zongwei	University of Wurzburg
Paudel, Danda Pani	ETH Zurich
Boutteau, Rémi	Université De Rouen Normandie
Yang, Fan	Univ. Bourgogne Franche-Comté
Van Gool, Luc	ETH Zurich
Timofte, Radu	University of Wurzburg
Ginhac, Dominique	Univ Burgundy

11:15-11:30 ThBT13.2

Deep Visual Odometry with Events and Frames, pp. 8965-8972. Attachment

Pellerito, Roberto	University of Zurich / ETH
Cannici, Marco	University of Zurich
Gehrig, Daniel	University of Zurich / ETH
Belhadj, Joris	European Space Agency, Noordwijk, the Netherlands
Dubois-Matra, Olivier	European Space Agency, Noordwijk, the Netherlands
Casasco, Massimo	European Space Agency, Noordwijk, the Netherlands
Scaramuzza, Davide	University of Zurich

11:30-11:45 ThBT13.3

Efficient-PIP: Large-Scale Pixel-Level Aligned Image Pair Generation for Cross-Time Infrared-RGB Translation, pp. 8973-8980. Attachment

Li, Jian	National University of Defense Technology
Fei, Kexin	National University of Defense Technology
Sun, Yi	National University of Defense Technology
Wang, Jie	National University of Defense Technology
Liu, Bokai	National University of Defense Technology
Zhou, Zongtan	National University of Defense Technology
Zheng, Yongbin	National University of Defense Technology
Sun, Zhenping	National University of Defense Technology

11:45-12:00 ThBT13.4

Reality Fusion: Robust Real-Time Immersive Mobile Robot Teleoperation with Volumetric Visual Data Fusion, pp. 8981-8988.

Li, Ke	Deutsches Elektronen-Synchrotron DESY
Bacher, Reinhard	Deutsches Elektronen-Synchrotron DESY

Schmidt, Susanne	Universität Hamburg
Leemans, Wim	Deutsches Elektronen-Synchrotron DESY
Steinicke, Frank	HCI / University of Hamburg

ThBT14	Room 14
Swarm Robotics (Regular session)	
Chair: Reina, Andreagiovanni	Université Libre De Bruxelles
Co-Chair: Hiraki, Takefumi	Cluster Metaverse Lab

11:00-11:15 ThBT14.1

Decentralized Trajectory Planning for Formation Flight in Unknown and Dense Environments, pp. 8989-8996.
Attachment

Zeng, Jianxin	Hunan University
Wang, Yaonan	Hunan University
Miao, Zhiqiang	Hunan University
He, Wei	University of Science and Technology Beijing
Wang, Hesheng	Shanghai Jiao Tong University

11:15-11:30 ThBT14.2

Language-Guided Pattern Formation for Swarm Robotics with Multi-Agent Reinforcement Learning, pp. 8997-9004.
Attachment

Liu, Hsu-Shen	National Tsing Hua University
Kuroki, So	The University of Tokyo
Kozuno, Tadashi	Omron Sinic X
Sun, Wei-Fang	NVIDIA
Lee, Chun-Yi	National Tsing Hua University

11:30-11:45 ThBT14.3

Robot Swarm Control Based on Smoothed Particle Hydrodynamics for Obstacle-Unaware Navigation, pp. 9005-9012.
Attachment

Eguchi, Michikuni	University of Tsukuba
Nishimura, Mai	Omron Sinic X
Yoshida, Shigeo	OMRON SINIC X Corporation
Hiraki, Takefumi	Cluster Metaverse Lab

11:45-12:00 ThBT14.4

Miscommunication between Robots Can Improve Group Accuracy in Best-Of-N Decision-Making, pp. 9013-9020.
Attachment

Zakir, Raina	Université Libre De Bruxelles
Dorigo, Marco	Université Libre De Bruxelles
Reina, Andreagiovanni	Université Libre De Bruxelles

ThF6O	Auditorium
Forum 6 - Empowering Diverse Voices in Robotics (Forum)	
Chair: Ashour, Reem	Khalifa University of Science and Technology

09:00-12:00 ThF6O.1

*Empowering Diverse Voices in Robotics**. N/A

Ashour, Reem	Khalifa University of Science and Technology

ThF7O	Room 17/18
Forum 7 - Human-Avatars Symbiosis: Can You Imagine a Future Society Where You Can Remotely Control Multiple Avatars? (Forum)	
Chair: Hagita, Norihiro	ATR
Co-Chair: Horikawa, Yukiko	Advanced Telecommunications Research Institute International

09:00-12:00 ThF7O.1

*Human-Avatars Symbiosis – Can You Imagine a Future Society Where You Can Remotely Control Multiple Avatars? –**. N/A

Hagita, Norihiro	ATR
Dario, Paolo	Scuola Superiore Sant'Anna
Sanfeliu, Alberto	Universitat Politècnica De Cataluyna
Ishiguro, Hiroshi	Osaka University
Horikawa, Yukiko	Advanced Telecommunications Research Institute International

ThPI5T1 Room 1

Legged Robot Systems II (Teaser Session)

Chair: Huang, Guoquan — University of Delaware

Co-Chair: Onishi, Yuki — Chiba Institute of Technology

15:30-16:30 ThPI5T1.1

Research on Autonomous Navigation of Dual-Mode Wheel-Legged Robot, pp. 9021-9028. Attachment

Wang, Wen — Hohai University

Xu, Xiaobin — Hohai University

Chen, Ziheng — Hohai University

Yang, Jian — Yangzhou University

Ran, Yingying — Hohai University

Tan, Zhiying — Hohai University

Luo, Minzhou — Hohai University

15:30-16:30 ThPI5T1.2

Real-Time Coupled Centroidal Motion and Footstep Planning for Biped Robots, pp. 9029-9034.

Bartlett, Tara — The University of Sydney

Manchester, Ian — University of Sydney

15:30-16:30 ThPI5T1.3

Understanding How a 3-Dimensional ZMP Exactly Decouples the Horizontal and Vertical Dynamics of the CoM-ZMP Model, pp. 9035-9041.

Onishi, Yuki — Tokyo Institute of Technology

Kajita, Shuuji — Chubu University

15:30-16:30 ThPI5T1.4

Online Determination of Legged Kinematics, pp. 9042-9048.

Burgul, Chinmay — University of Delaware

Lee, Woosik — University of Delaware

Geneva, Patrick — University of Delaware

Huang, Guoquan — University of Delaware

15:30-16:30 ThPI5T1.5

HILMA-Res: A General Hierarchical Framework Via Residual RL for Combining Quadrupedal Locomotion and Manipulation, pp. 9049-9056. Attachment

Huang, Xiaoyu — Georgia Institute of Technology

Liao, Qiayuan — University of California, Berkeley

Ni, Yiming — University of California Berkeley

Li, Zhongyu — University of California, Berkeley

Smith, Laura — UC Berkeley

Levine, Sergey — UC Berkeley

Peng, Xue Bin — Simon Fraser University

Sreenath, Koushil — University of California, Berkeley

15:30-16:30 ThPI5T1.6

StaccaToe: A Single-Leg Robot That Mimics the Human Leg and Toe, pp. 9057-9064. Attachment

Perera, Kankanige Nisal Minula — University of Massachusetts Amherst

Yu, Shangqun — University of Massachusetts Amherst

Marew, Daniel — University of Massachusetts Amherst

Tang, Mack — University of Maryland College Park

Suzuki, Ken — University of Massachusetts Amherst

McCormack, Aidan — University of Massachusetts Amherst

Zhu, Shifan — University of Massachusetts Amherst

Kim, Yong-Jae — Korea University of Technology and Education

Kim, Donghyun — University of Massachusetts Amherst

15:30-16:30 ThPI5T1.7

Structural Optimization of Lightweight Bipedal Robot Via SERL, pp. 9065-9072. Attachment

Cheng, Yi — Tsinghua University

Han, Chenxi — Tsinghua University

Min, Yuheng — Tsinghua University

Liu, Houde — Shenzhen Graduate School, Tsinghua University

Ye, Linqi — Shanghai University

Liu, Hang — University of Michigan

15:30-16:30 ThPI5T1.8

Quadruped Robot Traversing 3D Complex Environments with Limited Perception, pp. 9073-9080. Attachment

Cheng, Yi	Tsinghua University
Liu, Hang	University of Michigan
Pan, Guoping	Tsinghua University
Liu, Houde	Shenzhen Graduate School, Tsinghua University
Ye, Linqi	Shanghai University

15:30-16:30 ThPI5T1.9

Development of Bidirectional Series Elastic Actuator with Torsion Coil Spring and Implementation to the Legged Robot, pp. 9081-9086. Attachment

Koda, Yuta	Sony Interactive Entertainment
Osawa, Hiroshi	Sony Interactive Entertainment
Nagatsuka, Norio	Sony Interactive Entertainment
Kariya, Shinichi	Sony Interactive Entertainment
Inagawa, Taeko	Sony Interactive Entertainment
Ishizuka, Kensaku	Sony Interactive Entertainment

15:30-16:30 ThPI5T1.10

Evaluation and Design Recommendations for a Folding Morphing-Wheg Robot for Nuclear Characterisation, pp. 9087-9092.

Murphy, Dominic	University of the West of England
Giuliani, Manuel	Kempten University of Applied Sciences
Bremner, Paul	University of the West of England

15:30-16:30 ThPI5T1.11

Safety-Critical Autonomous Inspection of Distillation Columns Using Quadrupedal Robots Equipped with Roller Arms, pp. 9093-9100. Attachment

Lee, Jaemin	North Carolina State University
Kim, Jeeseop	Caltech
Ames, Aaron	Caltech

15:30-16:30 ThPI5T1.12

Learning Visual Quadrupedal Loco-Manipulation from Demonstrations, pp. 9101-9108. Attachment

He, Zhengmao	The Hong Kong University of Science and Technology (Guangzhou)
Lei, Kun	Shanghai Qizhi Institute
Ze, Yanjie	Stanford University
Sreenath, Koushil	University of California, Berkeley
Li, Zhongyu	University of California, Berkeley
Xu, Huazhe	Tsinghua University

15:30-16:30 ThPI5T1.13

PA-LOCO: Learning Perturbation-Adaptive Locomotion for Quadruped Robots, pp. 9109-9114. Attachment

Xiao, Zhiyuan	Sun Yat-Sen University
Zhang, Xinyu	Sun Yat-Sen University
Zhou, Xiang	Sun Yat-Sen University
Zhang, Qingrui	Sun Yat-Sen University

15:30-16:30 ThPI5T1.14

Robust Agility Via Learned Zero Dynamics Policies, pp. 9115-9122. Attachment

Csomay-Shanklin, Noel	California Institute of Technology
Compton, William	Georgia Institute of Technology
Jimenez Rodriguez, Ivan Dario	California Institute of Technology
Ambrose, Eric	California Institute of Technology
Yue, Yisong	California Institute of Technology
Ames, Aaron	California Institute of Technology

15:30-16:30 ThPI5T1.15

Preliminary Result of Cury: A Backdrivable Leg Design Using Linear Actuators, pp. 9123-9128. Attachment

Guan, Zhongtao	ShanghaiTech University
Chen, Yiming	Shanghaitech University
Zhu, Junlei	ShanghaiTech University
Hu, Yu	Shanghaitech University
Bai, Weibang	Shanghaitech University

Chen, Jiahao	ShanghaiTech University

ThPI5T2	Room 2
Soft and Flexible Robotics I (Teaser Session)	
Chair: Wen, Li	Beihang University
Co-Chair: Althoefer, Kaspar	Queen Mary University of London

15:30-16:30	ThPI5T2.1
To Help or Not to Help: LLM-Based Attentive Support for Human-Robot Group Interactions, pp. 9129-9136. Attachment	
Tanneberg, Daniel	Honda Research Institute
Ocker, Felix	Honda Research Institute Europe
Hasler, Stephan	Honda Research Institute Europe
Deigmoeller, Joerg	Honda Research Institute Europe
Belardinelli, Anna	Honda Research Institute Europe
Wang, Chao	Honda Research Institute Europe GmbH
Wersing, Heiko	Honda Research Institute Europe
Sendhoff, Bernhard	Honda Research Institute Europe GmbH
Gienger, Michael	Honda Research Institute Europe

15:30-16:30	ThPI5T2.2
Modelling and Analysis of Joint-To-End Variable Stiffness for Cable-Driven Hyper-Redundant Manipulator, pp. 9137-9142.	
Zhang, Hongyang	Huazhong University of Science and Technology
Wang, Shuting	Huazhong University of Science and Technology
Li, Hu	Huazhong University of Science and Technology
Xie, Yuanlong	Huazhong University of Science and Technology

15:30-16:30	ThPI5T2.3
Adaptive Smith Predictor Fractional Control of a Tele-Operated Flexible Link Robot, pp. 9143-9150.	
Gharab, Saddam	UCLM
Ben Ftima, Salma	Phd Student
Feliu, Vicente	Escuela Técnica Superior De IngenierosIndustriales/Universidad D

15:30-16:30	ThPI5T2.4
Dynamic Model and Experimental Validation of a Haptic Robot Based on a Flexible Antenna Mounted on an Omnidirectional Platform, pp. 9151-9157.	
Merida-Calvo, Luis	Escuela Técnica Superior De Ingeniería Industrial (Ciudad Real)
Haro-Olmo, Maria Isabel	University of Castilla La Mancha
Feliu, Vicente	Escuela Técnica Superior De IngenierosIndustriales/Universidad D

15:30-16:30	ThPI5T2.5
Robotic Object Insertion with a Soft Wrist through Sim-To-Real Privileged Training, pp. 9158-9165. Attachment	
Fuchioka, Yuni	ETH Zurich
Beltran-Hernandez, Cristian Camilo	OMRON SINIC X Corporation
Hai, Nguyen	Northeastern University
Hamaya, Masashi	OMRON SINIC X Corporation

15:30-16:30	ThPI5T2.6
Design and Control of a Soft Supernumerary Robotic Limb Based on Fiber-Reinforced Actuator, pp. 9166-9173. Attachment	
Zhang, Tianyi	Nanjing University of Aeronautics and Astronaut
Xu, Jiajun	Nanjing University of Aeronautics and Astronautics
Lu, Yonghua	Nanjing University of Aeronautics and Astronautics
Zhao, Mengcheng	Nanjing University of Aeronautics and Astronautics
Huang, Kaizhen	Nanjing University of Aeronautics and Astronautics
Chen, Bai	Nanjing University of Aeronautics and Astronautics
Hou, Xuyan	Harbin Institute of Technology
Li, You-Fu	City University of Hong Kong

15:30-16:30	ThPI5T2.7
Programming Passive Fingertip Deformation for Improved Grasping and Manipulation, pp. 9174-9180. Attachment	
Puhlmann, Steffen	TU Berlin
Weber, Lion-Constantin	TU Berlin
Hoeppner, Hannes	Berliner Hochschule Für Technik, BHT

15:30-16:30	ThPI5T2.8

A Circular Soft Pneumatic Actuator with Bi-Directional Bending Behavior, pp. 9181-9187. Attachment

Circe, Jeannette	The Cooper Union
Giglia, Michael	The Cooper Union
Rivera, Isaiah	The Cooper Union
Vardanyan, Ani	The Cooper Union
Bunt, Brandon, Kiau	The Cooper Union
Rosen, Michelle	The Cooper Union

15:30-16:30 ThPI5T2.9

A Laser-Induced Graphene-Based Flexible Multimodal Sensor for Material and Texture Perception, pp. 9188-9193. Attachment

Duo, Youning	Beihang University
Duan, Jinxi	Beihang University
Chen, Xingyu	Beihang University
Liu, Wenbo	Beihang University
Wang, Shengxue	Beihang University
Wen, Li	Beihang University

15:30-16:30 ThPI5T2.10

Reconfigurable Soft Gripper Based on Eversion and Electroadhesion for Cluttered Environments, pp. 9194-9200. Attachment

Ragab, Dana	University of Sussex
Rendon-Morales, Elizabeth	University of Sussex
Althoefer, Kaspar	Queen Mary University of London
Godaba, Hareesh	University of Sussex

15:30-16:30 ThPI5T2.11

Integrated Electronic Circuitry for Soft Robots Using Multi-Material FDM Printing, pp. 9201-9206. Attachment

Aygul, Cem	Worcester Polytechnic Institute
Pandey, Ritwik	Worcester Polytechnic Institute
Kothimbakam, Krishram	Worcester Polytechnic Institute
Yilmaz Akkaya, Ceren	Worcester Polytechnic Institute
Rao, Pratap	Worcester Polytechnic Institute
Nemitz, Markus	Tufts University

15:30-16:30 ThPI5T2.12

Optimal Sensing in Soft Pneumatic Actuators Via Stretchable Optical Waveguides, pp. 9207-9212. Attachment

ALJaber, Faisal	Qatar University
Hassan, Ahmed	Queen Mary University of London
Vitanov, Ivan	Queen Mary, University of London
Almeadadi, Noora	Qatar University
Alhajri, Hind	Qatar University
AlEnazi, Sara	Qatar University
Al-Marri, Rashid	Qatar University
Choe, Pilsung	Qatar University
Althoefer, Kaspar	Queen Mary University of London

15:30-16:30 ThPI5T2.13

Agonist-Antagonist Pouch Motors: Bidirectional Soft Actuators Enhanced by Thermally Responsive Peltier Elements, pp. 9213-9219. Attachment

Exley, Trevor	University of North Texas
Wijesundara Mudiyanselage, Rashmi Diviyanjali	University of North Texas
Tan, Nathan	Advanced Robotic Manipulators Lab, the University of North Texas
Sunkara, Akshay	ARM Lab
He, Xinyu	The Texas Academy of Mathematics and Science at University of No
Wang, Shuopu	University of North Texas
Chan, Bonnie	ARM Lab, University of North Texas
Jain, Aditya Jain	University of North Texas
Espinosa, Luis	University of North Texas
Jafari, Amir	University of North Texas

15:30-16:30 ThPI5T2.14

Design of a Pneumatically Driven 3D-Printed Under-Actuated Soft Robot with Programmable Stiffness, pp. 9220-9225. Attachment

Mustafa, Zaid	Sabanci University
Turkseven, Melih	Sabanci University

15:30-16:30 ThPI5T2.15

Enabling Maintainablity of Robot Programs in Assembly by Extracting Compositions of Force and Position-Based Robot Skills from Learning-From-Demonstration Models, pp. 9226-9233. Attachment

Bargmann, Daniel	Fraunhofer IPA
Kraus, Werner	Fraunhofer IPA
Huber, Marco F.	University of Stuttgart

15:30-16:30 ThPI5T2.16

Effects of Fiber Number and Density on Fiber Jamming: Towards Follow-The-Leader Deployment of a Continuum Robot, pp. 9234-9239. Attachment

Qian, Chen	University of New South Wales
Liu, Tangyou	The University of New South Wales
Wu, Liao	University of New South Wales

ThPI5T3 Room 3

Human-Robot Interaction (HRI) II (Teaser Session)

Chair: Secchi, Cristian	Univ. of Modena & Reggio Emilia
Co-Chair: Marino, Alessandro	University of Cassino and Southern Lazio

15:30-16:30 ThPI5T3.1

Design and Evaluation of a Prototype Tactile Scanner for Active Sensing of Proximal Objects, pp. 9240-9246.

Dechaux, Amaury	Laboratoire d'Informatique, Robotique Et Microelectronique De Mo
Kitazaki, Michiteru	Toyohashi University of Technology
Lagarde, Julien	University Montpellier 1
Ganesh, Gowrishankar	Centre National De La Recherche Scientifique (CNRS)

15:30-16:30 ThPI5T3.2

Automatic Dietary Monitoring Using Inertial Sensor in Smartwatch, pp. 9247-9252. Attachment

Pavlov, Konstantin	Samsung Research
Tsepulin, Vladimir	Samsung Research
Lutsyak, Nikolay	Samsung Research
Khasianov, Rasul	Samsung Research
Simchuk, Egor	Samsung Research
Perchik, Alexey	Samsung Research
Elena, Volkova	Samsung Research

15:30-16:30 ThPI5T3.3

Interactive Reward Tuning: Interactive Visualization for Preference Elicitation, pp. 9253-9260. Attachment

Shi, Danqing	Aalto University
Zhu, Shibei	Aalto University
Weinkauf, Tino	KTH Royal Institute of Technology
Oulasvirta, Antti	Aalto University

15:30-16:30 ThPI5T3.4

Foot Arch Stiffness-Based Dynamic Plantar Support Control of Human Walking Gait with Active Pneumatic Insoles, pp. 9261-9268.

Liu, Chenhao	School of Mechanical Engineering, Zhejiang University
Yi, Jingang	Rutgers University
He, Long	Zhiyuan Research Institute
Zhang, Yijun	The First Affiliated Hospital Zhejiang University School of Medi
Zhang, Xiufeng	National Research Center for Rehabilitation Technical Aids
Liu, Tao	Zhejiang University

15:30-16:30 ThPI5T3.5

Fast Explicit-Input Assistance for Teleoperation in Clutter, pp. 9269-9275. Attachment

Walker, Nick	University of Washington
Yang, Xuning	NVIDIA
Garg, Animesh	Georgia Institute of Technology
Cakmak, Maya	University of Washington
Fox, Dieter	University of Washington
Pérez-D'Arpino, Claudia	NVIDIA

15:30-16:30 ThPI5T3.6

PGA: Personalizing Grasping Agents with Single Human-Robot Interaction, pp. 9276-9283. Attachment

Kim, Junghyun	Seoul National University
Kang, Gi-Cheon	Seoul National University
Kim, Jaein	Seoul National University
Yang, Seoyun	University of Toronto
Jung, Minjoon	Seoul National University
Zhang, Byoung-Tak	Seoul National University

15:30-16:30 ThPI5T3.7

Boosting 3D Visual Grounding by Object-Centric Referring Network, pp. 9284-9290.

Ren, Ruilong	Peking University
Cao, Jian	Peking University
Xu, Weichen	Peking University
Fu, Tianhao	Peking University
Dong, Yilei	Peking University
Xu, Xinxin	Peking University
Hu, Zicong	Peking University
Zhang, Xing	Peking University

15:30-16:30 ThPI5T3.8

Adaptive Passivation of Admittance Controllers by Bypassing Power to Null Space on Redundant Manipulators, pp. 9291-9297. Attachment

Yun, Yeoil	Sungkyunkwan Univ
Oh, DongJun	SungKyunKwan University
Song, Eun Jeong	SungKyunKwan University
Choi, Hyouk Ryeol	Sungkyunkwan University
Moon, Hyungpil	Sungkyunkwan University
Koo, Ja Choon	Sungkyunkwan University

15:30-16:30 ThPI5T3.9

Learning-Based Adaptive Admittance Controller for Efficient and Safe pHRI in Contact-Rich Manufacturing Tasks, pp. 9298-9305. Attachment

Pourakbarian Niaz, Pouya	Koc University
Erzin, Engin	Koc University
Basdogan, Cagatay	Koc University

15:30-16:30 ThPI5T3.10

Force and Velocity Prediction in Human-Robot Collaborative Transportation Tasks through Video Retentive Networks, pp. 9306-9312. Attachment

Dominguez-Vidal, Jose Enrique	Institut De Robòtica I Informàtica Industrial, CSIC-UPC
Sanfeliu, Alberto	Universitat Politècnica De Cataluyna

15:30-16:30 ThPI5T3.11

Development of a Super-Thin and Fast Omnidirectional Treadmill through a Novel Helical Transmission Mechanism, pp. 9313-9319. Attachment

Pyo, Sanghun	Gwangju Institute of Science and Technology
Choi, Jinsun	Gwangju Institute of Science and Technology
Yoon, Jungwon	Gwangju Institutue of Science and Technology

15:30-16:30 ThPI5T3.12

Compliant Blind Handover Control for Human-Robot Collaboration, pp. 9320-9326. Attachment

Ferrari, Davide	University of Modena and Reggio Emilia
Pupa, Andrea	University of Modena and Reggio Emilia
Secchi, Cristian	Univ. of Modena & Reggio Emilia

15:30-16:30 ThPI5T3.13

Perception-Driven Shared Control Architecture for Agricultural Robots Performing Harvesting Tasks, pp. 9327-9333. Attachment

Palmieri, Jozsef	University of Cassino and Southern Lazio
Di Lillo, Paolo	University of Cassino and Southern Lazio
Sanfeliu, Alberto	Universitat Politècnica De Cataluyna
Marino, Alessandro	University of Cassino and Southern Lazio

15:30-16:30 ThPI5T3.14

Transparency Evaluation for the Kinematic Design of the Harnesses through Human-Exoskeleton Interaction Modeling, pp. 9334-9340.

Bezzini, Riccardo	Scuola Superiore Sant'Anna

Avizzano, Carlo Alberto	Scuola Superiore Sant'Anna
Porcini, Francesco	PERCRO Laboratory, TeCIP Institute, Sant'Anna School of Advanced
Filippeschi, Alessandro	Scuola Superiore Sant'Anna

15:30-16:30 ThPI5T3.15

Design and Validation of Soft Flexible Aerial Robot for Safe Human-Robot Interaction, pp. 9341-9346. Attachment

Jia, Fuhua	University of Nottingham, Ningbo, China
Zheng, Zihao	University of Nottingham Ningbo China
Li, Cheng'ao	University of Nottingham Ningbo China
Xiao, Junlin	University of Nottingham Ningbo China
Li, Rui	Umea University
Yang, Xiaoying	University of Nottingham
Rushworth, Adam	The University of Nottingham, Ningbo China
Ijaz, Salman	University of Nottingham Ningbo China

15:30-16:30 ThPI5T3.16

SmartKit： User-Friendly Robot with Multiple Operating Systems, pp. 9347-9353.

Chen, Guanyu	Zhejiang University
Zhou, Yiqun	Zhejiang University
Yang, Guoqing	Zhejiang University
Lv, Pan	Zhejiang University
Li, Hong	Zhejiang University

ThPI5T4 Room 4

Robot Vision III (Teaser Session)

Chair: Knoll, Alois	Tech. Univ. Muenchen TUM
Co-Chair: Li, Weizi	University of Tennessee, Knoxville

15:30-16:30 ThPI5T4.1

3D Object Visibility Prediction in Autonomous Driving, pp. 9354-9360.

Luo, Chuanyu	Ilmenau University of Technology
Cheng, Nuo	Nuo.cheng@tu-Ilmenau.de
Zhong, Ren	Great Wall Motor Co., Ltd
Jiang, Haipeng	Great Wall Motor Co., Ltd
Chen, Wenyu	Ilmenau University of Technology
Wang, Aoli	Ilmenau University of Technology
Li, Pu	Department of Simulation and Optimal Processes, Institute of Aut

15:30-16:30 ThPI5T4.2

Mini-PointNetPlus: A Local Feature Descriptor in Deep Learning Model for Real-Time 3D Environment Perception, pp. 9361-9365.

Luo, Chuanyu	Ilmenau University of Technology
Cheng, Nuo	Nuo.cheng@tu-Ilmenau.de
Ma, Sikun	LiangDao GmbH
Xiang, Jun	LiangDao GmbH
Li, Xiaohan	LiangDao GmbH
Lei, Shengguang	LiangDao GmbH
Li, Pu	Department of Simulation and Optimal Processes, Institute of Aut

15:30-16:30 ThPI5T4.3

Automatic Image Annotation for Mapped Features Detection, pp. 9366-9372. Attachment

Noizet, Maxime	Université De Technologie De Compiègne
Xu, Philippe	ENSTA Paris, Institut Polytechnique De Paris
Bonnifait, Philippe	Univ. of Technology of Compiegne

15:30-16:30 ThPI5T4.4

AutoJoin: Efficient Adversarial Training against Gradient-Free Perturbations for Robust Maneuvering Via Denoising Autoencoder and Joint Learning, pp. 9373-9379. Attachment

Villarreal, Michael	University of Tennessee, Knoxville
Poudel, Bibek	University of Tennessee Knoxville
Wickman, Ryan	University of Memphis
Shen, Yu	University of Maryland
Li, Weizi	University of Tennessee, Knoxville

15:30-16:30 ThPI5T4.5

Supervised Articulation Angles Estimation for Multi-Articulated Vehicles Based on Panoramic Camera System, pp. 9380-9386.

Liu, Weimin — Tsinghua University
Wang, Wenjun — Tsinghua University
Sun, Zhaocong — Tsinghua University

15:30-16:30 ThPI5T4.6

SGOR: Outlier Removal by Leveraging Semantic and Geometric Information for Robust Point Cloud Registration, pp. 9387-9394. Attachment

Zhao, Guiyu — Beijing Institute of Technology
Guo, Zhentao — Beijing Institute of Technology
Ma, Hongbin — Beijing Institute of Technology

15:30-16:30 ThPI5T4.7

Self-Supervised Monocular Depth Estimation in Challenging Environments Based on Illumination Compensation PoseNet, pp. 9395-9402. Attachment

Hou, Shengyu — Beijing Institute of Technology
Song, Wenjie — Beijing Institute of Technology
Wang, Rongchuan — Beijing Institute of Technology
Wang, Meiling — Beijing Institute of Technology
Yang, Yi — Beijing Institute of Technology
Fu, Mengyin — Beijing Institute of Technology

15:30-16:30 ThPI5T4.8

Vehicle Trajectory Prediction with Soft Behavior Constraints, pp. 9403-9409.

Ye, Ke — Xi'an Jiaotong University
Zhou, Sanping — Xi'an JIaotong University
Kang, Miao — Xi'an Jiaotong University
Fu, Jingwen — Xi, an Jiaotong University
Zheng, Nanning — Xi'an Jiaotong University

15:30-16:30 ThPI5T4.9

Efficient Motion Prediction: A Lightweight & Accurate Trajectory Prediction Model with Fast Training and Inference Speed, pp. 9410-9416. Attachment

Prutsch, Alexander — Graz University of Technology
Bischof, Horst — Graz University of Technology
Possegger, Horst — Graz University of Technology

15:30-16:30 ThPI5T4.10

Enhancing LiDAR Scene Upsampling with Instance-Aware Feature-Embedding and Attention Mechanism, pp. 9417-9423. Attachment

Wang, Wei-Ren — National Yang Ming Chiao Tung University
Do, You-Sheng — National Yang Ming Chiao Tung University
Lin, Wen-Chieh — National Yang Ming Chiao Tung University
Wang, Chieh-Chih — National Yang Ming Chiao Tung University

15:30-16:30 ThPI5T4.11

All-Day Depth Completion, pp. 9424-9430.

Ezhov, Vadim — Yale University
Park, Hyoungseob — Yale University
Zhang, Zhaoyang — Yale University
Upadhyay, Rishi — University of California, Los Angeles
Zhang, Howard — UCLA
Chandrappa, Chethan Chinder — UCLA
Kadambi, Achuta — UCLA
Ba, Yunhao — Sony, UCLA
Dorsey, Julie — Yale University
Wong, Alex — Yale University

15:30-16:30 ThPI5T4.12

Self-Supervised Motion Segmentation with Confidence-Aware Loss Functions for Handling Occluded Pixels and Uncertain Optical Flow Predictions, pp. 9431-9437. Attachment

Chen, Chung-Yu — National Yang Ming Chiao Tung University, Hsinchu, Taiwan
Lai, Bo-Yun — National Yang Ming Chiao Tung University
Huang, Ying-Shiuan — National Yang Ming Chiao Tung University

Lin, Wen-Chieh	National Yang Ming Chiao Tung University
Wang, Chieh-Chih	National Yang Ming Chiao Tung University

15:30-16:30 ThPI5T4.13

EC-IoU: Orienting Safety for Object Detectors Via Ego-Centric Intersection-Over-Union, pp. 9438-9445. Attachment

Liao, Brian Hsuan-Cheng	DENSO AUTOMOTIVE Deutschland GmbH
Cheng, Chih-Hong	Chalmers University of Technology
Esen, Hasan	DENSO AUTOMOTIVE Deutschland GmbH
Knoll, Alois	Tech. Univ. Muenchen TUM

15:30-16:30 ThPI5T4.14

LiDAR-Camera Online Calibration by Representing Local Feature and Global Spatial Context, pp. 9446-9453. Attachment

Moon, SeongJoo	KAIST, SAPEON
Lee, Sebin	KAIST
He, Dong	Sapeon Inc
Yoon, Sung-eui	KAIST

15:30-16:30 ThPI5T4.15

LDIP: Real-Time On-Road Object Detection with Depth Estimation from a Single Image, pp. 9454-9459.

Xu, Chengpeng	University of Science and Technology of China
Sun, Xiao	Hefei University of Technology
Xu, Yangyang	University of Science and Technology of China
Wang, Ruolin	University of Science and Technology of China

15:30-16:30 ThPI5T4.16

DSVT: Dynamic 3D Surround View for Tractor-Trailer Vehicles Based on Real-Time Pose Estimation with Drop Model, pp. 9460-9466. Attachment

Dong, Zhipeng	Beijing Institute of Technology
Fu, Mengyin	Beijing Institute of Technology
Liang, Hao	Beijing Institute of Technology
Zhu, Chunhui	Beijing Institute of Technology
Yang, Yi	Beijing Institute of Technology

ThPI5T5 Room 5

Deep Learning V (Teaser Session)

Chair: Dong, Huixu — Zhejiang University

15:30-16:30 ThPI5T5.1

Cross-Modal Self-Supervised Learning with Effective Contrastive Units for LiDAR Point Clouds, pp. 9467-9474. Attachment

Cai, Mu	University of Wisconsin-Madison
Luo, Chenxu	Johns Hopkins University
Lee, Yong Jae	UW-Madison
Yang, Xiaodong	QCraft

15:30-16:30 ThPI5T5.2

DAP: Diffusion-Based Affordance Prediction for Multi-Modality Storage, pp. 9475-9480. Attachment

Chang, Haonan	Rutgers University
Boyalakuntla, Kowndinya	Rutgers University
Liu, Yuhan	Rutgers University
Zhang, Xinyu	Rutgers University
Schramm, Liam	Rutgers University
Boularias, Abdeslam	Rutgers University

15:30-16:30 ThPI5T5.3

Object Pose Estimation by Camera Arm Control Based on Viewpoint Estimation, pp. 9481-9486. Attachment

Mizuno, Tomoki	University
Yabashi, Kazuya	University
Tasaki, Tsuyoshi	Meijo University

15:30-16:30 ThPI5T5.4

CoPa: General Robotic Manipulation through Spatial Constraints of Parts with Foundation Models, pp. 9487-9494. Attachment

Huang, Haoxu	Shanghai Jiao Tong University
Lin, Fanqi	Tsinghua University
Hu, Yingdong	Tsinghua University

Wang, Shengjie	Tsinghua University
Gao, Yang	Tsinghua University

15:30-16:30 ThPI5T5.5

MultipleCupSuctionNet: Deep Neural Network for Detecting Grasp Pose of a Vacuum Gripper with Multiple Suction Cups Based on YOLO Feature Map Affine Transformation, pp. 9495-9500.

Jiang, Ping	Toshiba Corporation
Komoda, Kazuma	Toshiba Corporation
Han, Haifeng	Toshiba Corporation
Ooga, Jun'ichiro	Toshiba Corporation

15:30-16:30 ThPI5T5.6

Discretizing SO(2)-Equivariant Features for Robotic Kitting, pp. 9501-9508. Attachment

Zhou, Jiadong	Nanyang Technological University
Zeng, Yadan	Nanyang Technology University
Dong, Huixu	Zhejiang University
Chen, I-Ming	Nanyang Technological University

15:30-16:30 ThPI5T5.7

Kosmos-E: Learning to Follow Instruction for Robotic Grasping, pp. 9509-9516. Attachment

Wang, Zhi	Microsoft
Wu, Xun	Tsinghua University
Wu, Xun	Microsoft
Dong, Li	Microsoft
Wenhui, Wang	Microsoft
Ma, Shuming	Microsoft
Wei, Furu	Microsoft

15:30-16:30 ThPI5T5.8

Avoiding Object Damage in Robotic Manipulation, pp. 9517-9524.

Aduh, Erica	Amazon Robotics
Wang, Fan	Amazon Robotics
Randle, Dylan Labatt	Amazon Robotics
Wang, Kaiwen	Amazon
Shah, Priyesh	Amazon
Mitash, Chaitanya	Amazon Robotics
Nambi, Manikantan	Amazon Robotics

15:30-16:30 ThPI5T5.9

APEX: Ambidextrous Dual-Arm Robotic Manipulation Using Collision-Free Generative Diffusion Models, pp. 9525-9532. Attachment

Dastider, Apan	University of Central Florida
Fang, Hao	University of Central Florida
Mingjie, Lin	University of Central Florida

15:30-16:30 ThPI5T5.10

Inverse Kinematics of Robotic Manipulators Using a New Learning-By-Example Method, pp. 9533-9540.

Demby's, Jacket	University of Missouri-Columbia
Farag, Ramy	University of Missouri-Columbia
DeSouza, Guilherme	University of Missouri-Columbia

15:30-16:30 ThPI5T5.11

Pseudo-Rigid Body Networks: Learning Interpretable Deformable Object Dynamics from Partial Observations, pp. 9541-9547. Attachment

Mamedov, Shamil	KU Leuven
Geist, Andreas René	Max Planck Institute for Intelligent Systems
Swevers, Jan	KU Leuven
Trimpe, Sebastian	RWTH Aachen University

15:30-16:30 ThPI5T5.12

Object Segmentation from Open-Vocabulary Manipulation Instructions Based on Optimal Transport Polygon Matching with Multimodal Foundation Models, pp. 9548-9555. Attachment

Nishimura, Takayuki	Keio University
Kuyo, Katsuyuki	Keio University
Kambara, Motonari	Keio University
Sugiura, Komei	Keio University

15:30-16:30 ThPI5T5.13

Channel-Wise Motion Features for Efficient Motion Segmentation, pp. 9556-9563.

Inoue, Riku — Honda R&D Co., Ltd
Tsuchiya, Masamitsu — Honda R&D Co.Ltd
Yasui, Yuji — Honda R&D Co., Ltd

15:30-16:30 ThPI5T5.14

InverseMatrixVT3D: An Efficient Projection Matrix-Based Approach for 3D Occupancy Prediction, pp. 9564-9571. Attachment

Ming, Zhenxing — The University of Sydney
Berrio Perez, Julie Stephany — ACFR - the University of Sydney
Shan, Mao — The University of Sydney
Worrall, Stewart — University of Sydney

15:30-16:30 ThPI5T5.15

Density-Aware Domain Generalization for LiDAR Semantic Segmentation, pp. 9572-9579. Attachment

Kim, Jaeyeul — DGIST
Woo, Jungwan — DGIST
Shin, Ukcheol — CMU(Carnegie Mellon University)
Oh, Jean — Carnegie Mellon University
Im, Sunghoon — DGIST

15:30-16:30 ThPI5T5.16

QuerySOD: A Small Object Detection Algorithm Based on Sparse Convolutional Network and Query Mechanism, pp. 9580-9586. Attachment

Cao, Zhengcai — Harbin Institute of Technology
Li, Junnian — Beijing Univ. of Chemical Tech
Niu, Jie — Beijing University of Chemical Technology
Zhou, MengChu — New Jersey Institute of Technology

15:30-16:30 ThPI5T5.17

Learning-On-The-Drive: Self-Supervised Adaptive Long-Range Perception for High-Speed Offroad Driving, pp. 9587-9594. Attachment

Chen, Eric — Stanford University
Ho, Cherie — Carnegie Mellon University
Maulimov, Mukhtar — Carnegie Mellon University
Wang, Chen — University at Buffalo
Scherer, Sebastian — Carnegie Mellon University

ThPI5T6 Room 6

Learning IV (Teaser Session)

Chair: Bardaro, Gianluca — Politecnico Di Milano
Co-Chair: Fu, Yanwei — Fudan University

15:30-16:30 ThPI5T6.1

GenChIP: Generating Robot PolicyCode forHigh-Precision and Contact-Rich Manipulation Tasks, pp. 9595-9602. Attachment

Burns, Kaylee — Stanford University
Jain, Ajinkya — Intrinsic Innovation LLC
Go, Keegan — Intrinsic Innovation LLC
Xia, Fei — Google Inc
Stark, Michael — Intrinsic Innovation LLC
Schaal, Stefan — Google X
Hausman, Karol — Google Brain

15:30-16:30 ThPI5T6.2

LLaKey: Follow My Basic Action Instructions to Your Next Key State, pp. 9603-9610. Attachment

Zhao, Zheyi — Guangdong Laboratory of Artificial Intelligence and Digital Econ
He, Ying — Shenzhen University
Yu, Fei — Guangming Lab
Li, Pengteng — Shenzhen University
Zhuo, Fan — Guangdong Laboratory of Artificial Intelligence and Digital Econ
Sun, Xilong — Kuban State University

15:30-16:30 ThPI5T6.3

LANCAR: Leveraging Language for Context-Aware Robot Locomotion in Unstructured Environments, pp. 9611-9618. Attachment

Shek, Chak Lam	University of Maryland, College Park
Wu, Xiyang	University of Maryland
Suttle, Wesley A.	DEVCOM ARL
Busart, Carl	US Army Research Laboratory
Zaroukian, Erin	DEVCOM ARL
Manocha, Dinesh	University of Maryland
Tokekar, Pratap	University of Maryland
Bedi, Amrit Singh	University of Maryland, College Park

15:30-16:30 ThPI5T6.4

Ensuring Safety in LLM-Driven Robotics: A Cross-Layer Sequence Supervision Mechanism, pp. 9619-9626. Attachment

Wang, Ziming	University of Science and Technology of China
Liu, Qingchen	University of Science and Technology of China
Qin, Jiahu	University of Science and Technology of China
Li, Man	University of Science and Technology of China

15:30-16:30 ThPI5T6.5

NARRATE: Versatile Language Architecture for Optimal Control in Robotics, pp. 9627-9634. Attachment

Ismail, Seif	ETH Zurich
Arbues, Antonio	ETH Zurich
Cotterell, Ryan	ETH Zürich
Zurbrügg, René	ETH Zürich
Amo Alonso, Carmen	Caltech

15:30-16:30 ThPI5T6.6

CoT-TL: Low-Resource Temporal Knowledge Representation of Planning Instructions Using Chain-Of-Thought Reasoning, pp. 9635-9642. Attachment

Manas, Kumar	Freie Universität Berlin
Zwicklbauer, Stefan	Continetal AG
Paschke, Adrian	Fraunhofer FOKUS and Freie University Berlin

15:30-16:30 ThPI5T6.7

MuTT: A Multimodal Trajectory Transformer for Robot Skills, pp. 9643-9650. Attachment

Kienle, Claudius	ArtiMinds Robotics GmbH
Alt, Benjamin	ArtiMinds Robotics
Celik, Onur	KIT
Becker, Philipp	Karlsruhe Institute of Technology (KIT)
Katic, Darko	Karlsruhe Institute for Technology (KIT)
Jäkel, Rainer	Karlsruhe Institute of Technology
Neumann, Gerhard	Karlsruhe Institute of Technology

15:30-16:30 ThPI5T6.8

Vision-Language Model-Based Physical Reasoning for Robot Liquid Perception, pp. 9651-9658. Attachment

Lai, Wenqiang	Shenzhen Institute of Artificial Intelligence and Robotics for S
Zhang, Tianwei	The University of Tokyo
Lam, Tin Lun	The Chinese University of Hong Kong, Shenzhen
Gao, Yuan	Shenzhen Institute of Artificial Intelligence and Robotics for S

15:30-16:30 ThPI5T6.9

Multi-Modal Representation Learning with Tactile Data, pp. 9659-9666. Attachment

Chi, Hyung-gun	Purdue University
Mercat, Jean	1991
Barreiros, Jose	Toyota Research Institute
Ramani, Karthik	Purdue University
Kollar, Thomas	Toyota Research Institute

15:30-16:30 ThPI5T6.10

TempBEV: Improving Learned BEV Encoders with Combined Image and BEV Space Temporal Aggregation, pp. 9667-9674.

Monninger, Thomas	Mercedes-Benz AG, University of Stuttgart
Dokkadi, Vandana	University of Massachusetts Amherst
Anwar, Md Zafar	Penn State University
Staab, Steffen	University of Stuttgart

15:30-16:30 ThPI5T6.11

Polaris: Open-Ended Interactive Robotic Manipulation Via Syn2Real Visual Grounding and Large Language Models, pp. 9675-9682. Attachment

Wang, Tianyu	Fudan University
Lin, Haitao	Fudan University
Yu, Junqiu	FudanUniversity
Fu, Yanwei	Fudan University

15:30-16:30 ThPI5T6.12

BTGenBot: Behavior Tree Generation for Robotic Tasks with Lightweight LLMs, pp. 9683-9689. Attachment

Izzo, Riccardo Andrea	Politecnico Di Milano
Bardaro, Gianluca	Politecnico Di Milano
Matteucci, Matteo	Politecnico Di Milano

15:30-16:30 ThPI5T6.13

Multi-Modal Motion Prediction Using Temporal Ensembling with Learning-Based Aggregation, pp. 9690-9696. Attachment

Hong, Kai-Yin	National Yang Ming Chiao Tung University
Wang, Chieh-Chih	National Yang Ming Chiao Tung University
Lin, Wen-Chieh	National Yang Ming Chiao Tung University

15:30-16:30 ThPI5T6.14

The Power of the Senses: Generalizable Manipulation from Vision and Touch through Masked Multimodal Learning, pp. 9697-9704.

Sferrazza, Carmelo	UC Berkeley
Seo, Younggyo	Dyson
Liu, Hao	UC Berkeley
Lee, Youngwoon	University of California, Berkeley
Abbeel, Pieter	UC Berkeley

15:30-16:30 ThPI5T6.15

Prompt-Driven Temporal Domain Adaptation for Nighttime UAV Tracking, pp. 9705-9712.

Fu, Changhong	Tongji University
Wang, Yiheng	Tongji University
Yao, Liangliang	Tongji University
Zheng, Guangze	The University of Hong Kong
Zuo, Haobo	University of Hong Kong
Pan, Jia	University of Hong Kong

15:30-16:30 ThPI5T6.16

Do One Thing and Do It Well: Delegate Responsibilities in Classical Planning, pp. 9713-9719.

Lai, Tin	University of Sydney
Morere, Philippe	University of Sydney

15:30-16:30 ThPI5T6.17

ODTFormer: Efficient Obstacle Detection and Tracking with Stereo Cameras Based on Transformer, pp. 9720-9727. Attachment

Ding, Tianye	Northeastern University
Li, Hongyu	Brown University
Jiang, Huaizu	Northeastern University

ThPI5T7 Room 7

Perception III (Semantic Scene Understanding) (Teaser Session)

Chair: Parasuraman, Ramviyas	University of Georgia
Co-Chair: Abu-Khalaf, Jumana	Edith Cowan University

15:30-16:30 ThPI5T7.1

Object-Oriented Material Classification and 3D Clustering for Improved Semantic Perception and Mapping in Mobile Robots, pp. 9728-9735. Attachment

Ravipati, Siva Krishna	University of Georgia
Latif, Ehsan	University of Georgia
Bhandarkar, Suchendra	University of Georgia
Parasuraman, Ramviyas	University of Georgia

15:30-16:30 ThPI5T7.2

Transcrib3D: 3D Referring Expression Resolution through Large Language Models, pp. 9736-9743. Attachment

Fang, Jiading	Toyota Technological Institute at Chicago

Tan, Xiangshan	Zhejiang University
Lin, Shengjie	TTI-Chicago
Vasiljevic, Igor	Toyota Research Institute
Guizilini, Vitor	Toyota Research Institute
Mei, Hongyuan	Toyota Technological Institute at Chicago
Ambrus, Rares	Toyota Research Institute
Shakhnarovich, Gregory	Toyota Technological Institute at Chicago
Walter, Matthew	Toyota Technological Institute at Chicago

15:30-16:30 ThPI5T7.3

Visual Preference Inference: An Image Sequence-Based Preference Reasoning in Tabletop Object Manipulation, pp. 9744-9751. Attachment

Lee, Joonhyung	Korea University
Park, Sangbeom	Korea University
Kwon, Yongin	Electronics and Telecommunications Research Institute
Lee, Jemin	Electronics and Telecommunications Research Institute
Ahn, Minwook	Neubla Korea Corporation
Choi, Sungjoon	Korea University

15:30-16:30 ThPI5T7.4

A Language-Driven Navigation Strategy Integrating Semantic Maps and Large Language Models, pp. 9752-9759. Attachment

Zhong, Zhengjun	Shenzhen University
He, Ying	Shenzhen University
Li, Pengteng	Shenzhen University
Yu, Fei	Guangming Lab
Ma, Fei	Guangdong Laboratory of Artificial Intelligence and Digital Econ

15:30-16:30 ThPI5T7.5

A Context-Enhanced Full-Resolution Floor Plan Segmentation Network for Topological Semantic Mapping, pp. 9760-9767. Attachment

Cao, Zhengcai	Harbin Institute of Technology
Sun, Yiyang	Beijing University of Chemical Technology
Ma, Zhe	Beijing University of Chemical Technology
Zhou, MengChu	New Jersey Institute of Technology

15:30-16:30 ThPI5T7.6

DVT: Decoupled Dual-Branch View Transformation for Monocular Bird's Eye View Semantic Segmentation, pp. 9768-9775. Attachment

Du, Jiayuan	Tongji University
Pan, Xianghui	Tongji University
Shen, Mengjiao	Tongji University
Su, Shuai	Tongji University, China
Yang, Jingwei	Tongji University
Liu, Chengju	Tongji University
Chen, Qijun	Tongji University

15:30-16:30 ThPI5T7.7

Indoor Scene Change Understanding (SCU): Segment, Describe, and Revert Any Change, pp. 9776-9782.

Khan, Mariia	Edith Cowan University
Qiu, Yue	National Institute of Advanced Industrial Science and Technology
Cong, Yuren	Leibniz University Hannover
Rosenhahn, Bodo	Institute of Information Processing, Leibniz Universität Hannove
Suter, David	Edith Cowan University, School of Science, Centre of AI and Mach
Abu-Khalaf, Jumana	Edith Cowan University

15:30-16:30 ThPI5T7.8

Weakly Scene Segmentation Using Efficient Transformer, pp. 9783-9789.

Huang, Hao	New York University
Yuan, Shuaihang	New York University
Wen, Congcong	New York University Abu Dhabi
Hao, Yu	New York University
Fang, Yi	New York University

15:30-16:30 ThPI5T7.9

DiffPrompter: Differentiable Implicit Visual Prompts for Semantic-Segmentation in Adverse Conditions, pp. 9790-9795.

Attachment

Kalwar, Sanket	International Institute of Information Technology, Hyderabad
Ungarala, Sri Mihir Devapi	IIIT Hyderabad
Jain, Shruti	The International Institute of Information Technology - Hyderaba
Monis, Aaron	IIIT Hyderabad
Konda, Krishna	ZF TCI
Garg, Sourav	University of Adelaide
Krishna, Madhava	IIIT Hyderabad

15:30-16:30 ThPI5T7.10

Leveraging Computation of Expectation Models for Commonsense Affordance Estimation on 3D Scene Graphs, pp. 9796-9801. Attachment

Valdes Saucedo, Mario Alberto	Lulea University of Technology
Stathoulopoulos, Nikolaos	Luleå University of Technology
Patel, Akash	Luleå University of Technology
Kanellakis, Christoforos	LTU
Nikolakopoulos, George	Luleå University of Technology

15:30-16:30 ThPI5T7.11

Learning High-Level Semantic-Relational Concepts for SLAM, pp. 9802-9809. Attachment

Millan Romera, Jose Andres	University of Luxembourg
Bavle, Hriday	University of Luxembourg
Shaheer, Muhammad	University of Luxembourg
Oswald, Martin R.	ETH Zurich
Voos, Holger	University of Luxembourg
Sanchez-Lopez, Jose Luis	University of Luxembourg

15:30-16:30 ThPI5T7.12

EMBOSR: Embodied Spatial Reasoning for Enhanced Situated Question Answering in 3D Scenes, pp. 9810-9815.

Hao, Yu	New York University
Yang, Fan	New York University
Fang, Nicholas	NYU Abu Dhabi
Liu, Yu-Shen	Tsinghua University

15:30-16:30 ThPI5T7.13

SePaint: Semantic Map Inpainting Via Multinomial Diffusion, pp. 9816-9822.

Chen, Zheng	Indiana University Bloomington
Duggirala, Deepak	Indiana University
Crandall, David	Indiana University
Jiang, Lei	Indiana University
Liu, Lantao	Indiana University

15:30-16:30 ThPI5T7.14

Volumetric Mapping with Panoptic Refinement Using Kernel Density Estimation for Mobile Robots, pp. 9823-9829. Attachment

Nguyen, Khang	University of Texas at Arlington
Dang, Tuan	University Taxes at Arlington
Huber, Manfred	University of Texas at Arlington

15:30-16:30 ThPI5T7.15

Semantic Layering in Room Segmentation Via LLMs, pp. 9830-9837. Attachment

Kim, Taehyeon	Purdue University
Min, Byung-Cheol	Purdue University

15:30-16:30 ThPI5T7.16

EVSMap: An Efficient Volumetric-Semantic Mapping Approach for Embedded Systems, pp. 9838-9845. Attachment

Qiu, Jiyuan	Tsinghua University
Jiang, Chen	Tsinghua University
Zhang, Pengfei	Tsinghua University
Wang, Haowen	Tsinghua University

ThPI5T8 Room 8

Robot Motion Planning IV (Teaser Session)

Chair: Zhang, Liding	Technical University of Munich

15:30-16:30 ThPI5T8.1

Optimal Robotic Assembly Sequence Planning (ORASP): A Sequential Decision-Making Approach, pp. 9846-9853. Attachment

Nagpal, Kartik	University of California Berkeley
Mehr, Negar	University of California Berkeley

15:30-16:30 ThPI5T8.2

Ontology Based AI Planning and Scheduling for Robotic Assembly, pp. 9854-9861. Attachment

Zhao, Jingyun	Technical University of Munich
Vogel-Heuser, Birgit	Technical University Munich
Ao, Jicong	Technical University Munich
Wu, Yansong	Technische Universität München
Zhang, Liding	Technical University of Munich
Fandi, Bi	Technical University of Munich
Hujo, Dominik	Technical University of Munich
Bing, Zhenshan	Technical University of Munich
Wu, Fan	Technical University of Munich
Knoll, Alois	Tech. Univ. Muenchen TUM
Haddadin, Sami	Technical University of Munich
Vojanec, Bernd	WITTENSTEIN SE
Markert, Timo	Resense GmbH
Kraft, André	BMW AG, Germany

15:30-16:30 ThPI5T8.3

Using Graphs of Convex Sets to Guide Nonconvex Trajectory Optimization, pp. 9862-9869.

von Wrangel, David	Massachusetts Institute of Technology
Tedrake, Russ	Massachusetts Institute of Technology

15:30-16:30 ThPI5T8.4

Demonstration to Adaptation: A User-Guided Framework for Sequential and Real-Time Planning, pp. 9870-9877. Attachment

Cai, Kuanqi	Technical University of Munich
Laha, Riddhiman	Technical University of Munich
Gong, Yuhe	Karlsruhe Institute of Technology
Chen, Lingyun	Technical University of Munich
Zhang, Liding	Technical University of Munich
Figueredo, Luis	University of Nottingham (UoN)
Haddadin, Sami	Technical University of Munich

15:30-16:30 ThPI5T8.5

Self-Reconfiguration Strategies for Space-Distributed Spacecraft, pp. 9878-9883. Attachment

Liu, Tianle	Zhejiang University
Wang, Zhixiang	Northwestern Polytechnical University
Zhang, Yongwei	National University of Technology
Wang, Ziwei	Lancaster University
Liu, Zihao	Northwestern Polytechnical University
Zhang, Yizhai	Northwestern Polytechnical University
Huang, Panfeng	Northwestern Polytechnical University

15:30-16:30 ThPI5T8.6

Grasping Trajectory Optimization with Point Clouds, pp. 9884-9891. Attachment

Xiang, Yu	University of Texas at Dallas
Allu, Sai Haneesh	The University of Texas at Dallas
Peddi, Rohith	University of Texas at Dallas
Summers, Tyler	University of Texas at Dallas
Gogate, Vibhav	University of Texas at Dallas

15:30-16:30 ThPI5T8.7

UNO Push: Unified Nonprehensile Object Pushing Via Non-Parametric Estimation and Model Predictive Control, pp. 9892-9899. Attachment

Wang, Gaotian	Rice University
Ren, Kejia	Rice University
Hang, Kaiyu	Rice University

15:30-16:30 ThPI5T8.8

Combining Sampling and Gradient-Based Planning for Contact-Rich Manipulation, pp. 9900-9906. Attachment

Rozzi, Filippo	Politecnico Di Milano
Roveda, Loris	SUPSI-IDSIA
Haninger, Kevin	Fraunhofer IPK

15:30-16:30 ThPI5T8.9

Clutter-Aware Spill-Free Liquid Transport Via Learned Dynamics, pp. 9907-9914. Attachment

Abderezaei, Ava	University of Colorado Boulder
Pasricha, Anuj	University of Colorado Boulder
Klausenstock, Alex	University of Colorado Boulder
Roncone, Alessandro	University of Colorado Boulder

15:30-16:30 ThPI5T8.10

ContactHandover: Contact-Guided Robot-To-Human Object Handover, pp. 9915-9922. Attachment

Wang, Zixi	Columbia University
Liu, Zeyi	Stanford University
Ouporov, Nicolas	Columbia University
Song, Shuran	Stanford University

15:30-16:30 ThPI5T8.11

Task-Driven Manipulation with Reconfigurable Parallel Robots, pp. 9923-9929. Attachment

Morton, Daniel	Stanford University
Cutkosky, Mark	Stanford University
Pavone, Marco	Stanford University

15:30-16:30 ThPI5T8.12

A General Formulation for Path Constrained Time-Optimized Trajectory Planning with Environmental and Object Contacts, pp. 9930-9937. Attachment

Mahalingam, Dasharadhan	Stony Brook University
Patankar, Aditya	Stony Brook University
Laha, Riddhiman	Technical University of Munich
Lakshminarayanan, Srinivasan	TUM
Haddadin, Sami	Technical University of Munich
Chakraborty, Nilanjan	Stony Brook University

15:30-16:30 ThPI5T8.13

Trajectory Planning for Non-Prehensile Object Transportation, pp. 9938-9945. Attachment

Chen, Lingyun	Technical University of Munich
Yu, Haoyu	Technical University of Munich
Zhang, Liding	Technical University of Munich
Naceri, Abdeldjallil	Technical University of Munich
Swikir, Abdalla	Technical University of Munich
Haddadin, Sami	Technical University of Munich

15:30-16:30 ThPI5T8.14

The Effectiveness of State Representation Model in Multi-Agent Proximal Policy Optimization for Multi-Agent Path Finding, pp. 9946-9951.

Chung, Jaehoon	University of Victoria
Fayyad, Jamil	The University of British Colombia
Ghafarian Tamizi, Mehran	University of Victoria
Najjaran, Homayoun	University of Victoria

15:30-16:30 ThPI5T8.15

Camera-Based Belief Space Planning in Discrete Partially-Observable Domains, pp. 9952-9958. Attachment

Freund, Janis Eric	Technical University of Berlin
Phiquepal, Camille	University of Stuttgart
Orthey, Andreas	Realtime Robotics Inc
Toussaint, Marc	TU Berlin

15:30-16:30 ThPI5T8.16

Path-Parameterised RRTs for Underactuated Systems, pp. 9959-9966.

Abood, Damian	University of Sydney
Manchester, Ian	University of Sydney

Navigation IV (Teaser Session)

Chair: Mahmoudian, Nina — Purdue University

15:30-16:30 — ThPI5T9.1

Exploring Latent Pathways: Enhancing the Interpretability of Autonomous Driving with a Variational Autoencoder, pp. 9967-9974.

Bairouk, Anass	Capgemini
Maras, Mirjana	Capgemini
Herlin, Simon	Capgemini
Amini, Alexander	Massachusetts Institute of Technology
Blanchon, Marc	Capgemini Engineering
Hasani, Ramin	Massachusetts Institute of Technology (MIT)
Chareyre, Patrick	Capgemini
Rus, Daniela	MIT

15:30-16:30 — ThPI5T9.2

Synergistic Reinforcement and Imitation Learning for Vision-Driven Autonomous Flight of UAV Along River, pp. 9975-9981.

Wang, Zihan	Purdue University
Li, Jianwen	Purdue University
Mahmoudian, Nina	Purdue University

15:30-16:30 — ThPI5T9.3

AdvDiffuser: Generating Adversarial Safety-Critical Driving Scenarios Via Guided Diffusion, pp. 9982-9988.

Xie, Yuting	Sun Yat-Sen University
Guo, Xianda	School of Computer Science, Wuhan University
Wang, Cong	Institute of Automation, Chinese Academy of Sciences
Kunhua, Liu	Qingdao University of Technology
Chen, Long	Chinese Academy of Sciences

15:30-16:30 — ThPI5T9.4

OSM vs HD Maps: Map Representations for Trajectory Prediction, pp. 9989-9995.

Liao, Jing-Yan	University of California, San Diego
Doshi, Parth Jaydip	UCSD
Zhang, Zihan	University of California San Diego
Paz, David	University of California, San Diego
Christensen, Henrik Iskov	UC San Diego

15:30-16:30 — ThPI5T9.5

FDNet: Feature Decoupling Framework for Trajectory Prediction, pp. 9996-10003.

Li, Yuhang	Beijing Institute of Technology
Li, Changsheng	Beijing Institute of Technology
Fan, Baoyu	Nankai University
Li, Rongqing	Beijing Institute of Technology
Zhang, Ziyue	Beijing Institute of Technology
Ren, Dongchun	Meituan
Yuan, Ye	Beijing Institute of Technology
Wang, Guoren	Beijing Institute of Technology

15:30-16:30 — ThPI5T9.6

Active Learning-Augmented Intention-Aware Obstacle Avoidance of Autonomous Surface Vehicles in High-Traffic Waters, pp. 10004-10011. Attachment

Jeong, Mingi	Dartmouth College
Chadda, Arihant	IQT Labs
Quattrini Li, Alberto	Dartmouth College

15:30-16:30 — ThPI5T9.7

Map-Based Modular Approach for Zero-Shot Embodied Question Answering, pp. 10012-10018. Attachment

Sakamoto, Koya	Kyoto University, ATR
Azuma, Daichi	Sony Semiconductor Solutions
Miyanishi, Taiki	Advanced Telecommunications Research Institute International
Kurita, Shuhei	RIKEN
Kawanabe, Motoaki	Advanced Telecommunications Research Institutte International

15:30-16:30 — ThPI5T9.8

LeGo-Drive: Language-Enhanced Goal-Oriented Closed-Loop End-To-End Autonomous Driving, pp. 10019-10025.

Attachment

Paul, Pranjal	International Institute of Information Technology
Garg, Anant	International Institute of Information Technology, Hyderabad
Choudhary, Tushar	International Institute of Information Technology, Hyderabad
Singh, Arun Kumar	University of Tartu
Krishna, Madhava	IIIT Hyderabad

15:30-16:30 ThPI5T9.9

Monocular Depth Estimation for Drone Obstacle Avoidance in Indoor Environments, pp. 10026-10033. Attachment

Zheng, Haokun	University of California, Berkeley
Rajadnya, Sidhant	University of California, Berkeley
Zakhor, Avideh	University of California, Berkeley

15:30-16:30 ThPI5T9.10

TriHelper: Zero-Shot Object Navigation with Dynamic Assistance, pp. 10034-10041. Attachment

Zhang, Lingfeng	The Hong Kong University of Science and Technology (Guangzhou)
Zhang, Qiang	The Hong Kong University of Science and Technology (Guangzhou)
Wang, Hao	Hong Kong University of Science and Technology(Guang Zhou)
Xiao, Erjia	The Hong Kong University of Science and Technology (Guangzhou)
Jiang, Zixuan	HKUST(GZ)
Chen, Honglei	The Hong Kong University of Science and Technology （Guang
Xu, Renjing	The Hong Kong University of Science and Technology (Guangzhou)

15:30-16:30 ThPI5T9.11

Towards Cross-View-Consistent Self-Supervised Surround Depth Estimation, pp. 10042-10049.

Ding, Laiyan	The Chinese University of Hong Kong, Shenzhen
Jiang, Hualie	Insta360 Research
Li, Jie	Shenzhen Polytechnic University
Chen, Yongquan	The Chinese University of Hong Kong, Shenzhen
Huang, Rui	The Chinese University of Hong Kong, Shenzhen

15:30-16:30 ThPI5T9.12

Boosting Generalizability towards Zero-Shot Cross-Dataset Single-Image Indoor Depth by Meta-Initialization, pp. 10050-10057. Attachment

Wu, Cho-Ying	University of Southern California
Zhong, Yiqi	University of Southern California
Wang, Junying	University of Southern California
Neumann, Ulrich	University of Southern California

15:30-16:30 ThPI5T9.13

LAC-Net: Linear-Fusion Attention-Guided Convolutional Network for Accurate Robotic Grasping under the Occlusion, pp. 10058-10064. Attachment

Zhang, Jinyu	Fudan University
Gu, Yongchong	Fudan University
Gao, Jianxiong	Fudan University
Lin, Haitao	Fudan University
Sun, Qiang	Shanghai University of International Business and Economics
Sun, Xinwei	Fudan University
Xue, Xiangyang	Fudan University
Fu, Yanwei	Fudan University

15:30-16:30 ThPI5T9.14

Visual-Geometry GP-Based Navigable Space for Autonomous Navigation, pp. 10065-10071. Attachment

Ali, Mahmoud	Indiana University
Pushp, Durgakant	Indiana University Bloomington
Chen, Zheng	Indiana University Bloomington
Liu, Lantao	Indiana University

15:30-16:30 ThPI5T9.15

Privacy-Preserving Map-Free Exploration for Confirming the Absence of a Radioactive Source, pp. 10072-10079. Attachment

Lepowsky, Eric	Princeton University

Snyder, David	Princeton University
Glaser, Alexander	Princeton University
Majumdar, Anirudha	Princeton University

15:30-16:30 ThPI5T9.16

Time-Ordered Ad-Hoc Resource Sharing for Independent Robotic Agents, pp. 10080-10087.

Chakravarty, Arjo	Intrinsic LLC, Singapore University of Technology and Design
Grey, Michael	Intrinsic, an Alphabet Company
Muthugala Arachchige, Viraj Jagathpriya Muthugala	Singapore University of Technology and Design
Elara, Mohan Rajesh	Singapore University of Technology and Design

ThPI5T10 Room 10

Simultaneous Localization and Mapping (SLAM) V (Teaser Session)

Co-Chair: Kawasaki, Hiroshi — Kyushu University

15:30-16:30 ThPI5T10.1

Inline Photometrically Calibrated Hybrid Visual SLAM, pp. 10088-10095. Attachment

Abboud, Nicolas	American University of Beirut
Sayour, Malak	American University of Beirut
Elhajj, Imad	American University of Beirut
Zelek, John S.	University of Waterloo
Asmar, Daniel	American University of Beirut

15:30-16:30 ThPI5T10.2

ESO-SLAM: Tightly-Coupled and Simultaneous Estimation of Self and Multi-Object Pose Via Sensor Fusion, pp. 10096-10103. Attachment

Li, Wu	Northeastern University
Zhang, Yunzhou	Northeastern University
Lv, Yuezhang	Northeastern University
Wang, TingTing	Northeastern University
Wang, Sizhan	Northeastern University
Wang, Guiyuan	Jiangsu Shuguang Optoelectronics Co., Ltd., Yangzhou, China

15:30-16:30 ThPI5T10.3

BE-SLAM: BEV-Enhanced Dynamic Semantic SLAM with Static Object Reconstruction, pp. 10104-10111. Attachment

Luo, Jun	Chongqing University
Wang, Gang	Chongqing University
Liu, Hongliang	Chongqing University
Wu, Lang	Huazhong University of Science and Technology
Huang, Tao	Chongqing University
Xiao, Dengyu	Chongqing University
Pu, Huayan	Shanghai University
Luo, Jun	Chongqing University

15:30-16:30 ThPI5T10.4

A Low-Texture Robust Hybrid Feature Based Visual Odometry, pp. 10112-10119. Attachment

Wang, He	Shanxi University
Zhang, Qi	University of Bath
Zheng, Zhiwen	Shanxi University
Li, Xiaoli	Institute for Infocomm Research
Tan, Hongye	Shanxi University
Li, Ru	ShanXi University

15:30-16:30 ThPI5T10.5

Grid-Based Submap Joining: An Efficient Algorithm for Simultaneously Optimizing Global Occupancy Map and Local Submap Frames, pp. 10120-10127. Attachment

Wang, Yingyu	University of Technology Sydney
Zhao, Liang	University of Technology Sydney
Huang, Shoudong	University of Technology, Sydney

15:30-16:30 ThPI5T10.6

ASML-VDIO: Visual-Depth-Inertial Odometry Using Selected Accurate and Stable Multi-Modal Landmarks in Structural Environments, pp. 10128-10135.

Luo, Xingjian	Northeastern University
Pang, Chenglin	Northeastern University

Wu, Xuankang	Northeastern University
Fang, Zheng	Northeastern University

15:30-16:30 ThPI5T10.7

Efficient Dynamic LiDAR Odometry for Mobile Robots with Structured Point Clouds, pp. 10136-10143.

Lichtenfeld, Jonathan	Technische Universität Darmstadt
Daun, Kevin	Technische Universität Darmstadt
von Stryk, Oskar	Technische Universität Darmstadt

15:30-16:30 ThPI5T10.8

LA-LIO: Robust Localizability-Aware LiDAR-Inertial Odometry for Challenging Scenes, pp. 10144-10151.

Huang, Junjie	Northeastern University
Zhang, Yunzhou	Northeastern University
Xu, Qingdong	Northeastern University
Wu, Song	Northeastern University
Liu, Jun	Northeastern University
Wang, Guiyuan	Jiangsu Shuguang Optoelectronics Co., Ltd., Yangzhou, China
Liu, Wei	Jiangsu Shuguang Optoelectronics Co., Ltd., Yangzhou, China

15:30-16:30 ThPI5T10.9

Visual Loop Closure Detection with Thorough Temporal and Spatial Context Exploitation, pp. 10152-10157.

Li, Jiaxin	Beijing Institute of Technology
Wang, Zan	Beijing Institute of Technology
Di, Huijun	Beijing Institute of Technology
Li, Jian	Beijing Institute of Technology
Liang, Wei	Beijing Institute of Technology

15:30-16:30 ThPI5T10.10

MM3DGS SLAM: Multi-Modal 3D Gaussian Splatting for SLAM Using Vision, Depth, and Inertial Measurements, pp. 10158-10165. Attachment

Sun, Lisong C.	University of Texas at Austin
Bhatt, Neel P.	The University of Texas at Austin
Liu, Jonathan C.	The University of Texas at Austin
Fan, Zhiwen	The University of Texas at Austin
Wang, Zhangyang (Atlas)	Texas A&M University
Humphreys, Todd E.	The University of Texas at Austin
Topcu, Ufuk	The University of Texas at Austin

15:30-16:30 ThPI5T10.11

PickScan: Object Discovery and Reconstruction from Handheld Interactions, pp. 10166-10172. Attachment

van der Brugge, Vincent Daniel	ETH Zurich
Pollefeys, Marc	ETH Zurich
Tenenbaum, Joshua	Massachusetts Institute of Technology
Jatavallabhula, Krishna Murthy	MIT
Tewari, Ayush	MIT

15:30-16:30 ThPI5T10.12

Towards Long Term SLAM on Thermal Imagery, pp. 10173-10180.

Keil, Colin	Northeastern University
Gupta, Aniket	Northeastern University
Kaveti, Pushyami	Northeastern University
Singh, Hanumant	Northeatern University

15:30-16:30 ThPI5T10.13

Two-Stage Pose Optimization Algorithm Using Color Information for Underwater SLAM with Light-Sectioning-Based 3D Scanning Method, pp. 10181-10188. Attachment

Ikeda, Takaki	Kyushu University
Iwaguchi, Takafumi	Kyushu University
Thomas, Diego	Kyushu University
Kawasaki, Hiroshi	Kyushu University

15:30-16:30 ThPI5T10.14

NF-SLAM: Effective, Normalizing Flow-Supported Neural Field Representations for Object-Level Visual SLAM in Automotive Applications, pp. 10189-10196. Attachment

Cui, Li	Motovis Intelligent Technologies (Shanghai) Co Ltd
Ding, Yang	Motovis Intelligent Technologies (Shanghai) Co Ltd

Hartley, Richard	Australian National University
Xie, Zirui	Motovis Intelligent Technologies (Shanghai) Co Ltd
Kneip, Laurent	ShanghaiTech University
Yu, Zhenghua	Motovis Intelligent Technologies

15:30-16:30 ThPI5T10.15

Object-Based SLAM Using Superquadrics, pp. 10197-10204. Attachment

Xing, Yifan	University of Bristol
Samano, Noe	University of Bristol
Fan, Wen	University of Bristol
Calway, Andrew	University of Bristol

15:30-16:30 ThPI5T10.16

SwiftBase: A Dataset Based on High-Frequency Visual Measurement for Visual-Inertial Localization in High-Speed Motion Scenes, pp. 10205-10212. Attachment

Zou, Zhenghao	Northwestern Polytechnical University
Lyu, Yang	Northwestern Polytechnical University
Zhao, Chunhui	Northwestern Polytechnical University
Kao, XiRui	Northwestern Polytechnical University
Liu, Jiang Bo	Northwestern Polytechnical University
Chai, Haochen	Northwestern Polytechnical University

ThPI5T11 Room 11

Multi-Robot Systems and Swarms IV (Teaser Session)

Chair: Wang, Chen	University at Buffalo

15:30-16:30 ThPI5T11.1

Online Planning for Multi Agent Path Finding in Inaccurate Maps, pp. 10213-10220.

Malka Nir, Nir	Ben-Gurion University of the Negev
Shani, Guy	Ben Gurion University
Stern, Roni	Ben Gurion University of the Negev, Palo Alto Research Center (P

15:30-16:30 ThPI5T11.2

SwarmPRM: Probabilistic Roadmap Motion Planning for Large-Scale Swarm Robotic Systems, pp. 10221-10227. Attachment

Hu, Yunze	Peking University
Yang, Xuru	Peking University
Zhou, Kangjie	Peking University
Liu, Qinghang	Peking University
Ding, Kang	Peking University
Gao, Han	Peking University
Zhu, Pingping	Marshall University
Liu, Chang	Peking University

15:30-16:30 ThPI5T11.3

Multi-Robot Active Graph Exploration with Reduced Pose-SLAM Uncertainty Via Submodular Optimization, pp. 10228-10235. Attachment

Bai, Ruofei	Nanyang Technological University
Yuan, Shenghai	Nanyang Technological University
Guo, Hongliang	Agency for Science Technology and Research
Yin, Pengyu	Nanyang Technological University
Yau, Wei-Yun	I2R
Xie, Lihua	NanyangTechnological University

15:30-16:30 ThPI5T11.4

A Non-Homogeneity Mapless Navigation Based on Hierarchical Safe Reinforcement Learning in Dynamic Complex Environments, pp. 10236-10243. Attachment

Qin, Jianmin	University of Science and Technology of China
Liu, Qingchen	University of Science and Technology of China
Ma, Qichao	University of Science and Technology of China
Wu, Zipeng	University of Science and Technology of China
Qin, Jiahu	University of Science and Technology of China

15:30-16:30 ThPI5T11.5

IMTSP: Solving Min-Max Multiple Traveling Salesman Problem with Imperative Learning, pp. 10244-10251.

Guo, Yifan	Purdue University
Ren, Zhongqiang	Shanghai Jiao Tong University
Wang, Chen	University at Buffalo

15:30-16:30 ThPI5T11.6

Multi-Agent Vulcan: An Information-Driven Multi-Agent Path Finding Approach, pp. 10252-10258. Attachment

Olkin, Jake	MIT
Parimi, Viraj	Massachusetts Institute of Technology
Williams, Brian	MIT

15:30-16:30 ThPI5T11.7

K-Robust Conflict-Based Search with Continuous Time for Multi-Robot Coordination, pp. 10259-10265.

Daudt, Guilherme	Universidade Federal Do Rio Grande Do Sul
Deus, Alleff Dymytry	Institute of Informatics, Universidade Federal Do Rio Grande Do
Kolberg, Mariana	UFRGS
Maffei, Renan	Federal University of Rio Grande Do Sul

15:30-16:30 ThPI5T11.8

Highly Efficient Observation Process Based on FFT Filtering for Robot Swarm Collaborative Navigation in Unknown Environments, pp. 10266-10273.

Li, Chenxi	Tsinghua University
Lu, Weining	Tsinghua University
Ma, Zhihao	Sun Yat-Sen University
Meng, Litong	Tsinghua University
Liang, Bin	Tsinghua University

15:30-16:30 ThPI5T11.9

Cooperative Path Planning for Four-Way Shuttle Vehicles in Storage and Retrieval Systems: A Hierarchically Dynamic Graph Based Approach, pp. 10274-10279.

Han, Xingyao	Shanghai Jiao Tong University
Tan, Yuhong	MoE Key Lab of Artificial Intelligence, AI Institute, Shanghai J
Chen, Siyuan	Shanghai JiaoTong University
Liu, Zhe	University of Cambridge
Wang, Hesheng	Shanghai Jiao Tong University

15:30-16:30 ThPI5T11.10

Spatiotemporal Co-Design Enabling Prioritized Multi-Agent Motion Planning, pp. 10280-10287. Attachment

Huang, Yunshen	Washington University in St. Louis
He, Wenbo	Washington University in St. Louis
Kantaros, Yiannis	Washington University in St. Louis
Zeng, Shen	Washington University in St. Louis

15:30-16:30 ThPI5T11.11

Decentralized Multi-Robot Navigation Coupled with Spatial-Temporal RetNet Based on Deep Reinforcement Learning, pp. 10288-10295. Attachment

Chen, Lin	Hu Nan University
Wang, Yaonan	Hunan University
Miao, Zhiqiang	Hunan University
Feng, Mingtao	Xidian University
Wang, Yuanzhe	Nanyang Technological University
Mo, Yang	Hunan University
Zhou, Zhen	Hunan University
Wang, Hesheng	Shanghai Jiao Tong University
Wang, Danwei	Nanyang Technological University

15:30-16:30 ThPI5T11.12

Consistent Distributed Cooperative Localization: A Coordinate Transformation Approach, pp. 10296-10302. Attachment

Tian, Chungeng	Harbin Institute of Technology
Hao, Ning	Harbin Institute of Technology
He, Fenghua	Harbin Institute of Technology
Yao, Haodi	Harbin Institute of Technology

15:30-16:30 ThPI5T11.13

Scalability of Platoon-Based Coordination for Mixed Autonomy Intersections, pp. 10303-10310. Attachment

Yan, Zhongxia	Massachusetts Institute of Technology
Wu, Cathy	MIT

15:30-16:30 ThPI5T11.14

Leader-Follower Cooperative Manipulation under Spatio-Temporal Constraints, pp. 10311-10316. Attachment

Sewlia, Mayank — KTH Royal Institute of Technology
Verginis, Christos — Uppsala University
Dimarogonas, Dimos V. — KTH Royal Institute of Technology

15:30-16:30 ThPI5T11.15

Extending Task and Motion Planning with Feasibility Prediction: Towards Multi-Robot Manipulation Planning of Realistic Objects, pp. 10317-10324. Attachment

Ait Bouhsain, Smail — LAAS-CNRS
Alami, Rachid — CNRS
Simeon, Thierry — LAAS-CNRS

15:30-16:30 ThPI5T11.16

PEERNet: An End-To-End Profiling Tool for Real-Time Networked Robotic Systems, pp. 10325-10332. Attachment

Narayanan, Aditya — University of Texas at Austin
Kasibhatla, Pranav — University of Texas at Austin
Choi, Minkyu — The University of Texas at Austin
Li, Po-han — The University of Texas at Austin
Zhao, Ruihan — UT Austin
Chinchali, Sandeep — The University of Texas at Austin

ThPI5T12 Room 12

Aerial Systems II (Teaser Session)

Chair: Chen, Kuan-Wen — National Yang Ming Chiao Tung University
Co-Chair: Ruiz Vincueria, Fernando — Universidad De Sevilla

15:30-16:30 ThPI5T12.1

Biodegradable Gliding Paper Flyers Fabricated through Inkjet Printing, pp. 10333-10340. Attachment

Girardi, Luca — ETH Zürich / Eidg. Forschungsanstalt WSL
Wu, Rui — ETH Zurich
Fukatsu, Yuki — Shibaura Institute of Technology
Shigemune, Hiroki — Shibaura Institute of Technology
Mintchev, Stefano — ETH Zurich

15:30-16:30 ThPI5T12.2

A Ducted Fan UAV for Safe Aerial Grabbing and Transfer of Multiple Loads Using Electromagnets, pp. 10341-10348. Attachment

Yin, Zhong — South China University of Technology
Pei, Hai-Long — South China University of Technology

15:30-16:30 ThPI5T12.3

Control of Unknown Quadrotors from a Single Throw, pp. 10349-10354. Attachment

Blaha, Till Martin — Delft University of Technology
Smeur, Ewoud — TU Delft
Remes, Bart — Delft University of Technology

15:30-16:30 ThPI5T12.4

AirCrab: A Hybrid Aerial-Ground Manipulator with an Active Wheel, pp. 10355-10360. Attachment

Cao, Muqing — Nanyang Technological University
Zhao, Jiayan — Nanyang Technological University
Xu, Xinhang — Nanyang Technological University
Xie, Lihua — NanyangTechnological University

15:30-16:30 ThPI5T12.5

Energy-Optimal Planning of Waypoint-Based UAV Missions - Does Minimum Distance Mean Minimum Energy?, pp. 10361-10368. Attachment

Michel, Nicolas — University of California, Davis
Patnaik, Ayush — University of California, Davis
Kong, Zhaodan — University of California, Davis
Lin, Xinfan — University of California, Davis

15:30-16:30 ThPI5T12.6

Learning to Walk and Fly with Adversarial Motion Priors, pp. 10369-10376. Attachment

L'Erario, Giuseppe — Istituto Italiano Di Tecnologia

Hanover, Drew	University of Zurich - Robotics and Perception Group
Romero, Angel	University of Zurich
Song, Yunlong	University of Zurich
Nava, Gabriele	Istituto Italiano Di Tecnologia
Viceconte, Paolo Maria	Lab0 SRL
Pucci, Daniele	Italian Institute of Technology
Scaramuzza, Davide	University of Zurich

15:30-16:30 ThPI5T12.7

Tracking Control with Uncertainty Smoothing Estimation under Aggressive Maneuvers of Aerial Vehicles, pp. 10377-10383.

Zhang, Hao	ChongQing University
Jiang, Tao	Chongqing University
Tan, Senqi	China North Artificial Intelligence & Innovation Research Instit
Ye, Jianchuan	Tsinghua University
Zheng, Zhi	Chongqing University

15:30-16:30 ThPI5T12.8

Quaternion-Based Sliding Mode Control for Six Degrees of Freedom Flight Control of Quadrotors, pp. 10384-10389.

Yazdanshenas, Amin	Toronto Metropolitan University
Faieghi, Reza	Toronto Metropolitan University

15:30-16:30 ThPI5T12.9

Photometric Consistency for Precise Drone Rephotography, pp. 10390-10397.

Chang, Hsuan-Jui	National Yang Ming Chiao Tung University
Huang, Tzu-Chun	Internet of Things Laboratory, Chunghwa Telecom Laboratories
Xu, Hao-Liang	National Yang Ming Chiao Tung University
Chen, Kuan-Wen	National Yang Ming Chiao Tung University

15:30-16:30 ThPI5T12.10

Active Scout: Multi-Target Tracking Using Neural Radiance Fields in Dense Urban Environments, pp. 10398-10405. Attachment

Hsu, Christopher D.	DEVCOM Army Research Laboratory
Chaudhari, Pratik	University of Pennsylvania

15:30-16:30 ThPI5T12.11

Semantics from Space: Satellite-Guided Thermal Semantic Segmentation Annotation for Aerial Field Robots, pp. 10406-10413.

Lee, Connor	California Institute of Technology
Soedarmadji, Saraswati	California Institute of Technology
Anderson, Matthew	Caltech
Clark, Anthony	Pomona College
Chung, Soon-Jo	Caltech

15:30-16:30 ThPI5T12.12

Neural Control Barrier Functions for Safe Navigation, pp. 10414-10421. Attachment

Harms, Marvin Chayton	NTNU
Kulkarni, Mihir	NTNU: Norwegian University of Science and Technology
Khedekar, Nikhil Vijay	NTNU
Jacquet, Martin	NTNU
Alexis, Kostas	NTNU - Norwegian University of Science and Technology

15:30-16:30 ThPI5T12.13

Preserving Relative Localization of FoV-Limited Drone Swarm Via Active Mutual Observation, pp. 10422-10429. Attachment

Guo, Lianjie	Huzhou Institute, Zhejiang University
Gongye, Zaitian	Zhejiang University
Xu, Ziyi	Zhejiang University
Wang, Yingjian	Zhejiang University
Zhou, Xin	ZHEJIANG UNIVERSITY
Zhou, Jinni	Hong Kong University of Science and Technology (Guangzhou)
Gao, Fei	Zhejiang University

15:30-16:30 ThPI5T12.14

Targeted Image Transformation for Improving Robustness in Long Range Aircraft Detection, pp. 10430-10437. Attachment

Martin, Rebecca	Carnegie Mellon University

Fung, Clement	Carnegie Mellon University
Keetha, Nikhil Varma	Carnegie Mellon University
Bauer, Lujo	Carnegie Mellon University
Scherer, Sebastian	Carnegie Mellon University

15:30-16:30 ThPI5T12.15

Explainable Artificial Intelligence for Autonomous UAV Navigation, pp. 10438-10445.

Dissanayaka, Didula	Memorial University of Newfoundland
Wanasinghe, Thumeera Ruwansiri	Memorial University of Newfoundland
Gosine, Raymond G.	Memorial University of Newfoundland

15:30-16:30 ThPI5T12.16

A Novel Variable Step-Size Path Planning Framework with Step Consistent Markov Decision Process for Large Scale UAV Swarm, pp. 10446-10451. Attachment

Xu, Dan	National University of Defense Technology
Guo, Yunxiao	National University of Defense Technology
Long, Han	National University of Defense Technology
Wang, Chang	National University of Defense Technology

ThCT1 Room 1

SLAM III (Regular session)

Chair: Yuan, Shenghai — Nanyang Technological University

16:30-16:45 ThCT1.1

I2EKF-LO: A Dual-Iteration Extended Kalman Filter Based LiDAR Odometry, pp. 10452-10459. Attachment

Yu, Wenlu	Harbin Institute of Technology
Xu, Jie	Harbin Institute of Technology
Zhao, Chengwei	Hangzhou Guochen Robot Technology Company Limited
Zhao, Lijun	Harbin Institute of Technology
Nguyen, Thien-Minh	Nanyang Technological University
Yuan, Shenghai	Nanyang Technological University
Bai, Mingming	College of Control Science and Engineering, Zhejiang University
Xie, Lihua	NanyangTechnological University

16:45-17:00 ThCT1.2

Physically-Based Photometric Bundle Adjustment in Non-Lambertian Environments, pp. 10460-10467.

Hu, Junpeng	Technical University of Munich
Cheng, Lei	Technical University of Munich
Yan, Haodong	The Hong Kong University of Science and Technology (Guangzhou)
Gladkova, Mariia	Technical University of Munich
Huang, Tianyu	The Chinese University of Hong Kong
Liu, Yunhui	Chinese University of Hong Kong
Cremers, Daniel	Technical University of Munich
Li, Haoang	Hong Kong University of Science and Technology (Guangzhou)

17:00-17:15 ThCT1.3

HSS-SLAM: Human-In-The-Loop Semantic SLAM Represented by Superquadrics, pp. 10468-10474. Attachment

Li, Yulong	Northeastern University
Zhang, Yunzhou	Northeastern University
Zhao, Bin	Northeastern University
Zhang, Zhiyao	Northeastern University
Shen, You	Northeastern University
Zhang, Tengda	Northeastern University
Chen, Guolu	Northeastern University

17:15-17:30 ThCT1.4

High-Fidelity SLAM Using Gaussian Splatting with Rendering-Guided Densification and Regularized Optimization, pp. 10475-10481.

Sun, Shuo	Orebro University
Mielle, Malcolm	Schindler
Lilienthal, Achim J.	Orebro University
Magnusson, Martin	Örebro University

ThCT2 Room 2

Simulation and Animation (Regular session)

Chair: Courtecuisse, Hadrien — AVR, CNRS Strasbourg

16:30-16:45 ThCT2.1

Solving Dynamic Cosserat Rods with Frictional Contact Using the Shooting Method and Implicit Surfaces, pp. 10482-10487. Attachment

Jilani, Radhouane — INRIA
Villard, Pierre-Frederic — Université De Lorraine
Kerrien, Erwan — INRIA

16:45-17:00 ThCT2.2

High Rate Mechanical Coupling of Interacting Objects in the Context of Needle Insertion Simulation with Haptic Feedback, pp. 10488-10493. Attachment

Martin, Claire — INRIA
Duriez, Christian — INRIA
Courtecuisse, Hadrien — AVR, CNRS Strasbourg

17:00-17:15 ThCT2.3

Text-To-Drive: Diverse Driving Behavior Synthesis Via Large Language Models, pp. 10494-10501. Attachment

Nguyen, Phat — University of Massachusetts Amherst
Wang, Tsun-Hsuan — Massachusetts Institute of Technology
Hong, Zhang-Wei — National Tsing Hua University
Karaman, Sertac — Massachusetts Institute of Technology
Rus, Daniela — MIT

17:15-17:30 ThCT2.4

TřiVis: Versatile, Reliable, and High-Performance Tool for Computing Visibility in Polygonal Environments, pp. 10502-10509.

Mikula, Jan — Czech Technical University in Prague
Kulich, Miroslav — Czech Technical University in Prague
Preucil, Libor — Czech Technical University in Prague, CIIRC

ThCT3 Room 3

Manipulation and Grasping III (Regular session)

Chair: Sycara, Katia — Carnegie Mellon University

16:30-16:45 ThCT3.1

Touch-GS: Visual-Tactile Supervised 3D Gaussian Splatting, pp. 10510-10517. Attachment

Swann, Aiden — Stanford
Strong, Matthew — University of Colorado Boulder
Do, Won Kyung — Stanford University
Sznaier Camps, Gadiel — Stanford
Schwager, Mac — Stanford University
Kennedy, Monroe — Stanford University

16:45-17:00 ThCT3.2

ToolEENet: Tool Affordance 6D Pose Estimation, pp. 10518-10525. Attachment

Wang, Yunlong — Universiät Hamburg
Zhang, Lei — University of Hamburg
Tu, Yuyang — Universitat Hamburg
Zhang, Hui — University of Hamburg
Bai, Kaixin — University of Hamburg
Chen, Zhaopeng — University of Hamburg
Zhang, Jianwei — University of Hamburg

17:00-17:15 ThCT3.3

ShapeGrasp: Zero-Shot Task-Oriented Grasping with Large Language Models through Geometric Decomposition, pp. 10526-10533.

Li, Samuel — Carnegie Mellon University
Bhagat, Sarthak — Carnegie Mellon University
Campbell, Joseph — Purdue University
Xie, Yaqi — Carnegie Mellon University
Kim, Woojun — Carnegie Mellon University
Sycara, Katia — Carnegie Mellon University

Stepputtis, Simon — Carnegie Mellon University

ThCT4 — Room 4

Soft Robot Applications I (Regular session)

Chair: Cha, Youngsu — Korea University

Co-Chair: Khan, Kamran — Khalifa University of Science and Technology

16:30-16:45 — ThCT4.1

Vine Robots That Evert through Bending, pp. 10534-10541. Attachment

Wu, Rui — ETH Zurich

Mintchev, Stefano — ETH Zurich

16:45-17:00 — ThCT4.2

Tunable Stiffness Glove for Tremor Suppression Based on 3D Printed Structured Fabrics, pp. 10542-10548. Attachment

Chen, Yu — Nanyang Technological University

Li, Junwei — Nanyang Technological University

Yang, Xudong — Nanyang Technological University

Wang, Yifan — Nanyang Technological University

17:00-17:15 — ThCT4.3

Design and Control of a Novel Soft-Rigid Lower Limb Exoskeleton Robot, pp. 10549-10556. Attachment

Wang, Yuxuan — Shanghai Jiao Tong University

Yuan, Shaoke — Shanghaijiaotong University

Pu, Zihan — Shanghai Jiao Tong University

Wang, Jiangbei — Shanghai Jiao Tong University

Yanqiong, Fei — Shanghai Jiao Tong University

17:15-17:30 — ThCT4.4

SoftNeRF: A Self-Modeling Soft Robot Plugin for Various Tasks, pp. 10557-10562. Attachment

Shan, Jiwei — The Chinese University of Hong Kong

Li, Yirui — Shanghai Jiao Tong University

Feng, Qiyu — Shanghai Jiao Tong University

Li, Ditao — Shanghai Jiao Tong University

Han, Lijun — Shanghai Jiao Tong University

Wang, Hesheng — Shanghai Jiao Tong University

ThCT5 — Room 5

Mechanism Design II (Regular session)

Chair: Borisov, Ivan — ITMO University

Co-Chair: Stefanini, Cesare — Scuola Superiore Sant'Anna

16:30-16:45 — ThCT5.1

Design and Preliminary Validation of a Multi-Mode Quadrotor Aerial-Aquatic Vehicle with Tilting Mechanism, pp. 10563-10568. Attachment

Liu, Mengyao — Nanjing University of Aeronautics and Astronautics

Chen, Bai — Nanjing University of Aeronautics and Astronautics

Wang, Lingyu — Nanjing University of Aeronautics and Astronautics

Mao, Zebing — Yamaguchi University

Shen, Yayi — Tokyo Institution of Technology

16:45-17:00 — ThCT5.2

Frozen Assets: Leveraging Ice, Water, and Phase Transitions in Robots, pp. 10569-10574. Attachment

Wilhelm, Aaron — Cornell University

Wilhelm, Andrew — Cornell University

Calderón-Aceituno, Lydia Isabela — Cornell University

Napp, Nils — Cornell University

Petersen, Kirstin Hagelskjaer — Cornell University

Helbling, E. Farrell — Cornell University

17:00-17:15 — ThCT5.3

Synergizing Morphological Computation and Generative Design: Automatic Synthesis of Tendon-Driven Grippers, pp. 10575-10580. Attachment

Zharkov, Kirill — ITMO University

Chaikovskii, Mikhail — ITMO University

Osipov, Yefim	ITMO University
Alshaowa, Rahaf	ITMO University
Borisov, Ivan	ITMO University
Kolyubin, Sergey	ITMO University

17:15-17:30 ThCT5.4

A High-Performance Anthropomorphic Robotic Arm for Household Applications, pp. 10581-10588. Attachment

Liu, Tianliang	Harbin Institute of Technology
Yang, Sicheng	Tencent
Li, Jingchen	Tencent
Chen, Xiangchi	Tencent
Wang, Shuai	Tencent
Teng, Xiao	Keppel-NUS Corporate Lab, National University of Singapore
Lee, Wang Wei	Tencent
Li, Xiong	Tencent
Zheng, Yu	Tencent

ThCT6 Room 6

Aerial Systems: Perception and Autonomy II (Regular session)

Chair: Corah, Micah	Colorado School of Mines
Co-Chair: Zhou, Boyu	Sun Yat-Sen University

16:30-16:45 ThCT6.1

Trajectory Optimization with Global Yaw Parameterization for Field-Of-View Constrained Autonomous Flight, pp. 10589-10595. Attachment

Wu, Yuwei	University of Pennsylvania
Tao, Yuezhan	University of Pennsylvania
Spasojevic, Igor	University of Pennsylvania
Kumar, Vijay	University of Pennsylvania

16:45-17:00 ThCT6.2

Drones Guiding Drones: Cooperative Navigation of a Less-Equipped Micro Aerial Vehicle in Cluttered Environments, pp. 10596-10603. Attachment

Pritzl, Vaclav	Czech Technical University in Prague
Vrba, Matous	Faculty of Electrical Engineering, Czech Technical University In
Stasinchuk, Yurii	Czech Technical University in Prague
Kratky, Vit	Czech Technical University in Prague
Horyna, Jiri	Czech Technical University in Prague
Stepan, Petr	Czech Technical University in Prague, Faculty of Electrical Engi
Saska, Martin	Czech Technical University in Prague

17:00-17:15 ThCT6.3

OmniNxt: A Fully Open-Source and Compact Aerial Robot with Omnidirectional Visual Perception, pp. 10604-10611. Attachment

Liu, Peize	The Hong Kong University of Science and Technology, Robotic Inst
Feng, Chen	Hong Kong University of Science and Technology
Xu, Yang	The Hong Kong University of Science and Technology
Ning, Yan	Hong Kong University of Science and Technology
Xu, Hao	HKUST
Shen, Shaojie	Hong Kong University of Science and Technology

17:15-17:30 ThCT6.4

Structure-Invariant Range-Visual-Inertial Odometry, pp. 10612-10619.

Alberico, Ivan	University of Zurich
Delaune, Jeff	Jet Propulsion Laboratory
Cioffi, Giovanni	University of Zurich
Scaramuzza, Davide	University of Zurich

ThCT7 Room 7

Medical Robotics II (Regular session)

Chair: Ciuti, Gastone	Scuola Superiore Sant'Anna
Co-Chair: Arai, Fumihito	The University of Tokyo

16:30-16:45 ThCT7.1

Advanced Handheld Micro-Surgical System Using an Hall Sensor and a Magnet Trocar for Retinal Microsurgery, pp. 10620-10626.

Lee, Myung Ho	DGIST
Im, Jintaek	DGIST
Song, Cheol	DGIST

16:45-17:00 ThCT7.2

An Octopus-Inspired-Configuration Sensor Array Concept Toward Torso-Oriented Magnetic Localization Task and Simulation Verification, pp. 10627-10632. Attachment

Sun, Yichong	The Chinese University of Hong Kong
Chan, Wai Shing	The Chinese University of Hong Kong
Li, Yehui	The Chinese University of Hong Kong
Zhang, Heng	The University of Hong Kong
Huang, Yisen	The Chinese University of Hong Kong
Hu, Haochen	Multi-Scale Medical Robotics Center
Chiu, Philip, Wai-yan	Chinese University of Hong Kong
Li, Zheng	The Chinese University of Hong Kong

17:00-17:15 ThCT7.3

Toward Micro Eye Movement Detection in Practice: Stand-Alone Eye Tracker with High Resolution and Wide Measurement Range, pp. 10633-10640. Attachment

Yokoyama, Keiko	NEC
Sueishi, Tomohiro	The University of Tokyo
Inoue, Michiaki	NEC Corporation
Yachida, Shoji	NEC
Hosoi, Toshinori	NEC Corporation
Ishikawa, Masatoshi	University of Tokyo

17:15-17:30 ThCT7.4

A Hybrid Vision/Force Control Strategy for Handheld Robotic Devices Enhancing Probe-Based Confocal Laser Endomicroscopy, pp. 10641-10648.

Choi, Ingu	HL Mando
Kim, Eunchan	KIST, Hanyang University
Yang, Sungwook	Korea Institute of Science and Technology

ThCT8 Room 8

Localization VI (Regular session)

Chair: Mock, Alexander — Osnabrück University

16:30-16:45 ThCT8.1

Cross-Modal Visual Relocalization in Prior LiDAR Maps Utilizing Intensity Textures, pp. 10649-10654. Attachment

Shen, Qiyuan	Shanghai Jiao Tong University
Zhao, Hengwang	Shanghai Jiao Tong University
Yan, Weihao	Shanghai Jiao Tong University
Qin, Tong	Shanghai Jiao Tong University
Yang, Ming	Shanghai Jiao Tong University

16:45-17:00 ThCT8.2

EVIT: Event-Based Visual-Inertial Tracking in Semi-Dense Maps Using Windowed Nonlinear Optimization, pp. 10655-10662. Attachment

Yuan, Runze	Shanghaitech University
Liu, Tao	ShanghaiTech University
Dai, Zijia	Shanghaitech University
Zuo, Yi-Fan	Beijing Institute of Technology
Kneip, Laurent	ShanghaiTech University

17:00-17:15 ThCT8.3

MICP-L: Mesh-Based ICP for Robot Localization Using Hardware-Accelerated Ray Casting, pp. 10663-10670. Attachment

Mock, Alexander	Osnabrück University
Wiemann, Thomas	Fulda University of Applied Sciences
Pütz, Sebastian	German Research Center for Artificial Intelligence
Hertzberg, Joachim	University of Osnabrueck

17:15-17:30 ThCT8.4

DSLO: Deep Sequence LiDAR Odometry Based on Inconsistent Spatio-Temporal Propagation, pp. 10671-10676. Attachment

Zhang, Huixin	Shanghai Jiao Tong University
Wang, Guangming	University of Cambridge
Wu, Xinrui	Shanghai Jiao Tong University
Xu, Chenfeng	University of California, Berkeley
Ding, Mingyu	UC Berkeley
Tomizuka, Masayoshi	University of California
Zhan, Wei	Univeristy of California, Berkeley
Wang, Hesheng	Shanghai Jiao Tong University

ThCT9 Room 9

Motion and Path Planning VI (Regular session)

Chair: Kyriakopoulos, Kostas	New York University - Abu Dhabi
Co-Chair: Bekris, Kostas E.	Rutgers, the State University of New Jersey

16:30-16:45 ThCT9.1

A Fast Motion and Foothold Planning Framework for Legged Robot on Discrete Terrain, pp. 10677-10684. Attachment

Yu, Jiyu	Zhejiang University
Wang, Dongqi	Zhejiang University
Chen, Zhenghan	Zhejiang University
Chen, Ci	Zhejiang University
Wu, Shuangpeng	Zhejiang University
Wang, Yue	Zhejiang University
Xiong, Rong	Zhejiang University

16:45-17:00 ThCT9.2

Robot Active Vision-Based Path Planning for Localization Improvement in Indoor Environments, pp. 10685-10692. Attachment

Barlakas, Sotirios	Centre for Research and Technology Hellas / Information Technolo
Alexiou, Dimitrios	Centre for Research and Technology Hellas (CERTH)
Tsiakas, Kosmas	Centre for Research and Technology Hellas (CERTH)
Katsatos, Dimitrios	Centre for Research & Technology Hellas (CERTH)
Kostavelis, Ioannis	Center for Research and Technology Hellas
Giakoumis, Dimitris	Centre for Research and Technology Hellas
Gasteratos, Antonios	Democritus University of Thrace
Tzovaras, Dimitrios	Centre for Research and Technology Hellas

17:00-17:15 ThCT9.3

GSRM: Building Roadmaps for Query-Efficient and Near-Optimal Path Planning Using a Reaction Diffusion System, pp. 10693-10700.

Henkel, Christian	Robert Bosch GmbH
Toussaint, Marc	TU Berlin
Hoenig, Wolfgang	TU Berlin

17:15-17:30 ThCT9.4

IDb-RRT: Sampling-Based Kinodynamic Motion Planning with Motion Primitives and Trajectory Optimization, pp. 10701-10708. Attachment

Ortiz-Haro, Joaquim	TU Berlin
Hoenig, Wolfgang	TU Berlin
Hartmann, Valentin	ETH Zürich
Toussaint, Marc	TU Berlin
Righetti, Ludovic	New York University

ThCT10 Room 10

Data Sets for Robotic Vision II (Regular session)

Chair: Erich, Floris Marc Arden	National Institute of Advanced Industrial Science and Technology

16:30-16:45 ThCT10.1

PEGASUS: Physically Enhanced Gaussian Splatting Simulation System for 6DoF Object Pose Dataset Generation, pp. 10709-10714. Attachment

Meyer, Lukas	Friedrich-Alexander-Universität Erlangen-Nürnberg
Erich, Floris Marc Arden	National Institute of Advanced Industrial Science and Technology

Yoshiyasu, Yusuke	CNRS-AIST JRL
Stamminger, Marc	Universität Erlangen-Nürnberg
Ando, Noriaki	National Institute of Advanced Industrial Science and Technology
Domae, Yukiyasu	The National Institute of Advanced Industrial Science and Techno

16:45-17:00 ThCT10.2

Two Teachers Are Better Than One: Leveraging Depth in Training Only for Unsupervised Obstacle Segmentation, pp. 10715-10722.

Eum, Sungmin	U.S. Army Research Laboratory, Booz Allen Hamilton Inc
Lee, Hyungtae	US Army Research Laboratory
Kwon, Heesung	DEVCOM Army Research Laboratory
Osteen, Philip	U.S. Army Research Laboratory
Harrison, Andre	U.S. Army Research Laboratory

17:00-17:15 ThCT10.3

Visual Place Recognition in Unstructured Driving Environments, pp. 10723-10730. Attachment

Rai, Utkarsh	CVIT, IIIT Hyderababd
Gangisetty, Shankar	IIIT Hyderabad
Abdul Hafez, A. H.	Hasan Kalyoncu Uiversity
Subramanian, Anbumani	Intel / IIIT-Hyderabad
Jawahar, C.V.	IIIT, Hyderabad

17:15-17:30 ThCT10.4

OTVIC: A Dataset with Online Transmission for Vehicle-To-Infrastructure Cooperative 3D Object Detection, pp. 10731-10738. Attachment

Zhu, He	Zhejiang University
Wang, Yunkai	Zhejiang University
Kong, Quyu	Alibaba Cloud
Wei, Yufei	Zhejiang University
Xia, Xunlong	Alibaba Cloud
Deng, Bing	Alibaba Cloud
Xiong, Rong	Zhejiang University
Wang, Yue	Zhejiang University

ThCT11 Room 11

Multi-Robot Systems VI (Regular session)

Chair: Bray, Edward	University of Technology Sydney
Co-Chair: Min, Byung-Cheol	Purdue University

16:30-16:45 ThCT11.1

Learning Coordinated Maneuver in Adversarial Environments, pp. 10739-10744. Attachment

Hu, Zechen	George Mason University
Limbu, Manshi	George Mason University
Shishika, Daigo	George Mason University
Xiao, Xuesu	George Mason University
Wang, Xuan	George Mason University

16:45-17:00 ThCT11.2

Multi-Goal Path Planning in Cluttered Environments with PRM-Guided Self-Organising Maps, pp. 10745-10752.

Davis, Benjamin R.	University of Technology, Sydney
Bray, Edward	University of Technology Sydney
Best, Graeme	University of Technology Sydney

17:00-17:15 ThCT11.3

Learning from Demonstration Framework for Multi-Robot Systems Using Interaction Keypoints and Soft Actor-Critic Methods, pp. 10753-10760. Attachment

Venkatesh, L.N Vishnunandan	Purdue University
Min, Byung-Cheol	Purdue University

17:15-17:30 ThCT11.4

Energy Sharing Mechanism for Freeform Robots Utilizing Conductive Spherical Sliding Surfaces, pp. 10761-10768.

Li, Xin-Zhuo	The Chinese University of Hong Kong, Shenzhen
Tu, Yuxiao	The Chinese University of Hong Kong, Shenzhen
Liang, Guanqi	The Chinese University of Hong Kong, Shenzhen
Wu, Di	Central South University

ThCT12 Room 12

Model Learning for Control (Regular session)

Chair: Wang, Hongpeng Nankai University

16:30-16:45 ThCT12.1

Arm-Constrained Curriculum Learning for Loco-Manipulation of a Wheel-Legged Robot, pp. 10769-10775.

Wang, Zifan The Hong Kong University of Science and Technology (Guangzhou)
Jia, Yufei Department of Electronic Engineering, Tsinghua University, China
Shi, Lu Tsinghua University
Wang, Haoyu Harbin Institute of Technology
Zhao, Haizhou Xi'an Jiaotong-Liverpool University
Li, Xueyang Discovver Robotics
Zhou, Jinni Hong Kong University of Science and Technology (Guangzhou)
Ma, Jun The Hong Kong University of Science and Technology
Zhou, Guyue Tsinghua University

16:45-17:00 ThCT12.2

Control-Oriented Reinforcement Active Modeling Scheme for Hysteresis Compensation of Flexible Endoscopic Robot, pp. 10776-10782.

Ren, Fan Nankai University
Wang, Xiangyu Nankai University
Fang, Yongchun Nankai University
Qin, Yanding Nankai University
Wang, Hongpeng Nankai University
Yu, Ningbo Nankai University
Han, Jianda Nankai University

17:00-17:15 ThCT12.3

Bridging the Sim-To-Real Gap with Bayesian Inference, pp. 10783-10790. Attachment

Rothfuss, Jonas ETH Zurich
Sukhija, Bhavya ETH Zürich
Treven, Lenart ETH Zürich
Dorfler, Florian ETH Zürich
Coros, Stelian ETH Zurich
Krause, Andreas ETH Zurich

17:15-17:30 ThCT12.4

A Cascaded Broad Learning System for Manipulator Motion Control, pp. 10791-10797.

Zuo, Guoyu Beijing University of Technology
Dong, Shuaifeng Beijing University of Technology
Zhou, Jiyong Beijing University of Technology
Yu, Shuangyue Beijing University of Technology

ThCT13 Room 13

Computer Vision for Automation I (Regular session)

Chair: Hadj-Abdelkader, Hicham IBISC
Co-Chair: Triebel, Rudolph German Aerospace Center (DLR)

16:30-16:45 ThCT13.1

Visual Quality Inspection Planning: A Model-Based Framework for Generating Optimal and Feasible Inspection Poses, pp. 10798-10805. Attachment

Staderini, Vanessa AIT Austrian Institute of Technology GmbH
Glück, Tobias AIT Austrian Institute of Technology GmbH
Schneider, Philipp Center for Vision, Automation & Control, AIT Austrian Institute
Kugi, Andreas TU Wien

16:45-17:00 ThCT13.2

Progressive Query Refinement Framework for Bird's-Eye-View Semantic Segmentation from Surrounding Images, pp. 10806-10811.

Choi, Dooseop ETRI
Kang, Jungyu Electronics and Telecommunications Research Institute (ETRI)

An, Taeg-Hyun	Electronics and Telecommunications Research Institute
An, Kyounghwan	ETRI
KyoungWook, Min	ETRI

17:00-17:15 ThCT13.3

Adv3D: Generating 3D Adversarial Examples for 3D Object Detection in Driving Scenarios with NeRF, pp. 10812-10819. Attachment

Li, Leheng	HKUST(GZ)
Lian, Qing	HKUST
Chen, Yingcong	Hong Kong University of Science and Technology

17:15-17:30 ThCT13.4

Outlier-Robust Geometric Perception: A Novel Thresholding-Based Estimator with Intra-Class Variance Maximization, pp. 10820-10827. Attachment

Sun, Lei	East China University of Science and Technology

ThDT1 Room 1

SLAM IV (Regular session)

Chair: Furukawa, Tomonari	University of Virginia
Co-Chair: Verdoja, Francesco	Aalto University

17:30-17:45 ThDT1.1

AS-LIO: Spatial Overlap Guided Adaptive Sliding Window LiDAR-Inertial Odometry for Aggressive FOV Variation, pp. 10828-10835. Attachment

Zhang, Tianxiang	Wuhan University
Zhang, Xuanxuan	Wuhan University
Liao, Zongbo	WuHan University
Xia, Xin	University of California, Los Angeles
Li, You	Wuhan University

17:45-18:00 ThDT1.2

DDS-SLAM: Dense Semantic Neural SLAM for Deformable Endoscopic Scenes, pp. 10836-10841. Attachment

Shan, Jiwei	The Chinese University of Hong Kong
Li, Yirui	Shanghai Jiao Tong University
Yang, Lujia	Shanghai Jiao Tong University
Feng, Qiyu	Shanghai Jiao Tong University
Han, Lijun	Shanghai Jiao Tong University
Wang, Hesheng	Shanghai Jiao Tong University

18:00-18:15 ThDT1.3

MUP-LIO: Mapping Uncertainty-Aware Point-Wise Lidar Inertial Odometry, pp. 10842-10848. Attachment

Yao, Hekai	Dalian University of Technology
Zhang, Xuetao	Dalian University of Technology
Sun, Gang	Dalian University of Technology
Liu, Yisha	Dalian Maritime University
Zhang, Xuebo	Nankai University,
Zhuang, Yan	Dalian University of Technology

18:15-18:30 ThDT1.4

STL-SLAM: A Structured-Constrained RGB-D SLAM Approach to Texture-Limited Environments, pp. 10849-10854. Attachment

Dong, Juan	Beijing Institute of Technology
Lu, Maobin	Beijing Institute of Technology
Chen, Chen	Beijing Institute of Technology
Deng, Fang	Beijing Institute of Technology
Chen, Jie	Tongji University

ThDT2 Room 2

Modeling, Tracking and Simulating Humans (Regular session)

Chair: Bombieri, Nicola	University of Verona
Co-Chair: Lee, Jangwon	Sungkyunkwan University

17:30-17:45 ThDT2.1

Autonomous Behavior Planning for Humanoid Loco-Manipulation through Grounded Language Model, pp. 10855-10862. Attachment

Wang, Jin	Italian Institute of Technology
Laurenzi, Arturo	Istituto Italiano Di Tecnologia
Tsagarakis, Nikos	Istituto Italiano Di Tecnologia

17:45-18:00 ThDT2.2

A Real-Time Filter for Human Pose Estimation Based on Denoising Diffusion Models for Edge Devices, pp. 10863-10868.

Bozzini, Chiara	University of Verona
Boldo, Michele	University of Verona
Martini, Enrico	Università Di Verona
Bombieri, Nicola	University of Verona

18:00-18:15 ThDT2.3

SFTrack: A Robust Scale and Motion Adaptive Algorithm for Tracking Small and Fast Moving Objects, pp. 10869-10876. Attachment

Song, Inpyo	Sungkyunkwan University
Lee, Jangwon	Sungkyunkwan University

18:15-18:30 ThDT2.4

A Hybrid Human Tracking System Using UWB Sensors and Monocular Visual Data Fusion for Human Following Robots, pp. 10877-10882. Attachment

Zhang, Dingzhi	Technical University of Munich
Birner, Lukas	Technical University of Munich
Pancheri, Felix	Technical University of Munich
Rehekampff, Christoph	Technische Universität München
Burschka, Darius	Technische Universitaet Muenchen
Lueth, Tim C.	Technical University of Munich

ThDT3 Room 3

Deep Learning in Grasping and Manipulation II (Regular session)

Co-Chair: Walas, Krzysztof, Tadeusz — Poznan University of Technology

17:30-17:45 ThDT3.1

Tactile Active Inference Reinforcement Learning for Efficient Robotic Manipulation Skill Acquisition, pp. 10883-10888. Attachment

Liu, Zihao	Northwestern Polytechnical University
Liu, Xing	Northwestern Polytechnical University
Liu, Zhengxiong	Northwestern Polytechnical University
Zhang, Yizhai	Northwestern Polytechnical University
Huang, Panfeng	Northwestern Polytechnical University

17:45-18:00 ThDT3.2

RelationGrasp: Object-Oriented Prompt Learning for Simultaneously Grasp Detection and Manipulation Relationship in Open Vocabulary, pp. 10889-10895. Attachment

Liu, Songting	NUS
Teo, Tat Joo	Singapore Institute of Manufacturing Technology
Lin, Zhiping	Nanyang Technological University
Zhu, Haiyue	Agency for Science, Technology and Research (A*STAR)

18:00-18:15 ThDT3.3

Adapting Skills to Novel Grasps: A Self-Supervised Approach, pp. 10896-10903. Attachment

Papagiannis, Georgios	Imperial College London
Dreczkowski, Kamil	Imperial College London
Vosylius, Vitalis	Imperial College London
Johns, Edward	Imperial College London

18:15-18:30 ThDT3.4

ManiFoundation Model for General-Purpose Robotic Manipulation of Contact Synthesis with Arbitrary Objects and Robots, pp. 10904-10911. Attachment

Xu, Zhixuan	National University of Singapore
Gao, Chongkai	National University of Singapore
Liu, Zixuan	Tsinghua University
Yang, Gang	National University of Singapore
Tie, Chenrui	Peking University
Zheng, Haozhuo	National University of Singapore
Zhou, Haoyu	National University of Singapore

Weikun, Peng	National University of Singapore
Wang, Debang	National University of Singapore
Hu, Tianrun	Nanyang Technological University
Chen, Tianyi	Shanghai Jiao Tong University
Yu, Zhouliang	The Hong Kong University of Science and Technology
Shao, Lin	National University of Singapore

ThDT4 Room 4

Soft Robot Applications II (Regular session)

Chair: Ciuti, Gastone	Scuola Superiore Sant'Anna
Co-Chair: Haninger, Kevin	Fraunhofer IPK

17:30-17:45 ThDT4.1

Embedded 3d Printing of Silicone for Soft Actuator with Stiffness Gradient and Programmable Workspace, pp. 10912-10917. Attachment

Xiao, Fei	The Chinese University of Hong Kong, Shenzhen
Wei, Zhuoheng	The Chinese University of Hong Kong, Shenzhen
Wang, Hao	The Chinese University of Hong Kong, Shenzhen
Li, Jisen	Shenzhen Institute of Artificial Intelligence and Robotics for S
Zhu, Jian	Chinese University of Hong Kong, Shenzhen

17:45-18:00 ThDT4.2

Soft Finger Rotational Stability for Precision Grasps, pp. 10918-10924. Attachment

Jang, Hun	Ulsan National Institute of Science and Technology
Petrichenko, Valentyn	Fraunhofer IPK
Bae, Joonbum	Korea University
Haninger, Kevin	Fraunhofer IPK

18:00-18:15 ThDT4.3

Strain-Based Modeling of Rod-Driven Soft Continuum Robots with Co-Located Embedded Sensors, pp. 10925-10930.

Wang, Peiyi	National University of Singapore (NUS)
Feliu, Daniel	Khalifa University of Science and Technology
Guo, Sheng	Beijing Jiaotong University
Renda, Federico	Khalifa University of Science and Technology
Laschi, Cecilia	National University of Singapore

18:15-18:30 ThDT4.4

S-BUN: Soft Bifunctional Utility Module for Robot Sensing and Signaling, pp. 10931-10937. Attachment

Mahuttanatan, Suksakaow	University of the Arts London, Central Saint Martins
Asawalertsak, Naris	Vidyasirimedhi Institute of Science and Technology (VISTEC)
Paripurana, Jinjuta	Kamnoetvidya Science Academy
Tarapongnivat, Kanut	Vidyasirimedhi Institute of Science and Technology
Chuthong, Thirawat	Vidyasirimedhi Institute of Science and Technology
Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

ThDT5 Room 5

Robot Design (Regular session)

Co-Chair: Stefanini, Cesare	Scuola Superiore Sant'Anna

17:30-17:45 ThDT5.1

Design of a Soft Shell for a Spherical Exploration Robot Traversing Varying Terrain, pp. 10938-10943.

Dravid, Meghali Prashant	Texas A&M University
Oevermann, Micah	Texas A&M University
McDougall, David	Texas A&M University, College Station
Dugas, David	Texas A&M University, College Station
Ambrose, Robert	Texas A&M University

17:45-18:00 ThDT5.2

Design of a Fully Actuated Drone with Non-Isotropic Wrench Shape, pp. 10944-10951. Attachment

Park, Seongsu	KAIST
Kim, Min Jun	KAIST

18:00-18:15 ThDT5.3

Novel Design of Reconfigurable Tracked Robot with Geometry-Changing Tracks, pp. 10952-10959. Attachment

Xuan, Chice	Huzhou Institute of Zhejiang University, Huzhou
Lu, Jiadong	Zhejiang Universisy, Huzhou Institute of Zhejiang University
Tian, Zhihao	Nanjing Institute of Technology
Li, Jiacheng	Huzhou Institute of Zhejiang University
Zhang, Mengke	Zhejiang University
Xie, Hanbin	Huzhou Institute of Zhejiang University, Huzhou
Qiu, Jianxiong	Zhejiang Zhongyan Industry Co. Ltd
Xu, Chao	Zhejiang University
Cao, Yanjun	Zhejiang University, Huzhou Institute of Zhejiang University

18:15-18:30 ThDT5.4

Self-Assessment of Robotic Laboratory and Equipment Readiness Using Large Language Models and Robotic Data Capture, pp. 10960-10965. Attachment

Ilić, Stefan	EPFL
Hughes, Josie	EPFL

ThDT6 Room 6

Aerial Systems: Perception and Autonomy III (Regular session)

Co-Chair: Qin, Tong	Shanghai Jiao Tong University

17:30-17:45 ThDT6.1

SCP: Soft Conditional Prompt Learning for Aerial Video Action Recognition, pp. 10966-10973.

Wang, Xijun	University of Maryland, College Park
Xian, Ruiqi	University of Maryland-College Park
Guan, Tianrui	University of Maryland
Liu, Fuxiao	University of Maryland
Manocha, Dinesh	University of Maryland

17:45-18:00 ThDT6.2

SOAR: Simultaneous Exploration and Photographing with Heterogeneous UAVs for Fast Autonomous Reconstruction, pp. 10974-10981. Attachment

Zhang, Mingjie	Northwestern Polytechnical University
Feng, Chen	Hong Kong University of Science and Technology
Li, Zengzhi	North China Electric Power University
Zheng, Guiyong	Xidian University
Luo, Yiming	The University of Hong Kong
Wang, Zhu	North China Electric Power University
Zhou, Jinni	Hong Kong University of Science and Technology (Guangzhou)
Shen, Shaojie	Hong Kong University of Science and Technology
Zhou, Boyu	Sun Yat-Sen University

18:00-18:15 ThDT6.3

Data-Driven Koopman Operator-Based Error-State Kalman Filter for Enhanced State Estimation of Quadrotors in Agile Flight, pp. 10982-10988.

Huang, Peng	Barkhausen Institut
Zheng, Ketong	Technische Universität Dresden
Fettweis, Gerhard	Technische Universität Dresden

18:15-18:30 ThDT6.4

Greedy Perspectives: Multi-Drone View Planning for Collaborative Perception in Cluttered Environments, pp. 10989-10996. Attachment

Suresh, Krishna	Olin College of Engineering
Rauniyar, Aditya	Carnegie Mellon University
Corah, Micah	Colorado School of Mines
Scherer, Sebastian	Carnegie Mellon University

ThDT7 Room 7

Medical Robotics III (Regular session)

Chair: Courtecuisse, Hadrien	AVR, CNRS Strasbourg
Co-Chair: Stilli, Agostino	University College London

17:30-17:45 ThDT7.1

Real-Time Robotic Flexible Needle Insertion in Deformable Living Organs Using Isolated Objective Constraint, pp. 10997-11002. Attachment

Ha, Thuc Long	ICUBE - Universite De Strasbourg
Bert, Julien	LaTIM, INSERM, CHRU Brest
Courtecuisse, Hadrien	AVR, CNRS Strasbourg

17:45-18:00 ThDT7.2

Continuum Robot Shape Estimation Using Magnetic Ball Chains, pp. 11003-11008.

Pittiglio, Giovanni	Worcester Polytechnic Institute
Donder, Abdulhamit	Boston Children's Hospital & Harvard Medical School
Dupont, Pierre	Children's Hospital Boston, Harvard Medical School

18:00-18:15 ThDT7.3

An MR Safe Double-Arch Needle Insertion Robot with Scissor-Folding Mechanism for Abdominal Percutaneous Interventions, pp. 11009-11016. Attachment

Liang, Ziting	University College London
Lu, Chuang	University College London
Yang, Haoqian	University College London
Hashem, Ryman	University of College London
Abdelaziz, Mohamed Essam Mohamed Kassem	Imperial College London
Lindenroth, Lukas	King's College London
Bandula, Steve	Wellcome/EPSRC Centre for Interventional and Surgical Sciences
Stoyanov, Danail	University College London
Stilli, Agostino	University College London

18:15-18:30 ThDT7.4

Spatial Spinal Fixation: A Transformative Approach Using a Unique Robot-Assisted Steerable Drilling System and Flexible Pedicle Screw, pp. 11017-11022. Attachment

Sharma, Susheela	University of Texas at Austin
Kulkarni, Yash	The University of Texas at Austin
Go, Sarah	University of Texas at Austin
Bonyun, Jeff	University of Texas at Austin
Amadio, Jordan P.	University of Texas Dell Medical School
Tilton, Maryam	University of Texas at Austin
Khadem, Mohsen	University of Edinburgh
Alambeigi, Farshid	University of Texas at Austin

ThDT8 Room 8

Localization VII (Regular session)

Co-Chair: Matteucci, Matteo — Politecnico Di Milano

17:30-17:45 ThDT8.1

Advancements in Radar Odometry, pp. 11023-11030. Attachment

Frosi, Matteo	Politecnico Di Milano
Usuelli, Mirko	Politecnico Di Milano
Matteucci, Matteo	Politecnico Di Milano

17:45-18:00 ThDT8.2

BEVRender: Vision-Based Cross-View Vehicle Registration in Off-Road GNSS-Denied Environment, pp. 11031-11038.

Lihong, Jin	Carnegie Mellon University
Dong, Wei	Carnegie Mellon University
Wang, Wenshan	Carnegie Mellon University
Kaess, Michael	Carnegie Mellon University

18:00-18:15 ThDT8.3

3D-BLUE: Backscatter Localization for Underwater Robotics, pp. 11039-11046.

Afzal, Sayed Saad	Massachusetts Institute of Technology
Chen, Wei-Tung	Massachusetts Institute of Technology
Adib, Fadel	Massachusetts Institute of Technology

18:15-18:30 ThDT8.4

BEV-CV: Birds-Eye-View Transform for Cross-View Geo-Localisation, pp. 11047-11054.

Shore, Tavis	University of Surrey
Hadfield, Simon	University of Surrey
Mendez, Oscar	University of Surrey

ThDT9 Room 9

Motion and Path Planning VII (Regular session)

Chair: Bekris, Kostas E. — Rutgers, the State University of New Jersey

Co-Chair: Dantam, Neil — Colorado School of Mines

17:30-17:45 ThDT9.1

BOMP: Bin-Optimized Motion Planning, pp. 11055-11062. Attachment

Tam, Zachary — University of California, Berkeley

Dharmarajan, Karthik — UC Berkeley

Qiu, Tianshuang — University of California, Berkeley

Avigal, Yahav — UC Berkeley

Ichnowski, Jeffrey — Carnegie Mellon University

Goldberg, Ken — UC Berkeley

17:45-18:00 ThDT9.2

Roadmaps with Gaps Over Controllers: Achieving Efficiency in Planning under Dynamics, pp. 11063-11068. Attachment

Sivaramakrishnan, Aravind — Rutgers University

Tangirala, Sumanth — Rutgers University, New Brunswick

Granados, Edgar — Rutgers University

Carver, Noah — Rutgers University

Bekris, Kostas E. — Rutgers, the State University of New Jersey

18:00-18:15 ThDT9.3

A Sampling Ensemble for Asymptotically Complete Motion Planning with Volume-Reducing Workspace Constraints, pp. 11069-11076. Attachment

Li, Sihui — Colorado School of Mines

Schack, Matthew — Colorado School of Mines

Upadhyay, Aakriti — Colorado School of Mines

Dantam, Neil — Colorado School of Mines

18:15-18:30 ThDT9.4

Deep Geometric Potential Functions for Tracking on Manifolds, pp. 11077-11084.

Potu Surya Prakash, Nikhil — University of California, Berkeley

Seo, Joohwan — University of California, Berkeley

Sreenath, Koushil — University of California, Berkeley

Choi, Jongeun — Yonsei University

Horowitz, Roberto — Berkeley

ThDT10 Room 10

Data Sets for Robotic Vision III (Regular session)

Chair: Pomerleau, Francois — Université Laval

17:30-17:45 ThDT10.1

NeuralLabeling: A Versatile Toolset for Labeling Vision Datasets Using Neural Radiance Fields, pp. 11085-11092.

Erich, Floris Marc Arden — National Institute of Advanced Industrial Science and Technology

Chiba, Naoya — Tohoku University

Mustafa, Abdullah — National Institute of Advanced Industrial Science and Technology

Yoshiyasu, Yusuke — CNRS-AIST JRL

Ando, Noriaki — National Institute of Advanced Industrial Science and Technology

Hanai, Ryo — National Institute of Industrial Science and Technology(AIST)

Domae, Yukiyasu — The National Institute of Advanced Industrial Science and Techno

17:45-18:00 ThDT10.2

DaDiff: Domain-Aware Diffusion Model for Nighttime UAV Tracking, pp. 11093-11100.

Zuo, Haobo — University of Hong Kong

Fu, Changhong — Tongji University

Zheng, Guangze — The University of Hong Kong

Yao, Liangliang — Tongji University

Lu, Kunhan — Tongji University

Pan, Jia — University of Hong Kong

18:00-18:15 ThDT10.3

LiDAR-Based 4D Occupancy Completion and Forecasting, pp. 11101-11108.

Liu, Xinhao — New York University

Gong, Moonjun — New York University

Fang, Qi	University of Toronto
Xie, Haoyu	New York University
Li, Yiming	New York University
Zhao, Hang	Tsinghua University
Feng, Chen	New York University

18:15-18:30 ThDT10.4

Exposing the Unseen: Exposure Time Emulation for Offline Benchmarking of Vision Algorithms, pp. 11109-11116. Attachment

Gamache, Olivier	Université Laval
Fortin, Jean-Michel	Université Laval
Boxan, Matej	Norlab, Université Laval
Vaidis, Maxime	Université Laval
Pomerleau, Francois	Université Laval
Giguère, Philippe	Université Laval

ThDT11 Room 11

Quadruped Locomotion (Regular session)

Chair: Barasuol, Victor	Istituto Italiano Di Tecnologia
Co-Chair: Caldwell, Darwin G.	Istituto Italiano Di Tecnologia

17:30-17:45 ThDT11.1

Stable Wheel Gait Generation for Planar X-Shaped Walker with Telescopic Legs Based on Asymmetric Impact Posture, pp. 11117-11122. Attachment

Asano, Fumihiko	Japan Advanced Institute of Science and Technology
Komori, Mikito	Japan Advanced Institute of Science and Technology
Sedoguchi, Taiki	Japan Advanced Institute of Science and Technology
Zheng, Yanqiu	Ritsumeikan University

17:45-18:00 ThDT11.2

Whole-Body Compliance Control for Quadruped Manipulator with Actuation Saturation of Joint Torque and Ground Friction, pp. 11123-11130. Attachment

Zhang, Tianlin	Harbin Institute of Technology
Peng, Xuanbin	Harbin Institute of Technology, Shenzhen
Lin, Fenghao	Harbin Institute of Technology, Shenzhen
Xiong, Xiaogang	Harbin Institute of Technology, Shenzhen
Lou, Yunjiang	Harbin Institute of Technology, Shenzhen

18:00-18:15 ThDT11.3

Exploring Constrained Reinforcement Learning Algorithms for Quadrupedal Locomotion, pp. 11131-11137. Attachment

Lee, Joonho	Neuromeka
Schroth, Lukas	ETH Zürich
Klemm, Victor	ETH Zurich
Bjelonic, Marko	ETH Zurich
Reske, Alexander	ETH Zurich
Hutter, Marco	ETH Zurich

18:15-18:30 ThDT11.4

PACC: A Passive-Arm Approach for High-Payload Collaborative Carrying with Quadruped Robots Using Model Predictive Control, pp. 11138-11145. Attachment

Turrisi, Giulio	Istituto Italiano Di Tecnologia
Schulze, Lucas	Technische Universität Darmstadt
Suzano Medeiros, Vivian	University of São Paulo
Semini, Claudio	Istituto Italiano Di Tecnologia
Barasuol, Victor	Istituto Italiano Di Tecnologia

ThDT12 Room 12

Robot Learning (Regular session)

Co-Chair: Puranic, Aniruddh Gopinath	University of Southern California

17:30-17:45 ThDT12.1

Signal Temporal Logic-Guided Apprenticeship Learning, pp. 11146-11153. Attachment

Puranic, Aniruddh Gopinath	University of Southern California
Deshmukh, Jyotirmoy	University of Southern California

Nikolaidis, Stefanos	University of Southern California

17:45-18:00 ThDT12.2

Working Backwards: Learning to Place by Picking, pp. 11154-11161. Attachment

Limoyo, Oliver	University of Toronto
Konar, Abhisek	McGill University
Ablett, Trevor	University of Toronto
Kelly, Jonathan	University of Toronto
Hogan, Francois	Massachusetts Institute of Technology
Dudek, Gregory	McGill University

18:00-18:15 ThDT12.3

Learning Deep Dynamical Systems Using Stable Neural ODEs, pp. 11162-11169. Attachment

Sochopoulos, Andreas	The University of Edinburgh
Gienger, Michael	Honda Research Institute Europe
Vijayakumar, Sethu	University of Edinburgh

18:15-18:30 ThDT12.4

Iterative Reference Learning for Cartesian Impedance Control of Robot Manipulators, pp. 11170-11177.

Salt Ducaju, Julian Mauricio	LTH, Lund University
Olofsson, Bjorn	Lund University
Johansson, Rolf	Lund University

ThDT13 Room 13

Computer Vision for Automation II (Regular session)

Chair: Knoll, Alois	Tech. Univ. Muenchen TUM
Co-Chair: Triebel, Rudolph	German Aerospace Center (DLR)

17:30-17:45 ThDT13.1

SDGE: Stereo Guided Depth Estimation for 360°Camera Sets, pp. 11178-11185. Attachment

Xu, Jialei	Harbin Institute of Technology
Yin, Wei	University of Adelaide
Gong, Dong	UNSW
Jiang, Junjun	Harbin Institute of Technology
Liu, Xianming	Harbin Institute of Technology

17:45-18:00 ThDT13.2

PCDepth: Pattern-Based Complementary Learning for Monocular Depth Estimation by Best of Both Worlds, pp. 11186-11193.

Liu, Haotian	Tongji University
Qu, Sanqing	Tongji University
Lu, Fan	Tongji University
Bu, Zongtao	Tongji University
Roehrbein, Florian	Chemnitz University of Technology
Knoll, Alois	Tech. Univ. Muenchen TUM
Chen, Guang	Tongji University

18:00-18:15 ThDT13.3

Making the Flow Glow -- Robot Perception under Severe Lighting Conditions Using Normalizing Flow Gradients, pp. 11194-11200.

Kristoffersson Lind, Simon	Lund University
Krueger, Volker	Lund University
Triebel, Rudolph	German Aerospace Center (DLR)

18:15-18:30 ThDT13.4

GS-Planner: A Gaussian-Splatting-Based Planning Framework for Active High-Fidelity Reconstruction, pp. 11201-11208. Attachment

Jin, Rui	Zhejiang University
Gao, Yuman	Zhejiang University
Wang, Yingjian	Zhejiang University
Wu, Yuze	Zhejiang University
Lu, Haojian	Zhejiang University
Xu, Chao	Zhejiang University
Gao, Fei	Zhejiang University

ThF8O	Auditorium
Forum 8 - Sustainable Medical and Surgical Robotics (Forum)	
Chair: Fiorini, Paolo	University of Verona
Co-Chair: Valdastri, Pietro	University of Leeds
15:30-18:30	ThF8O.1
*Sustainable Medical and Surgical Robotics**. N/A	
Fiorini, Paolo	University of Verona
Valdastri, Pietro	University of Leeds
Ren, Hongliang	Chinese Univ Hong Kong (CUHK) & National Univ Singapore(NUS)
Vander Poorten, Emmanuel B	KU Leuven
Horeman, Tim	Delft University of Technology
Rodriguez y Baena, Ferdinando	Imperial College, London, UK
Chandler, James Henry	University of Leeds
Mathis-Ullrich, Franziska	Friedrich-Alexander-University Erlangen-Nurnberg (FAU)

ThF9O	Room 17/18
Forum 9 - Moonshot R&D Program Goal 3: Envisioning a Future of Human-Robot Co-Living: Potential for Robotics to Transform Human Lives (Forum)	
Chair: Sugano, Shigeki	Waseda University
Co-Chair: Fukuda, Toshio	Nagoya University
15:30-18:30	ThF9O.1
*Moonshot R&D Program Goal 3 Forum - Envisioning a Future of Human-Robot Co-Living: Potential for Robotics to Transform Human Lives**. N/A	
Shimoda, Shingo	Nagoya University
Hirata, Yasuhisa	Tohoku University
Sugano, Shigeki	Waseda University

Friday October 18, 2024

FrPI6T1	Room 1
Humanoid and Bipedal Locomotion (Teaser Session)	
Chair: Pucci, Daniele	Italian Institute of Technology
Co-Chair: Guo, Yijie	UBTECH Robotics

09:00-10:00 FrPI6T1.1

Demonstrating a Robust Walking Algorithm for Underactuated Bipedal Robots in Non-Flat, Non-Stationary Environments, pp. 11209-11216. Attachment

Dosunmu-Ogunbi, Oluwami	University of Michigan
Shrivastava, Aayushi	University of Michigan Ann Arbor
Grizzle, J.W	University of Michigan

09:00-10:00 FrPI6T1.2

Compliance Optimization Control for Rigid-Soft Hybrid System and Its Application in Humanoid Robot Motion Control, pp. 11217-11223. Attachment

He, Zewen	University of Tokyo
Ishigaki, Taiki	The University of Tokyo
Yamamoto, Ko	University of Tokyo

09:00-10:00 FrPI6T1.3

Whole-Body Humanoid Robot Locomotion with Human Reference, pp. 11224-11230. Attachment

Zhang, Qiang	The Hong Kong University of Science and Technology (Guangzhou)
Cui, Peter	Peter & David Robotics (Beijing) Co, . Ltd
Yan, David	Peter & David Robotics (Beijing) Co, . Ltd
Sun, Jingkai	The Hong Kong University of Science and Technology(GZ)
Duan, Yiqun	University of Technolgoy Sydney
Han, Gang	PND Robotics
Zhao, Wen	Nankai University
Zhang, Weining	Beijing Innovation Center of Humanoid Robotics
Guo, Yijie	UBTECH Robotics
Zhang, Arthur	Peter & David Robotics (Beijing) Co, . Ltd
Xu, Renjing	The Hong Kong University of Science and Technology (Guangzhou)

09:00-10:00 FrPI6T1.4

Toward Understanding Key Estimation in Learning Robust Humanoid Locomotion, pp. 11231-11238. Attachment

Wang, Zhicheng	Zhejiang University
Wei, Wandi	Zhejiang University
Yu, Ruiqi	Zhejiang University
Wu, Jun	Zhejiang University
Zhu, Qiuguo	Zhejiang University

09:00-10:00 FrPI6T1.5

Joint-Level IS-MPC: A Whole-Body MPC with Centroidal Feasibility for Humanoid Locomotion, pp. 11239-11246. Attachment

Belvedere, Tommaso	CNRS
Scianca, Nicola	Sapienza University of Rome
Lanari, Leonardo	Sapienza University of Rome
Oriolo, Giuseppe	Sapienza University of Rome

09:00-10:00 FrPI6T1.6

Integrating Model-Based Footstep Planning with Model-Free Reinforcement Learning for Dynamic Legged Locomotion, pp. 11247-11254. Attachment

Lee, Ho Jae	Massachusetts Institute of Technology
Hong, Seungwoo	MIT (Massachusetts Institute of Technology)
Kim, Sangbae	Massachusetts Institute of Technology

09:00-10:00 FrPI6T1.7

Revisiting Reward Design and Evaluation for Robust Humanoid Standing and Walking, pp. 11255-11262. Attachment

van Marum, Bart	Oregon State University
Shrestha, Aayam	Oregon State University
Duan, Helei	Oregon State University

Dugar, Pranay	Oregon State University
Dao, Jeremy	Oregon State University
Fern, Alan	Oregon State University

09:00-10:00 FrPI6T1.8

Bipedal Safe Navigation Over Uncertain Rough Terrain: Unifying Terrain Mapping and Locomotion Stability, pp. 11263-11270. Attachment

Muenprasitivej, Kasidit	Georgia Institute of Technology
Jiang, Jesse	Georgia Institute of Technology
Shamsah, Abdulaziz	Georgia Institute of Technology
Coogan, Samuel	Georgia Tech
Zhao, Ye	Georgia Institute of Technology

09:00-10:00 FrPI6T1.9

Whleaper: A 10-DOF High-Performance Bipedal Wheeled Robot, pp. 11271-11276. Attachment

Zhu, Yinglei	Tsinghua University
He, SiXiao	Tsinghua University
Qi, Zhenghao	Tsinghua University
Yong, Zhuoyuan	Tsinghua University
Qin, Yihua	Tsinghua University
Chen, Jianyu	Tsinghua University

09:00-10:00 FrPI6T1.10

Physically Consistent Online Inertial Adaptation for Humanoid Loco-Manipulation, pp. 11277-11284. Attachment

Foster, James Paul	University of West Florida
McCrory, Stephen	Institute for Human and Machine Cognition
DeBuys, Christian	Texas A&M University
Bertrand, Sylvain	Institute for Human and Machine Cognition
Griffin, Robert J.	Institute for Human and Machine Cognition (IHMC)

09:00-10:00 FrPI6T1.11

Feasible Region Construction by Polygon Merging for Continuous Bipedal Walking, pp. 11285-11292. Attachment

Li, Chao	Beijing Institute of Technology
Chen, Xuechao	Beijing Insititute of Technology
Hengbo, Qi	Beijing Institute of Technology School of Mechatronical Engineer
Li, Qingqing	Beijing Institute of Technology
Zhao, Qingrui	Beijing Institute of Technology
Shi, Yongliang	Tsinghua University
Yu, Zhangguo	Beijing Institute of Technology
Zhao, Lingxuan	Beijing Institute of Technology
Jiang, Zhihong	Beijing Institute of Technology

09:00-10:00 FrPI6T1.12

Magnetic Tactile Sensor with Load Tolerance and Flexibility Using Frame Structures for Estimating Triaxial Contact Force Distribution of Humanoid, pp. 11293-11300. Attachment

Hiraoka, Takuma	The University of Tokyo
Kunita, Ren	The University of Tokyo
Kojima, Kunio	The University of Tokyo
Hiraoka, Naoki	The University of Tokyo
Konishi, Masanori	The University of Tokyo
Makabe, Tasuku	The University of Tokyo
Tang, Annan	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

09:00-10:00 FrPI6T1.13

Fly by Book: How to Train a Humanoid Robot to Fly an Airplane Using Large Language Models, pp. 11301-11308. Attachment

Kim, Hyungjoo	Korea Advanced Institute of Science and Technology (KAIST)
Min, Sungjae	Korea Advanced Institute of Science and Technology (KAIST)
Kang, Gyuree	Korea Advanced Institute of Science and Technology (KAIST)
Kim, Jihyeok	Korea Advanced Institute of Science and Technology
Shim, David Hyunchul	KAIST

09:00-10:00 FrPI6T1.14

Towards Designing a Low-Cost Humanoid Robot with Flex Sensors-Based Movement, pp. 11309-11316. Attachment

Al Omoush, Muhammad H.	Dublin City University
Kishore, Sameer	Middlesex University
Mehigan, Tracey	Dublin City University

09:00-10:00 FrPI6T1.15

Driving Style Alignment for LLM-Powered Driver Agent, pp. 11317-11323. Attachment

Yang, Ruoxuan	Tsinghua University
Zhang, Xinyue	Tsinghua University
Fernandez-Laaksonen, Anais	Tsinghua University
Ding, Xin	Tsinghua University
Gong, Jiangtao	Tsinghua University

09:00-10:00 FrPI6T1.16

From CAD to URDF: Co-Design of a Jet-Powered Humanoid Robot Including CAD Geometry, pp. 11324-11330. Attachment

Vanteddu, Punith Reddy	Istituto Italiano Di Tecnologia
Nava, Gabriele	Istituto Italiano Di Tecnologia
Bergonti, Fabio	Istituto Italiano Di Tecnologia
L'Erario, Giuseppe	Istituto Italiano Di Tecnologia
Paolino, Antonello	Istituto Italiano Di Tecnologia
Pucci, Daniele	Italian Institute of Technology

FrPI6T2 Room 2

Soft and Flexible Robotics II (Teaser Session)

Chair: George Thuruthel, Thomas	University College London
Co-Chair: Vazquez, Andres S.	Universidad De Castilla La Mancha

09:00-10:00 FrPI6T2.1

Robust-Adaptive Two-Loop Control for Robots with Mixed Rigid-Elastic Joints, pp. 11331-11338.

Hua, Minh Tuan	University of Agder
Sveen, Emil Mühlbradt	University of Agder
Schlanbusch, Siri Marte	University of Agder
Sanfilippo, Filippo	University of Agder

09:00-10:00 FrPI6T2.2

CFD-Enabled Approach for Optimizing CPG Control Network for Underwater Soft Robotic Fish, pp. 11339-11345. Attachment

Wang, Yunfei	Tsinghua University
Sun, Weiyuan	Tsinghua University
Tang, Wei	Tsinghua University
Zhang, Xianrui	Tsinghua University
Yu, Zhenping	Tsinghua University
Cao, Shunxiang	Tsinghua University
Qu, Juntian	Tsinghua University

09:00-10:00 FrPI6T2.3

Design, Modelling, and Experimental Validation of a Soft Continuum Wrist Section Developed for a Prosthetic Hand, pp. 11346-11353. Attachment

Sulaiman, Shifa	University of Naples, Federico II, Naples
Menon, Mehul	NIT Durgapur
Schetter, Francesco	University of Naples, Federico II, Naples
Ficuciello, Fanny	Università Di Napoli Federico II

09:00-10:00 FrPI6T2.4

Theoretical Modeling and Bio-Inspired Trajectory Optimization of a Multiple-Locomotion Origami Robot, pp. 11354-11360. Attachment

Zhu, Keqi	Zhejiang University
Guo, Haotian	National University of Singapore
Yu, Wei	Zhejiang University
Sirag, Hassen Nigatu	ZJU
Li, Tong	Zhejiang University
Dong, Ruihong	Zhejiang University
Dong, Huixu	Zhejiang University

09:00-10:00 FrPI6T2.5

Fractional Order Modeling and Control of Hydrogel-Based Soft Pneumatic Bending Actuators, pp. 11361-11366. Attachment

de la Morena, Jesús	UCLM
Redrejo López, David	Universidad De Castilla-La Mancha
Ramos, Francisco	University of Castilla-La Mancha
Feliu, Vicente	Escuela Técnica Superior De IngenierosIndustriales/Universidad D
Vazquez, Andres S.	Universidad De Castilla La Mancha

09:00-10:00 FrPI6T2.6

A Soft Robotic System Automatically Learns Precise Agile Motions without Model Information, pp. 11367-11372.

Bachhuber, Simon	FAU Erlangen-Nürnberg
Pawluchin, Alexander	Berliner Hochschule Für Technik
Pal, Arka	Student
Boblan, Ivo	Berliner Hochschule Fuer Technik
Seel, Thomas	Leibniz Universität Hannover

09:00-10:00 FrPI6T2.7

Human-Robot Interaction Control for Multi-Mode Exosuit with Reinforcement Learning, pp. 11373-11379.

Huang, Kaizhen	Nanjing University of Aeronautics and Astronautics
Xu, Jiajun	Nanjing University of Aeronautics and Astronautics
Zhang, Tianyi	Nanjing University of Aeronautics and Astronaut
Zhao, Mengcheng	Nanjing University of Aeronautics and Astronautics
Ji, Aihong	Nanjing University of Aeronautics Ans Astronautics
Song, Guoli	Shenyang Institute of Automation, Chinese Academy of Sciences&#65
Li, Y.F.	City University of Hong Kong

09:00-10:00 FrPI6T2.8

Predicting Interaction Shape of Soft Continuum Robots Using Deep Visual Models, pp. 11380-11386. Attachment

Huang, Yunqi	University College London
Alkayas, Abdulaziz Y.	Khalifa University
Shi, Jialei	Imperial College London
Renda, Federico	Khalifa University of Science and Technology
Wurdemann, Helge Arne	University College London
George Thuruthel, Thomas	University College London

09:00-10:00 FrPI6T2.9

Learning Dynamic Tasks on a Large-Scale Soft Robot in a Handful of Trials, pp. 11387-11392.

Zwane, Sicelukwanda Njabuliso Tunner	University College London
Cheney, Daniel G.	Brigham Young University
Johnson, Curtis C	Brigham Young University
Luo, Yicheng	UCL
Bekiroglu, Yasemin	Chalmers University of Technology, University College London
Killpack, Marc	Brigham Young University
Deisenroth, Marc Peter	University College London

09:00-10:00 FrPI6T2.10

Design and Control of an Ultra-Slender Push-Pull Multisection Continuum Manipulator for In-Situ Inspection of Aeroengine, pp. 11393-11400.

Zhong, Weiheng	Beijing Institute of Technology
Huang, Yuancan	Beijing Institute of Technology
Hong, Da	Beijing Institute of Technology
Shao, Nianfeng	Beijing Institute of Technology

09:00-10:00 FrPI6T2.11

Origami Actuator with Tunable Limiting Layer for Reconfigurable Soft Robotic Grasping, pp. 11401-11406. Attachment

Yang, Yang	Nanjing University of Information Science and Technology
Kejin, Zhu	Nanjing University of Information Science and Technology
Xie, Yuan	Nanjing University of Information Science and Technology
Yan, Shaoyang	Nanjing University of Information Science and Technology
Yi, Juan	Southern University of Science and Technology
Jiang, Pei	Chongqing University
Li, Yunquan	South China University of Technology
Zhang, Yazhan	Peng Cheng National Laboratory
Li, Yingtian	Shenzhen Institutes of Advanced Technology, Chinese Academy

09:00-10:00 FrPI6T2.12

A 'MAP' to Find High-Performing Soft Robot Designs: Traversing Complex Design Spaces Using MAP-Elites and Topology Optimization, pp. 11407-11414.

Xie, Yue	University of Cambridge
Pinskier, Joshua	CSIRO
Liow, Lois	CSIRO
Howard, David	CSIRO
Iida, Fumiya	University of Cambridge

09:00-10:00 FrPI6T2.13

Pneumatic Bladder Links with Wide Range of Motion Joints for Articulated Inflatable Robots, pp. 11415-11420. Attachment

Uchiyama, Katsu	Meiji University
Niiyama, Ryuma	Meiji University

09:00-10:00 FrPI6T2.14

Bistable Valve for Electronics-Free Soft Robots, pp. 11421-11426.

Kan, Longxin	National University of Singapore
Lam, Jia Qing Joshua	National University of Singapore
Qin, Zhihang	National University of Singapore
Li, Keyi	National University of Singapore
Tang, Zhiqiang	National University of Singapore
Laschi, Cecilia	National University of Singapore

09:00-10:00 FrPI6T2.15

A Facile One-Step Injection Novel Composite Sensor for Robot Tactile Assistance, pp. 11427-11432.

Zhang, Yuyin	Shanghai University
Wang, Yue	Shanghai University
Liu, Na	Shanghai University, Shanghai, China
Zhong, Songyi	Shanghai University
Li, Long	Shanghai University
Xie, Xie	Shanghai University
Zhang, Quan	Shanghai University
Yue, Tao	Shanghai University
Fukuda, Toshio	Nagoya University

09:00-10:00 FrPI6T2.16

Development of Permanent Magnet Elastomer-Based Tactile Sensor with Adjustable Compliance and Sensitivity, pp. 11433-11440. Attachment

Abhyankar, Devesh	Waseda University
Wang, Yushi	Waseda University
Iwamoto, Yuhiro	Nagoya Institute of Technology
Sugano, Shigeki	Waseda University
Kamezaki, Mitsuhiro	The University of Tokyo

FrPI6T3 Room 3

Cognitive Systems (Teaser Session)

Chair: Roennau, Arne — Karlsruhe Institute of Technology (KIT)

09:00-10:00 FrPI6T3.1

Online Hand Movement Recognition System with EEG-EMG Fusion Using One-Dimensional Convolutional Neural Network, pp. 11441-11446. Attachment

Wang, Haozheng	Nankai University
Jia, Hao	University of Vic Central University of Catalonia
Sun, Zhe	RIKEN
Duan, Feng	Nankai University

09:00-10:00 FrPI6T3.2

Goal Estimation-Based Adaptive Shared Control for Brain-Machine Interfaces Remote Robot Navigation, pp. 11447-11454.

Muraoka, Tomoka	Osaka University
Aoki, Tatsuya	Osaka University
Hirata, Masayuki	Osaka University

Taniguchi, Tadahiro	Ritsumeikan University
Horii, Takato	Osaka University
Nagai, Takayuki	Osaka University

09:00-10:00 FrPI6T3.3

Voltage Regulation in Polymer Electrolyte Fuel Cell Systems Using Gaussian Process Model Predictive Control, pp. 11455-11460.

Li, Xiufei	Lund University
Yang, Miao	City University of HongKong
Zhang, Miao	Tsinghua Shenzhen International Graduate School
Qi, Yuanxin	Lund University
Li, Zhuowei	The University of Nottingham, China
Yu, Senbin	Gala Sports
Yuantao, Wang	Beijing University of Technology；Fengtai Technology (Beij
Shen, Linpeng	Tsinghua University
Li, Xiang	Nantong University

09:00-10:00 FrPI6T3.4

Roaming with Robots: Utilizing Artificial Curiosity in Global Path Planning for Autonomous Mobile Robots, pp. 11461-11468.

Spielbauer, Niklas	FZI Forschungszentrum Informatik
Laube, Till Jasper	FZI Forschungszentrum Informatik
Oberacker, David	FZI Forschungszentrum Informatik
Roennau, Arne	Karlsruhe Institute of Technology (KIT)
Dillmann, Rüdiger	FZI - Forschungszentrum Informatik - Karlsruhe

09:00-10:00 FrPI6T3.5

ROBOVERINE: A Human-Inspired Neural Robotic Process Model of Active Visual Search and Scene Grammar in Naturalistic Environments, pp. 11469-11476. Attachment

Grieben, Raul	Ruhr-Universität Bochum
Sehring, Stephan	Ruhr-Universität Bochum
Tekülve, Jan	Ruhr-Universitaet Bochum
Spencer, John P.	University of East Anglia
Schöner, Gregor	Ruhr University Bochum

09:00-10:00 FrPI6T3.6

Interactive Reinforcement Learning from Natural Language Feedback, pp. 11477-11483.

Tarakli, Imene	Sheffield Hallam University
Vinanzi, Samuele	Sheffield Hallam University
Di Nuovo, Alessandro	Sheffield Hallam University

09:00-10:00 FrPI6T3.7

*Synthetic Dataset Using Diffusion Model for Pixel-Level Dense Pose Estimation**. N/A

Wen, Jiaixiao	South China University of Technology
Liu, Qiong	South China University of Technology

09:00-10:00 FrPI6T3.8

Contacts from Motion: Learning Discrete Features for Automatic Contact Detection and Estimation from Human Movements, pp. 11484-11491.

Miyake, Hibiki	Tokyo University of Science
Ayusawa, Ko	National Institute of Advanced Industrial Science and Technology
Sagawa, Ryusuke	National Institute of Advanced Industrial Science AndTechnology
Yoshida, Eiichi	Faculty of Advanced Engineering, Tokyo University of Science

09:00-10:00 FrPI6T3.9

Dual-Branch Graph Transformer Network for 3D Human Mesh Reconstruction from Video, pp. 11492-11498. Attachment

Tang, Tao	Peking University
Liu, Hong	Peking University
You, Yingxuan	Peking University
Wang, Ti	Peking University
Li, Wenhao	Peking University

09:00-10:00 FrPI6T3.10

Predicting Long-Term Human Behaviors in Discrete Representations Via Physics-Guided Diffusion, pp. 11499-11506. Attachment

Zhang, Zhitian	Simon Fraser University

Li, Anjian	Princeton University
Lim, Angelica	Simon Fraser University
Chen, Mo	Simon Fraser University

09:00-10:00 FrPI6T3.11

Multi-View 2D to 3D Lifting Video-Based Optimization: A Robust Approach for Human Pose Estimation with Occluded Joint Prediction, pp. 11507-11513. Attachment

Rato, Daniela	University of Aveiro, Institute of Electronics and Informatics E
Oliveira, Miguel	University of Aveiro
Santos, Vitor	University of Aveiro
Sappa, Angel	Computer Vision Center
Raducanu, Bogdan	Computer Vision Center

09:00-10:00 FrPI6T3.12

Can Reasons Help Improve Pedestrian Intent Estimation? a Cross-Modal Approach, pp. 11514-11521. Attachment

Khindkar, Vaishnavi	IIIT Hyderabad
Balasubramanian, Vineeth	Indian Institute of Technology, Hyderabad
Arora, Chetan	Indian Institute of Technology, Delhi
Subramanian, Anbumani	Intel / IIIT-Hyderabad
Jawahar, C.V.	IIIT, Hyderabad

09:00-10:00 FrPI6T3.13

Enhanced Robotic Assistance for Human Activities through Human-Object Interaction Segment Prediction, pp. 11522-11528. Attachment

Wu, Yuankai	TUM
Messaoud, Rayene	TUM
Hildebrandt, Arne-Christoph	Technische Universität München
Baldini, Marco	ABB AG
Salihu, Driton	Technical University Munich
Patsch, Constantin	Technical University of Munich
Steinbach, Eckehard	Technical University of Munich

09:00-10:00 FrPI6T3.14

Aligning Learning with Communication in Shared Autonomy, pp. 11529-11535. Attachment

Hoegerman, Joshua	Virginia Polytechnic Institute and State University
Sagheb, Shahabedin	Virginia Tech
Christie, Benjamin	Virginia Tech
Losey, Dylan	Virginia Tech

09:00-10:00 FrPI6T3.15

Learned Sensor Fusion for Robust Human Activity Recognition in Challenging Environments, pp. 11536-11542.

Conway, Max	University of Denver
Reily, Brian	Army Research Laboratory
Reardon, Christopher M.	University of Denver

09:00-10:00 FrPI6T3.16

Human Orientation Estimation under Partial Observation, pp. 11543-11550. Attachment

Zhao, Jieting	Southern University of Science and Technology
Ye, Hanjing	Southern University of Science and Technology
Zhan, Yu	Southern University of Science and Technology
Luan, Hao	National University of Singapore
Zhang, Hong	SUSTech

FrPI6T4 Room 4

Robot Vision IV (Teaser Session)

Chair: Tanaka, Kanji	University of Fukui
Co-Chair: Patel, Amir	University of Cape Town

09:00-10:00 FrPI6T4.1

An Ultrafast Multi-Object Zooming System Based on Low-Latency Stereo Correspondence, pp. 11551-11556.

Li, Qing	Tsinghua University
Hu, Shaopeng	Hiroshima University
Shimasaki, Kohei	Hiroshima University
Ishii, Idaku	Hiroshima University

09:00-10:00 FrPI6T4.2

Enhanced Model Robustness to Input Corruptions by Per-Corruption Adaptation of Normalization Statistics, pp. 11557-11564. Attachment

Camuffo, Elena — University of Padova
Michieli, Umberto — Samsung Research
Milani, Simone — University of Padova
Moon, Jijoong — Samsung Research Korea
Ozay, Mete — Samsung Research

09:00-10:00 FrPI6T4.3

A Low-Cost, High-Speed, and Robust Bin Picking System for Factory Automation Enabled by a Non-Stop, Multi-View, and Active Vision Scheme, pp. 11565-11572. Attachment

Fu, Xingdou — OMRON Corporation
Miao, Lin — Omron Corporation
Ohnishi, Yasuhiro — OMRON Corporation
Hasegawa, Yuki — OMRON Corporation
Suwa, Masaki — OMRON Corporation

09:00-10:00 FrPI6T4.4

Every Dataset Counts: Scaling up Monocular 3D Object Detection with Joint Datasets Training, pp. 11573-11579.

Ma, Fulong — The Hong Kong University of Science and Technology
Yan, Xiaoyang — The Hong Kong University of Science and Technology
Zhao, Guoyang — HKUST(GZ)
Xu, Xiaojie — The Hong Kong University of Science and Technology(Guangzhou)
Liu, Yuxuan — Hong Kong University of Science and Technology
Ma, Jun — The Hong Kong University of Science and Technology
Liu, Ming — Hong Kong University of Science and Technology (Guangzhou)

09:00-10:00 FrPI6T4.5

Direct TPS-Based 3D Non-Rigid Motion Estimation on 3D Colored Point Cloud in Eye-In-Hand Configuration, pp. 11580-11585. Attachment

Cuau, Lénaïc — LIRMM
Cavalcanti Santos, Joao — University of Montpellier, LIRMM
Poignet, Philippe — LIRMM University of Montpellier CNRS
Zemiti, Nabil — LIRMM, Université Montpellier II - CNRS UMR 5506

09:00-10:00 FrPI6T4.6

OW3Det: Toward Open-World 3D Object Detection for Autonomous Driving, pp. 11586-11592.

Hu, Wenfei — Peking University
Lin, Weikai — Peking University
Fang, Hongyu — Peking University, Beijing, China
Wang, Yi — Tsinghua University
Luo, Dingsheng — Peking University

09:00-10:00 FrPI6T4.7

FoveaCam++: Systems-Level Advances for Long Range Multi-Object High-Resolution Tracking, pp. 11593-11600. Attachment

Zhang, Yuxuan — University of Florida
Koppal, Sanjeev — University of Florida

09:00-10:00 FrPI6T4.8

Robot Traversability Prediction: Towards Third-Person-View Extension of Walk2Map with Photometric and Physical Constraints, pp. 11601-11608.

Tay Yu Liang, Jonathan — University of Fukui
Tanaka, Kanji — University of Fukui

09:00-10:00 FrPI6T4.9

Click to Grasp: Zero-Shot Precise Manipulation Via Visual Diffusion Descriptors, pp. 11609-11616. Attachment

Tsagkas, Nikolaos — University of Edinburgh
Rome, Jack A — University of Edinburgh
Ramamoorthy, Subramanian — The University of Edinburgh
Mac Aodha, Oisin — University of Edinburgh
Lu, Chris Xiaoxuan — University College London

09:00-10:00 FrPI6T4.10

Refining Airway Segmentation through Breakage Filling and Leakage Reduction Using Point Clouds, pp. 11617-11622.

Hu, Yan	University of New South Wales
Meijering, Erik	University of New South Wales
Song, Yang	University of New South Wales

09:00-10:00 FrPI6T4.11

Differentiable Fluid Physics Parameter Identification by Stirring and for Stirring, pp. 11623-11629. Attachment

Xu, Wenqiang	Shanghai Jiaotong University
Zheng, Dongzhe	Shanghai Jiao Tong University
Li, Yutong	Shanghai Jiao Tong University
Ren, Jieji	Shanghai Jiao Tong University
Lu, Cewu	ShangHai Jiao Tong University

09:00-10:00 FrPI6T4.12

Enhancing 3D Single Object Tracking with Efficient Point Cloud Segmentation, pp. 11630-11637.

Yang, Yu Shi	Nanjing University of Posts and Telecommunications
Fan, Baojie	Nanjing University of Posts and Telecommunications
Jiang, Yuyu	Nanjing University of Posts and Telecommunications
Zhou, Wuyang	Nanjing University of Posts and Telecommunications
Chen, Dong	Nanjing University of Posts and Telecommunications
Xu, Hongxin	Delft University of Technology

09:00-10:00 FrPI6T4.13

Monocular 3D Reconstruction of Cheetahs in the Wild, pp. 11638-11644. Attachment

da Silva, Zico	University of Cape Town
Parkar, Zuhayr	University of Cape Town
Muramatsu, Naoya	University of Cape Town
Nicolls, Fred	University of Cape Town
Patel, Amir	University of Cape Town

09:00-10:00 FrPI6T4.14

Scalable Network and Adaptive Refinement Module for 6D Pose Estimation of Diverse Industrial Components, pp. 11645-11652. Attachment

Qian, Kun	University of Manchester
Erden, Mustafa Suphi	Heriot-Watt University
Kong, Xianwen	Heriot-Watt Universiy

09:00-10:00 FrPI6T4.15

AirShot: Efficient Few-Shot Detection for Autonomous Exploration, pp. 11653-11660. Attachment

Wang, Zihan	Carnegie Mellon University
Li, Bowen	Carnegie Mellon University
Wang, Chen	University at Buffalo
Scherer, Sebastian	Carnegie Mellon University

09:00-10:00 FrPI6T4.16

RATE: Real-Time Asynchronous Feature Tracking with Event Cameras, pp. 11661-11668. Attachment

Ikura, Mikihiro	University of Tokyo
Le Gentil, Cedric	University of Technology Sydney
Müller, Marcus Gerhard	German Aerospace Center
Schuler, Florian	German Aerospace Center
Yamashita, Atsushi	The University of Tokyo
Stuerzl, Wolfgang	DLR, Institute of Robotics and Mechatronics

FrPI6T5 Room 5

Field Robotics (Teaser Session)

Chair: Karki, Hamad — Khalifa University

09:00-10:00 FrPI6T5.1

PhysORD: A Neuro-Symbolic Approach for Physics-Infused Motion Prediction in Off-Road Driving, pp. 11669-11676. Attachment

Zhao, Zhipeng	University at Buffalo
Li, Bowen	Carnegie Mellon University
Du, Yi	University at Buffalo
Fu, Taimeng	University at Buffalo
Wang, Chen	University at Buffalo

09:00-10:00 FrPI6T5.2

Kinetic-Energy-Optimal and Safety-Guaranteed Trajectory Planning for Bridge Inspection Robot Manipulator, pp. 11677-11684.

Zhang, Tianyu — University of Chinese Academy of Sciences
Chang, Yong — Chinese Academy of Sciences, Shenyang Institute of Automation
Wang, Hongguang — Shenyang Institute of Automation, Chinese AcademyofSciences
Wang, Tianlong — Shenyang Institute of Automation, Chinese Academy of Sciences

09:00-10:00 FrPI6T5.3

Proprioception Is All You Need: Terrain Classification for Boreal Forests, pp. 11685-11692.

LaRocque, Damien — Université Laval
Guimont-Martin, William — Université Laval
Duclos, David-Alexandre — Université Laval
Giguère, Philippe — Université Laval
Pomerleau, Francois — Université Laval

09:00-10:00 FrPI6T5.4

On Predicting Terrain Changes Induced by Mobile Robot Traversal, pp. 11693-11698. Attachment

Pragr, Milos — Czech Technical University in Prague, FEE
Bayer, Jan — Czech Technical University in Prague
Faigl, Jan — Czech Technical University in Prague

09:00-10:00 FrPI6T5.5

Real-Time Terrain Assessment and Bayesian-Based Path Planning for Off-Road Navigation, pp. 11699-11705. Attachment

Niu, Tianwei — Beijing Institute of Technology
Yu, Shuwei — Beijing Institute of Technology
Wang, Liang — Beijing Institute of Technology
Yuan, Haoyu — Beijing Institute of Technology
Wang, Shoukun — Beijing Institute of Technology
Wang, Junzheng — Beijing Institute of Technology

09:00-10:00 FrPI6T5.6

PARE: A Plane-Assisted Autonomous Robot Exploration Framework in Unknown and Uneven Terrain, pp. 11706-11713. Attachment

Xu, Pu — Northeastern University
Bai, Zhaoqiang — Northeastern University
Liu, Haoming — Northeastern University(CN)
Fang, Zheng — Northeastern University

09:00-10:00 FrPI6T5.7

Low-Cost Urban Localization with Magnetometer and LoRa Technology, pp. 11714-11721. Attachment

Benham, Derek — Brigham Young University
Palacios, Ashton — Brigham Young University
Lundrigan, Philip — Brigham Young University
Mangelson, Joshua — Brigham Young University

09:00-10:00 FrPI6T5.8

Side-Scan Sonar Based Landmark Detection for Underwater Vehicles, pp. 11722-11728.

Hoff, Simon Andreas — Norwegian University of Science and Technology
Haraldstad, Vegard — Norwegian University of Science and Technology
Reitan Hogstad, Bjørnar — Norwegian University of Science and Technology
Varagnolo, Damiano — Norwegian University of Science and Technology

09:00-10:00 FrPI6T5.9

Development of a Throwbot with Shock Absorption Structure, pp. 11729-11734.

Keum, Jaeyeong — DGIST
Kim, Jaemin — DGIST
Lee, Changgi — DGIST
Lim, Seunghyun — DGIST
Ju, Insung — DGIST
Yun, Dongwon — Daegu Gyeongbuk Institute of Science and Technology (DGIST)

09:00-10:00 FrPI6T5.10

Archie Jnr: A Robotic Platform for Autonomous Cane Pruning of Grapevines, pp. 11735-11742.

Williams, Henry — University of Auckland

Smith, David Anthony James	University of Auckland
Shahabi, Jalil	University of Auckland
Gee, Trevor	The University of Auckland
Qureshi, Ans	University of Auckland
McGuinness, Benjamin John	University of Waikato
Harvey, Scott	University of Waikato
Downes, Catherine	University of Waikato
Jangali, Rahul	The University of Waikato
Black, Kale	Black Box Technologies LTD
Lim, Shen Hin	University of Waikato
Duke, Mike	Waikato University
MacDonald, Bruce	University of Auckland

09:00-10:00 FrPI6T5.11

CAIS: Culvert Autonomous Inspection Robotic System, pp. 11743-11748. Attachment

Le, Chuong	University of Nevada, Reno
Walunj, Pratik	University of Nevada Reno
Nguyen, An	University of Nevada, Reno
Zhou, Yong	University of Nevada, Reno
Nguyen, Thanh Binh	TAMUCC
Nguyen, Thang	Texas A&M University-Corpus Christi
Netchaev, Anton	USACE ERDC
La, Hung	University of Nevada at Reno

09:00-10:00 FrPI6T5.12

Intelligent Fish Detection System with Similarity-Aware Transformer, pp. 11749-11756.

Li, Shengchen	Tongji University
Zuo, Haobo	University of Hong Kong
Fu, Changhong	Tongji University
Wang, Zhiyong	Fishery Machinery and Instrument Research Institute, Chinese Aca
Xu, Zhiqiang	Fishery Machinery and Instrument Research Institute

09:00-10:00 FrPI6T5.13

Calibration-Free Vision-Assisted Container Loading of RTG Cranes, pp. 11757-11763. Attachment

Yang, Jianbing	Nanyang Technological University
Wang, Yuanzhe	Nanyang Technological University
Jiang, Hao	Shanghai Zhenhua Heavy Industries Co., Ltd
Zhao, Bin	Shanghai Zhenhua Heavy Industries Co., Ltd
Li, Yiming	Shanghai Zhenhua Heavy Industries Co., Ltd
Wang, Danwei	Nanyang Technological University

09:00-10:00 FrPI6T5.14

Online Tree Reconstruction and Forest Inventory on a Mobile Robotic System, pp. 11764-11771. Attachment

Freißmuth, Leonard	Technical University Munich
Mattamala, Matias	University of Oxford
Chebrolu, Nived	University of Oxford
Schaefer, Simon	Technical University of Munich
Leutenegger, Stefan	Technical University of Munich
Fallon, Maurice	University of Oxford

09:00-10:00 FrPI6T5.15

Roofus: Learning-Based Robotic Moisture Mapping on Flat Rooftops with Ground Penetrating Radar, pp. 11772-11779.

Lee, Kevin	New York University
Lin, Wei-Heng	New York University
Javed, Talha	Building Diagnostic Robotics
Madhusudhan, Sruti	Building Diagnostic Robotics
Sher, Bilal	Building Diagnostic Robotics
Feng, Chen	New York University

09:00-10:00 FrPI6T5.16

Archie Snr: A Robotic Platform for Autonomous Apple Fruitlet Thinning, pp. 11780-11787.

Williams, Henry	University of Auckland
Qureshi, Ans	University of Auckland
Smith, David Anthony James	University of Auckland

Gee, Trevor	The University of Auckland
McGuinness, Benjamin John	University of Waikato
Jangali, Rahul	The University of Waikato
Black, Kale	Black Box Technologies LTD
Harvey, Scott	University of Waikato
Downes, Catherine	University of Waikato
Lim, Shen Hin	University of Waikato
Oliver, Richard	Plant and Food Research
Duke, Mike	Waikato University
MacDonald, Bruce	University of Auckland

FrPI6T6	Room 6
Learning V (Teaser Session)	
Chair: Wang, Yang	Shanghaitech University
Co-Chair: Boukas, Evangelos	Technical University of Denmark

09:00-10:00 FrPI6T6.1

Neural Kinodynamic Planning: Learning for Kinodynamic Tree Expansion, pp. 11788-11794.

Lai, Tin	University of Sydney
Zhi, Weiming	Carnegie Mellon University
Hermans, Tucker	University of Utah
Ramos, Fabio	University of Sydney, NVIDIA

09:00-10:00 FrPI6T6.2

Unsupervised Multiple Proactive Behavior Learning of Mobile Robots for Smooth and Safe Navigation, pp. 11795-11802. Attachment

Srisuchinnawong, Arthicha	University of Southern Denmark and Vidyasirimedhi Institute of S
Baech, Jonas	Danish Technological Institute
Hyzy, Marek Piotr	Technical University of Denmark, Lungby
Kounalakis, Tsampikos	Danish Technological Institute
Boukas, Evangelos	Technical University of Denmark
Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

09:00-10:00 FrPI6T6.3

NFPDE: Normalizing Flow-Based Parameter Distribution Estimation for Offline Adaptive Domain Randomization, pp. 11803-11810. Attachment

Takano, Rin	NEC Corporation
Takaya, Kei	NEC Corporation
Oyama, Hiroyuki	NEC Corporation

09:00-10:00 FrPI6T6.4

The Power of Input: Benchmarking Zero-Shot Sim-To-Real Transfer of Reinforcement Learning Control Policies for Quadrotor Control, pp. 11811-11817. Attachment

Dionigi, Alberto	University of Perugia
Costante, Gabriele	University of Perugia
Loianno, Giuseppe	New York University

09:00-10:00 FrPI6T6.5

Tube-GAN: A Novel Virtual Tube Generation Method for Unmanned Aerial Swarms Based on Generative Adversarial Network, pp. 11818-11825. Attachment

Zhai, Shixun	North Automatic Control Technology Institute
Zhang, Kaige	Utah State University
Nan, Bo	North Automatic Control Technology Institute
Sun, Yanwen	North Automatic Control Technology Institute
Fu, Qianyi	Leeds/Zhejiang University

09:00-10:00 FrPI6T6.6

Repairing Neural Networks for Safety in Robotic Systems Using Predictive Models, pp. 11826-11833.

Majd, Keyvan	Arizona State University
Clark, Geoffrey	ASU
Fainekos, Georgios	Toyota NA-R&D
Ben Amor, Heni	Arizona State University

09:00-10:00 FrPI6T6.7

Performing Efficient and Safe Deformable Package Transport Operations Using Suction Cups, pp. 11834-11841.

Attachment

Shukla, Rishabh	University of Southern California
Yu, Zeren	Covariant.ai
Moode, Samrudh	University of Southern California
Manyar, Omey Mohan	University of Southern California
Wang, Fan	Amazon Robotics
Mayya, Siddharth	Amazon Robotics
Gupta, Satyandra K.	University of Southern California

09:00-10:00 FrPI6T6.8

Dynamic Modeling of Robotic Fish Considering Background Flow Using Koopman Operators, pp. 11842-11847.
Attachment

Lin, Xiaozhu	ShanghaiTech University
Liu, Song	ShanghaiTech University
Liu, Chengyuan	Loughborough Univeristy
Wang, Yang	Shanghaitech University

09:00-10:00 FrPI6T6.9

Data-Driven Force Observer for Human-Robot Interaction with Series Elastic Actuators Using Gaussian Processes, pp. 11848-11855.

Tesfazgi, Samuel	Technical University of Munich
Keßler, Markus	Technical University of Munich
Trigili, Emilio	Scuola Superiore Sant'Anna
Lederer, Armin	ETH Zurich
Hirche, Sandra	Technische Universität München

09:00-10:00 FrPI6T6.10

Guiding Reinforcement Learning with Incomplete System Dynamics, pp. 11856-11862. Attachment

Wang, Shuyuan	University of British Columbia
Duan, Jingliang	University of Science and Technology Beijing
Lawrence, Nathan P.	University of British Columbia
Loewen, Philip D	University of British Columbia, Vancouver
Forbes, Michael	Honeywell
Gopaluni, Bhushan	University of British Columbia
Zhang, Lixian	Harbin Institute of Technology

09:00-10:00 FrPI6T6.11

Learning Agile Locomotion on Risky Terrains, pp. 11863-11870. Attachment

Zhang, Chong	ETH Zurich
Rudin, Nikita	ETH Zurich, NVIDIA
Hoeller, David	ETH Zurich, NVIDIA
Hutter, Marco	ETH Zurich

09:00-10:00 FrPI6T6.12

Sensorimotor Attention and Language-Based Regressions in Shared Latent Variables for Integrating Robot Motion Learning and LLM, pp. 11871-11877.

Suzuki, Kanata	Fujitsu Limited
Ogata, Tetsuya	Waseda University

09:00-10:00 FrPI6T6.13

GeRM: A Generalist Robotic Model with Mixture-Of-Experts for Quadruped Robot, pp. 11878-11885. Attachment

Song, Wenxuan	Westlake University
Zhao, Han	Westlake University
Ding, Pengxiang	Westlake University
Cui, Can	Westlake University
Lyu, Shangke	Westlake University
Fan, YaNing	Hebei University of Technology
Wang, Donglin	Westlake University

09:00-10:00 FrPI6T6.14

Feeling Optimistic? Ambiguity Attitudes for Online Decision Making, pp. 11886-11891.

Beard, Jared	West Virginia University
Butts, R. Michael	West Virginia University
Gu, Yu	West Virginia University

09:00-10:00 FrPI6T6.15

Offline Meta-Reinforcement Learning with Evolving Gradient Agreement, pp. 11892-11899. Attachment

Chen, Jiaxing	National University of Defense Technology
Yuan, Weilin	National University of Defense Technology
Chen, Shaofei	National University of Defense Technology
Liu, Furong	National University of Defense Technology
Ma, Ao	National University of Defense Technology
Hu, Zhenzhen	National University of Defense Technology
Li, Peng	National University of Defence Technology

09:00-10:00 FrPI6T6.16

Stein Movement Primitives for Adaptive Multi-Modal Trajectory Generation, pp. 11900-11907.

Zeya, Yin	Univeristy of Sydney
Lai, Tin	University of Sydney
Khan, Subhan	The University of Sydney
Jacob, Jayadeep	The University of Sydney
Li, Yong Hui	Univeristy of Sydney
Ramos, Fabio	University of Sydney, NVIDIA

FrPI6T7 Room 7

Optimal Control in Robotics (Teaser Session)

Chair: Tortora, Stefano — University of Padova

09:00-10:00 FrPI6T7.1

Toward Control of Wheeled Humanoid Robots with Unknown Payloads: Equilibrium Point Estimation Via Real-To-Sim Adaptation, pp. 11908-11915. Attachment

Baek, DongHoon	University of Illinois Urbana-Champaign
Sim, Youngwoo	University of Illinois at Urbana-Champaign
Purushottam, Amartya	University of Illinois, Urbana-Champaign
Gupta, Saurabh	UIUC
Ramos, Joao	University of Illinois at Urbana-Champaign

09:00-10:00 FrPI6T7.2

CLIPSwarm: Generating Drone Shows from Text Prompts with Vision-Language Models, pp. 11916-11922. Attachment

Pueyo, Pablo	Universidad De Zaragoza
Montijano, Eduardo	Universidad De Zaragoza
Murillo, Ana Cristina	University of Zaragoza
Schwager, Mac	Stanford University

09:00-10:00 FrPI6T7.3

Robust Two-View Geometry Estimation with Implicit Differentiation, pp. 11923-11930.

Pyatov, Vladislav	Skolkovo Institute of Science and Technology
Koshelev, Iaroslav	AI Foundation and Algorithm Lab
Lefkimmiatis, Stamatios	MTS AI

09:00-10:00 FrPI6T7.4

Robustifying Model-Based Locomotion by Zero-Order Stochastic Nonlinear Model Predictive Control with Guard Saltation Matrix, pp. 11931-11938. Attachment

Katayama, Sotaro	Sony Group Corporation
Takasugi, Noriaki	Sony Group Corporation
Kaneko, Mitsuhisa	Sony Global Manufacturing & Operations Corporation
Nagatsuka, Norio	Sony Interactive Entertainment
Kinoshita, Masaya	Sony Group Corporation

09:00-10:00 FrPI6T7.5

Momentum-Aware Trajectory Optimisation Using Full-Centroidal Dynamics and Implicit Inverse Kinematics, pp. 11939-11946. Attachment

Papatheodorou, Aristotelis	University of Oxford
Merkt, Wolfgang Xaver	University of Oxford
Mitchell, Alexander Luis	University of Oxford
Havoutis, Ioannis	University of Oxford

09:00-10:00 FrPI6T7.6

Model Predictive Control for Frenet-Cartesian Trajectory Tracking of a Tricycle Kinematic Automated Guided Vehicle, pp. 11947-11952. Attachment

Subash, Akash John	University of Freiburg

Kloeser, Daniel	Ek Robotics
Frey, Jonathan	University of Freiburg
Reiter, Rudolf	University of Freiburg
Diehl, Moritz	Univ. of Heidelberg
Bohlmann, Karsten	Eberhard-Karls-Universität Tübingen

09:00-10:00 FrPI6T7.7

Ensuring Joint Constraints of Torque-Controlled Robot Manipulators under Bounded Jerk, pp. 11953-11960. Attachment

Ko, Dongwoo	POSTECH
Kim, Jonghyeok	POSTECH
Chung, Wan Kyun	POSTECH

09:00-10:00 FrPI6T7.8

Collaboration Strategies for Two Heterogeneous Pursuers in a Pursuit-Evasion Game Using Deep Reinforcement Learning, pp. 11961-11967.

Zhong, Zhanping	Beihang University
Dong, Zhuoning	Beihang University
Duan, Xiaoming	Shanghai Jiao Tong University
He, Jianping	Shanghai Jiao Tong University

09:00-10:00 FrPI6T7.9

Adaptive Trajectory Database Learning for Nonlinear Control with Hybrid Gradient Optimization, pp. 11968-11975.

Tseng, Kuan-Yu	University of Illinois at Urbana-Champaign
Zhang, Mengchao	University of Illinois at Urbana-Champaign
Hauser, Kris	University of Illinois at Urbana-Champaign
Dullerud, Geir E.	University of Illinois

09:00-10:00 FrPI6T7.10

Bi-Level Trajectory Optimization on Uneven Terrains with Differentiable Wheel-Terrain Interaction Model, pp. 11976-11983. Attachment

Manoharan, Amith	University of Tartu
Sharma, Aditya	Robotics Research Center, IIIT Hyderabad
Belsare, Himani	International Institute of Information Technology, Hyderabad
Pal, Kaustab	International Institute of Information Technology, Hyderabad
Krishna, Madhava	IIIT Hyderabad
Singh, Arun Kumar	University of Tartu

09:00-10:00 FrPI6T7.11

Disturbance-Aware Model Predictive Control of Underactuated Robotics Systems, pp. 11984-11991. Attachment

Kim, Jiwon	KAIST
Kim, Min Jun	KAIST

09:00-10:00 FrPI6T7.12

A Fast Online Omnidirectional Quadrupedal Jumping Framework Via Virtual-Model Control and Minimum Jerk Trajectory Generation, pp. 11992-11998. Attachment

Yue, Linzhu	The Chinese University of Hong Kong
Zhang, Lingwei	Hong Kong Centre for Logistics Robotics
Song, Zhitao	The Chinese University of Hong Kong
Zhang, Hongbo	The Chinese University of Hong Kong
Dong, Jinhu	Tongji University
Zeng, Xuanqi	Chinese University of Hong Kong
Liu, Yunhui	Chinese University of Hong Kong

09:00-10:00 FrPI6T7.13

Adaptive Feedforward Super-Twisting Sliding Mode Control of Parallel Kinematic Manipulators with Real-Time Experiments, pp. 11999-12006.

Saied, Hussein	Univesity of Montpellier, LIRMM
Chemori, Ahmed	LIRMM, University of Montpellier, CNRS
Bouri, Mohamed	EPFL
El Rafei, Maher	Lebanese University, Faculty of Engineering, CRSI
Francis, Clovis	Lebanese University

09:00-10:00 FrPI6T7.14

SoftMAC: Differentiable Soft Body Simulation with Forecast-Based Contact Model and Two-Way Coupling with Articulated Rigid Bodies and Clothes, pp. 12007-12014. Attachment

Liu, Min	Carnegie Mellon University
Yang, Gang	National University of Singapore

Luo, Siyuan	Xi'an Jiaotong University
Shao, Lin	National University of Singapore

09:00-10:00 FrPI6T7.15

Task-Based Design and Policy Co-Optimization for Tendon-Driven Underactuated Kinematic Chains, pp. 12015-12022. Attachment

Islam, Sharfin	Columbia University
He, Zhanpeng	Columbia University
Ciocarlie, Matei	Columbia University

FrPI6T8 Room 8

Robot Motion Planning V (Teaser Session)

Chair: Quattrini Li, Alberto	Dartmouth College
Co-Chair: Suriani, Vincenzo	University of Basilicata

09:00-10:00 FrPI6T8.1

Search-Based Strategy for Spatio-Temporal Environmental Property Restoration, pp. 12023-12030. Attachment

Docena, Amel Nestor	Dartmouth College
Quattrini Li, Alberto	Dartmouth College

09:00-10:00 FrPI6T8.2

Elliptical K-Nearest Neighbors - Path Optimization Via Coulomb's Law and Invalid Vertices in C-Space Obstacles, pp. 12031-12038. Attachment

Zhang, Liding	Technical University of Munich
Bing, Zhenshan	Technical University of Munich
Zhang, Yu	Technical University of Munich
Cai, Kuanqi	Technical University of Munich
Chen, Lingyun	Technical University of Munich
Wu, Fan	Technical University of Munich
Haddadin, Sami	Technical University of Munich
Knoll, Alois	Tech. Univ. Muenchen TUM

09:00-10:00 FrPI6T8.3

EMPOWER: Embodied Multi-Role Open-Vocabulary Planning with Online Grounding and Execution, pp. 12039-12046. Attachment

Argenziano, Francesco	Sapienza University of Rome
Brienza, Michele	Sapienza University of Rome
Suriani, Vincenzo	University of Basilicata
Nardi, Daniele	Sapienza University of Rome
Bloisi, Domenico	International University of Rome UNINT

09:00-10:00 FrPI6T8.4

Extended Tree Search for Robot Task and Motion Planning, pp. 12047-12054.

Ren, Tianyu	Technische Universität Darmstadt
Chalvatzaki, Georgia	Technische Universität Darmstadt
Peters, Jan	Technische Universität Darmstadt

09:00-10:00 FrPI6T8.5

HPHS: Hierarchical Planning Based on Hybrid Frontier Sampling for Unknown Environments Exploration, pp. 12055-12062. Attachment

Long, Shijun	Beijing Institute of Technology
Li, Ying	Beijing Institute of Technology
Wu, Chenming	Baidu Research
Xu, Bin	Beijing Institute of Technology
Fan, Wei	Beijing Institute of Technology

09:00-10:00 FrPI6T8.6

Multi-Robot Multi-Goal Mission Planning in Terrains of Varying Energy Consumption, pp. 12063-12068. Attachment

Herynek, Jáchym	Czech Technical University in Prague
Edelkamp, Stefan	Computer Science & Artificial Intelligence Center Faculty of Ele

09:00-10:00 FrPI6T8.7

A Framework for Neurosymbolic Goal-Conditioned Continual Learning for Open World Environments, pp. 12069-12076. Attachment

Lorang, Pierrick	AIT Austrian Institute of Technology GmbH - Tufts University
Goel, Shivam	Tufts University

Shukla, Yash	Tufts University
Zips, Patrik	AIT Austrian Institute of Technology GmbH
Scheutz, Matthias	Tufts University

09:00-10:00 FrPI6T8.8

Multi-Stage Monte Carlo Tree Search for Non-Monotone Object Rearrangement Planning in Narrow Confined Environments, pp. 12077-12084. Attachment

Ren, Hanwen	Purdue University
Qureshi, Ahmed H.	Purdue University

09:00-10:00 FrPI6T8.9

LLM^3: Large Language Model-Based Task and Motion Planning with Motion Failure Reasoning, pp. 12085-12091. Attachment

Wang, Shu	UCLA
Han, Muzhi	University of California, Los Angeles
Jiao, Ziyuan	Beijing Institute for General Artificial Intelligence
Zhang, Zeyu	Beijing Institute for General Artificial Intelligence
Wu, Ying Nian	University of California, Los Angeles
Zhu, Song-Chun	UCLA
Liu, Hangxin	Beijing Institute for General Artificial Intelligence (BIGAI)

09:00-10:00 FrPI6T8.11

StratXplore: Strategic Novelty-Seeking and Instruction-Aligned Exploration for Vision and Language Navigation, pp. 12092-12099.

Gopinathan, Muraleekrishna	Edith Cowan University
Abu-Khalaf, Jumana	Edith Cowan University
Suter, David	Edith Cowan University, School of Science, Centre of AI and Mach
Masek, Martin	ECU

09:00-10:00 FrPI6T8.12

Efficient Target Singulation with Multi-Fingered Gripper Using Propositional Logic, pp. 12100-12106. Attachment

Kim, Hyojeong	Korea Institute of Science and Technology (KIST)
Jo, Jeong Yong	Hanyang University
Lim, Myo-Taeg	Korea University
Kim, ChangHwan	Korea Institute of Science and Technology

09:00-10:00 FrPI6T8.13

Reactive Temporal Logic-Based Planning and Control for Interactive Robotic Tasks, pp. 12107-12114. Attachment

Savvas Sadiq Ali, Farhad Nawaz	University of Pennsylvania
Peng, Shaoting	University of Pennsylvania
Lindemann, Lars	University of Southern California
Figueroa, Nadia	University of Pennsylvania
Matni, Nikolai	University of Pennsylvania

09:00-10:00 FrPI6T8.14

NLNS-MASPF for Solving Multi-Agent Scheduling and Path-Finding, pp. 12115-12122.

Park, Heemang	KAIST
Ahn, Kyuree	Omelet
Park, Jinkyoo	Korea Advanced Institute of Science and Technology

09:00-10:00 FrPI6T8.15

DoReMi: Grounding Language Model by Detecting and Recovering from Plan-Execution Misalignment, pp. 12123-12130. Attachment

Guo, Yanjiang	Tsinghua University
Wang, Yen-Jen	Tsinghua University
Zha, Lihan	Stanford University
Chen, Jianyu	Tsinghua University

09:00-10:00 FrPI6T8.16

Sequential Discrete Action Selection Via Blocking Conditions and Resolutions, pp. 12131-12138. Attachment

Merz Hoffmeister, Liam	Yale University
Scassellati, Brian	Yale
Rakita, Daniel	Yale University

09:00-10:00 FrPI6T8.17

SMART-LLM: Smart Multi-Agent Robot Task Planning Using Large Language Models, pp. 12139-12146.

Kannan, Shyam Sundar	Purdue University

Venkatesh, L.N Vishnunandan	Purdue University
Min, Byung-Cheol	Purdue University

FrPI6T9	Room 9
Telerobotics and Teleoperation (Teaser Session)	
Chair: Piater, Justus	University of Innsbruck
Co-Chair: Naceri, Abdeldjallil	Technical University of Munich

09:00-10:00 FrPI6T9.1

Local Linearity Is All You Need (in Data Driven Teleoperation), pp. 12147-12154. Attachment

Przystupa, Michael	University of Alberta
Gidel, Gauthier	Université De Montréal
Taylor, Matthew	University of Alberta
Jagersand, Martin	University of Alberta
Piater, Justus	University of Innsbruck
Tosatto, Samuele	University of Innsbruck

09:00-10:00 FrPI6T9.2

GELLO: A General, Low-Cost, and Intuitive Teleoperation Framework for Robot Manipulators, pp. 12155-12162. Attachment

Wu, Shiyao	University of California, Berkeley
Shentu, Yide	University of California -- Berkeley
Yi, Zhongke	Covariant
Lin, Xingyu	UC Berkeley
Abbeel, Pieter	UC Berkeley

09:00-10:00 FrPI6T9.3

Real-Time Dexterous Telemanipulation with an End-Effect-Oriented Learning-Based Approach, pp. 12163-12168. Attachment

Wang, Haoyang	Oklahoma State University
Bai, He	Oklahoma State University
Zhang, Xiaoli	Colorado School of Mines
Jung, Yunsik	Colorado School of Mines
Bowman, Michael	University of Pennsylvania
Tao, Lingfeng	Oklahoma State University

09:00-10:00 FrPI6T9.4

Development of a Bilateral Control Teleoperation System for Bipedal Humanoid Robot Utilizing Foot Sole Haptics Feedback, pp. 12169-12174. Attachment

Shen, Yang	Faculty of Science and Engineering, Waseda University
Kanazawa, Masanobu	Waseda University
Mori, Kazuki	Waseda University
Isono, Ryu	Faculty of Science and Engineering, Waseda University
Nakazawa, Yuri	Waseda University
Takanishi, Atsuo	Waseda University
Otani, Takuya	Shibaura Institute of Technology

09:00-10:00 FrPI6T9.5

Immersive Human-In-The-Loop Control: Real-Time 3D Surface Meshing and Physics Simulation, pp. 12175-12181. Attachment

Akturk, Sait	University of Alberta
Valentine, Justin	University of Alberta
Ahmad, Junaid	University of Alberta
Jagersand, Martin	University of Alberta

09:00-10:00 FrPI6T9.6

6D Variable Virtual Fixtures for Telemanipulated Insertion Tasks, pp. 12182-12188. Attachment

Schwarz, Stephan Andreas	Chemnitz University of Technology
Thomas, Ulrike	Chemnitz University of Technology

09:00-10:00 FrPI6T9.7

Evaluation of Predictive Display for Teleoperated Driving Using CARLA Simulator, pp. 12189-12194. Attachment

Kashwani, Fatima	Khalifa University
Hassan, Bilal	Khalifa University, Abu Dhabi
Kong, Peng-Yong	Khalifa University

Khonji, Majid	Khalifa University
Dias, Jorge	Khalifa University

09:00-10:00 FrPI6T9.8

User-Customizable Shared Control for Robot Teleoperation Via Virtual Reality, pp. 12195-12202. Attachment

Luo, Rui	Northeastern University
Zolotas, Mark	Northeastern University
Moore, Drake	Northeastern University
Padir, Taskin	Northeastern University

09:00-10:00 FrPI6T9.9

Exploring Cognitive Load Dynamics in Human-Machine Interaction for Teleoperation: A User-Centric Perspective on Remote Operation System Design, pp. 12203-12210.

García Cárdenas, Juan José	ENSTA - Institute Polytechinique De Paris
Hei, Xiaoxuan	ENSTA Paris, Institut Polytechnique De Paris
Tapus, Adriana	ENSTA Paris, Institut Polytechnique De Paris

09:00-10:00 FrPI6T9.10

Deep Learning-Based Delay Compensation Framework for Teleoperated Wheeled Rovers on Soft Terrains, pp. 12211-12218. Attachment

Abubakar, Ahmad	Khalifa University
Zweiri, Yahya	Khalifa University
Yakubu, Mubarak	Khalifa University
Alhammadi, Ruqqayya	Khalifa University
Mohiuddin, Mohammed	Khalifa University
Haddad, Abdel Gafoor	Khalifa University
Dias, Jorge	Khalifa University
Seneviratne, Lakmal	Khalifa University

09:00-10:00 FrPI6T9.11

An Optimization Based Scheme for Real-Time Transfer of Human Arm Motion to Robot Arm, pp. 12219-12224. Attachment

Yang, Zhelin	Technical University of Munich
Bien, Seongjin	Technical University of Munich
Nertinger, Simone	Technical University of Munich
Naceri, Abdeldjallil	Technical University of Munich
Haddadin, Sami	Technical University of Munich

09:00-10:00 FrPI6T9.12

A Tetherless Soft Robotic Wearable Haptic Human Machine Interface for Robot Teleoperation, pp. 12225-12232. Attachment

Thakur, Shilpa	Worcester Polytechnic Institute
Diaz Armas, Nathalia	University of Massachusetts Lowell
Adegite, Joseph	Worcester Polytechnic Institute
Pandey, Ritwik	Worcester Polytechnic Institute
Mead, Joey	University of Massachusetts Lowell
Rao, Pratap	Worcester Polytechnic Institute
Onal, Cagdas	WPI

FrPI6T10 Room 10

Simultaneous Localization and Mapping (SLAM) VI (Teaser Session)

Chair: Yue, Yufeng	Beijing Institute of Technology
Co-Chair: Kornilova, Anastasiia	Skolkovo Institute of Science and Technology

09:00-10:00 FrPI6T10.1

PS-Loc: Robust LiDAR Localization with Prior Structural Reference, pp. 12233-12238. Attachment

Li, Rui	Shanghai Jiao Tong University
Zhao, Wentao	Shanghai Jiao Tong University
Deng, Tianchen	Shanghai Jiao Tong University
Yanbo, Wang	Shanghai Jiao Tong University
Wang, Jingchuan	Shanghai Jiao Tong University

09:00-10:00 FrPI6T10.2

Backpropagation-Based Analytical Derivatives of EKF Covariance for Active Sensing, pp. 12239-12246.

Benhamou, Jonas	Mines Paris/Safran

Bonnabel, Silvere	Mines ParisTech
Chapdelaine, Camille	Safran SA

09:00-10:00 FrPI6T10.3

EgoVM: Achieving Precise Ego-Localization Using Lightweight Vectorized Maps, pp. 12247-12254.

He, Yuzhe	Baidu
Liang, Shuang	Baidu
Rui, XiaoFei	BAIDU
Cai, Chengying	Baidu
Wan, Guowei	Baidu

09:00-10:00 FrPI6T10.4

Deep Sensor Fusion with Constraint Safety Bounds for High Precision Localization, pp. 12255-12261. Attachment

Schmidt, Sebastian	BMW
Stumpp, Ludwig	AppliedAI Initiative GmbH
Valverde Garrro, Diego	BMW
Günnemann, Stephan	Technical University of Munich

09:00-10:00 FrPI6T10.5

LCP-Fusion: A Neural Implicit SLAM with Enhanced Local Constraints and Computable Prior, pp. 12262-12269.

Wang, Jiahui	Beijing Institute of Technology
Deng, Yinan	Beijing Institute of Technology
Yang, Yi	Beijing Institute of Technology
Yue, Yufeng	Beijing Institute of Technology

09:00-10:00 FrPI6T10.6

Long-Term Map-Maintenance in Changing Environments Using Ray-Bundle-Impact-Factor Estimation, pp. 12270-12277.

Breitfuss, Matthias	Karlsruhe Institute of Technology (KIT)
Geimer, Marcus	Karlsruhe Institute of Technology
Gruber, Christoph Johannes	Self-Employed

09:00-10:00 FrPI6T10.7

DeepMIF: Deep Monotonic Implicit Fields for Large-Scale LiDAR 3D Mapping, pp. 12278-12285. Attachment

Yilmaz, Kutay	Technical University of Munich
Niessner, Matthias	Technical University of Munich
Kornilova, Anastasiia	Skolkovo Institute of Science and Technology
Artemov, Alexey	Technical University of Munich

09:00-10:00 FrPI6T10.8

MM-Gaussian: 3D Gaussian-Based Multi-Modal Fusion for Localization and Reconstruction in Unbounded Scenes, pp. 12286-12292. Attachment

Wu, Chenyang	University of Science and Technology of China
Duan, Yifan	University of Science and Technology of China
Zhang, Xinran	University of Science and Technology of China
Sheng, Yu	University of Science and Technology of China
Ji, Jianmin	University of Science and Technology of China
Zhang, Yanyong	University of Science and Technology of China

09:00-10:00 FrPI6T10.9

Large-Scale Indoor Mapping with Failure Detection and Recovery in SLAM, pp. 12293-12300. Attachment

Rahman, Sharmin	Amazon
DiPietro, Robert	Johns Hopkins University
Kedarisetti, Dharanish	Amazon
Kulathumani, Vinod	Amazon

09:00-10:00 FrPI6T10.10

Active Loop Closure for OSM-Guided Robotic Mapping in Large-Scale Urban Environments, pp. 12301-12308. Attachment

Gao, Wei	University of Macau
Sun, Zezhou	Nanjing University of Science and Technology
Zhao, Mingle	University of Macau
Xu, Chengzhong	University of Macau
Kong, Hui	University of Macau

09:00-10:00 FrPI6T10.11

MOE: A Dense LiDAR Moving Event Dataset, Detection Benchmark and LeaderBoard, pp. 12309-12316.

Chen, Zhiming	Hong Kong University of Science and Technology

Fang, Haozhe	Hong Kong University of Science and Technology
Chen, Jiapeng	The Individual Researcher
Wang, Michael Yu	Mywang@gbu.edu.cn
Yu, Hongyu	The Hong Kong University of Science and Technology

09:00-10:00 FrPI6T10.12

I-ASM: Iterative Acoustic Scene Mapping for Enhanced Robot Auditory Perception in Complex Indoor Environments, pp. 12317-12322. Attachment

Fu, Linya	Southern University of Science and Technology
He, Yuanzheng	Southern University of Science and Technology
Wang, Jiang	Southern University of Science and Technology
Qiao, Xu	Department of Mechanical and Energy Engineering, Southern Univer
Kong, He	Southern University of Science and Technology

09:00-10:00 FrPI6T10.13

TivNe-SLAM: Dynamic Mapping and Tracking Via Time-Varying Neural Radiance Fields, pp. 12323-12330. Attachment

Duan, Chengyao	Yunnan University
Yang, Zhiliu	Yunnan University

09:00-10:00 FrPI6T10.14

RCAL: A Lightweight Road Cognition and Automated Labeling System for Autonomous Driving Scenarios, pp. 12331-12338.

Chen, Jiancheng	Li Auto
Yu, Chao	Li Auto
Wang, Huayou	Li Auto
Liu, Kun	Li Auto
Zhan, Yifei	Li Auto
Lang, Xianpeng	Li Auto
Xue, Changliang	Li Auto

09:00-10:00 FrPI6T10.15

AutoInst: Automatic Instance-Based Segmentation of LiDAR 3D Scans, pp. 12339-12346. Attachment

Perauer, Cedric	Technical University of Munich
Zhang, Haifan	Technical University of Munich
Heidrich, Laurenz Adrian	Technical University of Munich
Niessner, Matthias	Technical University of Munich
Kornilova, Anastasiia	Skolkovo Institute of Science and Technology
Artemov, Alexey	Technical University of Munich

09:00-10:00 FrPI6T10.16

Visual Timing for Sound Source Depth Estimation in the Wild, pp. 12347-12354.

Sun, Wei	UT AUSTIN
Qiu, Lili	UT Austin

FrPI6T11 Room 11

Safety for Robots (Teaser Session)

Chair: Althoefer, Kaspar	Queen Mary University of London
Co-Chair: Ho, Van	Japan Advanced Institute of Science and Technology

09:00-10:00 FrPI6T11.1

TacLink-Integrated Robot Arm Toward Safe Human-Robot Interaction, pp. 12355-12361. Attachment

Luu, Quan	Japan Advanced Institute of Science and Technology
Albini, Alessandro	University of Oxford
Maiolino, Perla	University of Oxford
Ho, Van	Japan Advanced Institute of Science and Technology

09:00-10:00 FrPI6T11.2

Fixing Symbolic Plans with Reinforcement Learning in Object-Based Action Spaces, pp. 12362-12368.

Thierauf, Christopher	Woods Hole Oceanographic Institution
Scheutz, Matthias	Tufts University

09:00-10:00 FrPI6T11.3

Online Efficient Safety-Critical Control for Mobile Robots in Unknown Dynamic Multi-Obstacle Environments, pp. 12369-12376. Attachment

Zhang, Yu	Technical University of Munich

Tian, Guangyao	Technische Universität München
Wen, Long	Technical University of Munich
Yao, Xiangtong	Technical University of Munich
Zhang, Liding	Technical University of Munich
Bing, Zhenshan	Technical University of Munich
He, Wei	University of Science and Technology Beijing
Knoll, Alois	Tech. Univ. Muenchen TUM

09:00-10:00 FrPI6T11.4

Safe Reinforcement Learning Via Hierarchical Adaptive Chance-Constraint Safeguards, pp. 12377-12384.

Chen, Zhaorun	Purdue University
Zhao, Zhuokai	University of Chicago
He, Tairan	Carnegie Mellon University
Chen, BinHao	Shanghai Jiao Tong University
Zhao, Xuhao	Shanghai Jiao Tong University
Gong, Liang	Shanghai Jiao Tong University
Liu, Chengliang	Shanghai Jiao Tong University

09:00-10:00 FrPI6T11.5

Adaptive Splitting of Reusable Temporal Monitors for Rare Traffic Violations, pp. 12385-12392.

Innes, Craig	University of Edinburgh
Ramamoorthy, Subramanian	The University of Edinburgh

09:00-10:00 FrPI6T11.6

Interruptive Language Control of Bipedal Locomotion, pp. 12393-12398.

Malik, Ashish	Oregon State University
Lee, Stefan	Oregon State University
Fern, Alan	Oregon State University

09:00-10:00 FrPI6T11.7

Safe Offline-To-Online Multi-Agent Decision Transformer: A Safety Conscious Sequence Modeling Approach, pp. 12399-12406.

Shah, Aamir Bader	University of Houston
Wen, Yu	University of Houston
Chen, Jiefu	University of Houston
Wu, Xuqing	University of Houston
Fu, Xin	University of Houston

09:00-10:00 FrPI6T11.8

Differential-Algebraic Equation Control Barrier Function for Flexible Link Manipulator, pp. 12407-12412.

Park, Younghwa	Maersk Mc-Kinney Moller Institute, University of Southern Denmar
Sloth, Christoffer	University of Southern Denmark

09:00-10:00 FrPI6T11.9

MIXED-SENSE: A Mixed Reality Sensor Emulation Framework for Test and Evaluation of UAVs against False Data Injection Attacks, pp. 12413-12418. Attachment

Pant, Kartik Anand	Purdue University
Lin, Li-Yu	Purdue University
Kim, Jaehyeok	Purdue University - West Lafayette
Sribunma, Worawis	Purdue University
Goppert, James	Purdue University
Hwang, Inseok	Purdue University

09:00-10:00 FrPI6T11.10

Safe Multi-Agent Reinforcement Learning for Bimanual Dexterous Manipulation, pp. 12419-12426. Attachment

Zhan, Weishu	Dartmouth College
Chin, Peter	Dartmouth College

09:00-10:00 FrPI6T11.11

CBFkit: A Control Barrier Function Toolbox for Robotics Applications, pp. 12427-12433.

Black, Mitchell	MIT Lincoln Laboratory
Fainekos, Georgios	Toyota NA-R&D
Hoxha, Bardh	Toyota Research Institute of North America
Okamoto, Hideki	Toyota Motor North America
Prokhorov, Danil	Toyota Tech Center

09:00-10:00 FrPI6T11.12

RECOVER: A Neuro-Symbolic Framework for Failure Detection and Recovery, pp. 12434-12441. Attachment

Cornelio, Cristina	Samsung AI
Diab, Mohammed	Imperial College London

09:00-10:00 FrPI6T11.13

Hybrid Continuum-Eversion Robot: Precise Navigation and Decontamination in Nuclear Environments Using Vine Robot, pp. 12442-12448. Attachment

Al-Dubooni, Mohammed	Queen Mary University of London
Wong, Cuebong	National Nuclear Laboratory
Althoefer, Kaspar	Queen Mary University of London

09:00-10:00 FrPI6T11.14

RoboGuardZ: A Scalable Zero-Shot Framework for Zero-Day Malware Detection in Robots, pp. 12449-12455. Attachment

Kaur, Upinder	Purdue University
Celik, Berkay	Purdue University
Voyles, Richard	Purdue University

09:00-10:00 FrPI6T11.15

RoboCop: A Robust Zero-Day Cyber-Physical Attack Detection Framework for Robots, pp. 12456-12462. Attachment

Kaur, Upinder	Purdue University
Celik, Berkay	Purdue University
Voyles, Richard	Purdue University

09:00-10:00 FrPI6T11.16

Collision Detection between Smooth Convex Bodies Via Riemannian Optimization Framework, pp. 12463-12470.

An, Seoki	Seoul National University
Lee, Somang	Seoul National University
Lee, Jeongmin	Seoul National University
Park, Sunkyung	Seoul National University
Lee, Dongjun	Seoul National University

FrPI6T12 Room 12

Sensor Fusion for Robots (Teaser Session)

Chair: Oishi, Takeshi	The University of Tokyo
Co-Chair: Kim, Jinwhan	KAIST

09:00-10:00 FrPI6T12.1

A Case Study on Visual-Audio-Tactile Cross-Modal Retrieval, pp. 12471-12477.

Wojcik, Jagoda	King's College London
Jiang, Jiaqi	King's College London
Wu, Jiacheng	King's College London
Luo, Shan	King's College London

09:00-10:00 FrPI6T12.2

ASY-VRNet: Waterway Panoptic Driving Perception Model Based on Asymmetric Fair Fusion of Vision and 4D mmWave Radar, pp. 12478-12485.

Guan, Runwei	University of Liverpool
Yao, Shanliang	XJTLU
Man, Ka Lok	Xi'an Jiaotong-Liverpool University
Zhu, Xiaohui	Xi'an Jiaotong-Liverpool University
Yue, Yong	Xi'an Jiaotong-Liverpool University
Smith, Jeremy	University of Liverpool
Lim, Eng Gee	Xi'an Jiaotong-Liverpool University
Yue, Yutao	Hong Kong University of Science and Technology (Guangzhou)

09:00-10:00 FrPI6T12.3

KLILO: Kalman Filter Based LiDAR-Inertial-Leg Odometry for Legged Robots, pp. 12486-12491. Attachment

Xu, Shaohang	Huazhong University of Science and Technology
Zhang, Wentao	Huazhong University of Science and Technology
Zhu, Lijun	Huazhong University of Science and Technology

09:00-10:00 FrPI6T12.4

AnytimeFusion: Parameter-Free RGB Camera-Radar Sensor Fusion Algorithm in Complex Maritime Situations, pp. 12492-12499.

Shin, Yeongha	Korea Advanced Institute of Science and Technology

Kim, Hanguen	Seadronix Corp
Kim, Jinwhan	KAIST

09:00-10:00 FrPI6T12.5

Implicit Neural Fusion of RGB and Far-Infrared 3D Imagery for Invisible Scenes, pp. 12500-12507. Attachment

Li, Xiangjie	The University of Tokyo
Xie, Shuxiang	The University of Tokyo
Sakurada, Ken	National Institute of Advanced Industrial Science and Technology
Sagawa, Ryusuke	National Institute of Advanced Industrial Science AndTechnology
Oishi, Takeshi	The University of Tokyo

09:00-10:00 FrPI6T12.6

Audio-Visual Traffic Light State Detection for Urban Robots, pp. 12508-12513. Attachment

Gupta, Sagar	Deakin University
Cosgun, Akansel	Monash University

09:00-10:00 FrPI6T12.7

Accurately Tracking Relative Positions of Moving Trackers Based on UWB Ranging and Inertial Sensing without Anchors, pp. 12514-12520.

Armani, Rayan	ETH Zurich
Holz, Christian	ETH Zürich

09:00-10:00 FrPI6T12.8

Bridging Language, Vision and Action: Multimodal VAEs in Robotic Manipulation Tasks, pp. 12521-12527. Attachment

Sejnova, Gabriela	Czech Technical University in Prague
Vavrecka, Michal	Czech Technical University CIIRC
Stepanova, Karla	Czech Technical University

09:00-10:00 FrPI6T12.9

Adaptive Visual-Aided 4D Radar Odometry through Transformer-Based Feature Fusion, pp. 12528-12534. Attachment

Zhang, Yuanfan	Harbin Institute of Technology
Xiao, Renxiang	Harbin Institute of Technology, Shenzhen
Hong, Ziyang	Heriot-Watt University
Hu, Liang	Harbin Institute of Technology, Shenzhen
Liu, Jie	Harbin Institute of Technology

09:00-10:00 FrPI6T12.10

VIRUS-NeRF - Vision, InfraRed and UltraSonic Based Neural Radiance Fields, pp. 12535-12542. Attachment

Schmid, Nicolaj	EPFL
von Einem, Cornelius	ETH Zürich
Cadena Lerma, Cesar	ETH Zurich
Siegwart, Roland	ETH Zurich
Hruby, Lorenz	Filics GmbH
Tschopp, Florian	Voliro AG

09:00-10:00 FrPI6T12.11

Monocular Event-Inertial Odometry with Adaptive Decay-Based Time Surface and Polarity-Aware Tracking, pp. 12543-12550. Attachment

Tang, Kai	Zhejiang University
Lang, Xiaolei	Zhejiang University
Ma, Yukai	Zhejiang University
Huang, Yuehao	Zhejiang University
Li, Laijian	Zhejiang University
Liu, Yong	Zhejiang University
Lv, Jiajun	Zhejiang University

09:00-10:00 FrPI6T12.12

DCSANet: Dual Cross-Channel and Spatial Attention Make RGB-T Object Detection Better, pp. 12551-12557.

Lan, Xiaoxiong	Sun Yat-Sen University
Liu, Shenghao	Sun Yat-Sen University
Zhang, Zhiyong	Sun Yat-Sen University
Qiu, Changzhen	Sun Yat-Sen University

09:00-10:00 FrPI6T12.13

*Advanced Liquid and Dust Detection Sensor Setup and Algorithm Based on YOLO and Feature Extraction for Commercial Autonomous Cleaning Robots**. N/A

Jung, Dae-Hwan	Samsung Electronics Company, Ltd

Hong, Hyun Seok	Samsung Electronics
Park, Sahng-Gyu	Samsung Electronics
Lee, Yeongrok	Samsung Electronics
Lee, Woosub	Samsung

09:00-10:00 FrPI6T12.14

Error-State Kalman Filter Based Visual-Inertial Odometry Using Orientation Measurement on Unit Quaternion Group, pp. 12558-12563. Attachment

Chang, Chao-Wei	National Taiwan University
Lian, Feng-Li	National Taiwan University

09:00-10:00 FrPI6T12.15

Real-Time Truly-Coupled Lidar-Inertial Motion Correction and Spatiotemporal Dynamic Object Detection, pp. 12564-12571.

Le Gentil, Cedric	University of Technology Sydney
Falque, Raphael	University of Technology Sydney
Vidal-Calleja, Teresa A.	University of Technology Sydney

09:00-10:00 FrPI6T12.16

Accurate and Efficient Loop Closure Detection with Deep Binary Image Descriptor and Augmented Point Cloud Registration, pp. 12572-12579.

Wang, Jialiang	The Chinese University of Hong Kong
Gao, Zhi	Temasek Laboratories @ NUS
Lin, Zhipeng	The Chinese University of Hong Kong
Zhou, Zhiyu	Wuhan University
Wang, Xiaonan	ZG Technology Co., Ltd
Cheng, Jianhua	ZG Technology Co., Ltd
Zhang, Hao	Wuhan University
Liu, Xinyi	Wuhan University
Chen, Ben M.	Chinese University of Hong Kong

09:00-10:00 FrPI6T12.17

Event-Intensity Stereo with Cross-Modal Fusion and Contrast, pp. 12580-12585. Attachment

Wang, Yuanbo	Dalian University of Technolory
Qu, Shanglai	Dalian University of Technology
Meng, Tianyu	Dalian University of Technology
Cui, Yan	China Germany Artificial Intelligence Institute
Piao, Haiyin	Northwestern Polytechnical University
Wei, Xiaopeng	Dalian University of Technology
Yang, Xin	Dalian University of Technology

FrAT1 Room 1

SLAM V (Regular session)

Chair: Furukawa, Tomonari	University of Virginia
Co-Chair: Dias, Jorge	Khalifa University

10:00-10:15 FrAT1.1

EverySync: An Open Hardware Time Synchronization Sensor Suite for Common Sensors in SLAM, pp. 12586-12592. Attachment

Wu, Xuankang	Northeastern University
Sun, Haoxiang	Northeastern University
Wu, Rongguang	Northeastern University
Fang, Zheng	Northeastern University

10:15-10:30 FrAT1.2

A Point-Line Features Fusion Method for Fast and Robust Monocular Visual-Inertial Initialization, pp. 12593-12599. Attachment

Xie, Guoqiang	Sichuan University
Chen, Jie	Sichuan University
Tang, Tianhang	Sichuan University
Chen, Zeyu	Sichuan University
Lei, Ling	Sichuan University
Liu, Yiguang	Sichuan University

10:30-10:45 FrAT1.3

NVINS: Robust Visual Inertial Navigation Fused with NeRF-Augmented Camera Pose Regressor and Uncertainty Quantification, pp. 12600-12607. Attachment

Han, Juyeop	Massachusetts Institute of Technology
Lao Beyer, Lukas	Massachusetts Institute of Technology
Cavalheiro, Guilherme	MIT
Karaman, Sertac	Massachusetts Institute of Technology

10:45-11:00 FrAT1.4

Online Refractive Camera Model Calibration in Visual Inertial Odometry, pp. 12608-12615. Attachment

Singh, Mohit	NTNU: Norwegian University of Science and Technology
Alexis, Kostas	NTNU - Norwegian University of Science and Technology

FrAT2 Room 2

Neurorobotics (Regular session)

Co-Chair: Anil Meera, Ajith — Radboud University

10:00-10:15 FrAT2.1

Confidence-Aware Decision-Making and Control for Tool Selection, pp. 12616-12623.

Anil Meera, Ajith	Radboud University
Lanillos, Pablo	Donders Institute for Brain, Cognition and Behavior, Radboud Uni

10:15-10:30 FrAT2.2

Environment Transformer and Policy Optimization for Model-Based Offline Reinforcement Learning, pp. 12624-12630.

Wang, Pengqin	The Hong Kong University of Science and Technology
Zhu, Meixin	Hong Kong University of Science and Technology (Guangzhou)
Shen, Shaojie	Hong Kong University of Science and Technology

10:30-10:45 FrAT2.3

Learning to Recover from Plan Execution Errors During Robot Manipulation: A Neuro-Symbolic Approach, pp. 12631-12638. Attachment

Kalithasan, Namasivayam	Indian Institute of Technology, Delhi
Tuli, Arnav	Indian Institute of Technology, Delhi
Bindal, Vishal	Indian Institute of Technology, Delhi
Singh, Himanshu Gaurav	University of California Berkeley
Singla, Parag	Indian Institute of Technology, Delhi
Paul, Rohan	Indian Institute of Technology Delhi

10:45-11:00 FrAT2.4

MLPER: Multi-Level Prompts for Adaptively Enhancing Vision-Language Emotion Recognition, pp. 12639-12646. Attachment

Gao, Yu	Harbin Institute of Technology, Shenzhen
Ren, Weihong	Harbin Institute of Technology (Shenzhen)
Xu, Xinglong	Harbin Institute of Technology(Shenzhen)
Wang, Yan	Harbin Institute of Technology
Wang, Zhiyong	Harbin Institute of Technology Shenzhen
Liu, Honghai	Portsmouth University

FrAT3 Room 3

Cooperative Manipulation (Regular session)

Chair: Hamaya, Masashi	OMRON SINIC X Corporation
Co-Chair: Park, J. hyeon	Samsung Electronics

10:00-10:15 FrAT3.1

Hierarchical Action Chunking Transformer: Learning Temporal Multimodality from Demonstrations with Fast Imitation Behavior, pp. 12647-12653. Attachment

Park, J. hyeon	Samsung Electronics
Choi, Wonhyuk	SAMSUNG Electronics
Hong, Sunpyo	Samsung Electronics
Seo, Hoseong	Seoul National University
Ahn, Joonmo	Samsung Electronics
Ha, Changsu	Samsung Electronics
Han, Heungwoo	Samsung Research
Kwon, Junghyun	Seoul National University

10:15-10:30 FrAT3.2

Dynamic Manipulation of Deformable Objects Using Imitation Learning with Adaptation to Hardware Constraints, pp. 12654-12661. Attachment

Hannus, Eric	Aalto University
Nguyen Le, Tran	Aalto University
Blanco-Mulero, David	Institut De Robòtica I Informàtica Industrial, CSIC-UPC
Kyrki, Ville	Aalto University

10:30-10:45 FrAT3.3

Learning Variable Compliance Control from a Few Demonstrations for Bimanual Robot with Haptic Feedback Teleoperation System, pp. 12662-12669. Attachment

Kamijo, Tatsuya	The University of Tokyo
Beltran-Hernandez, Cristian Camilo	OMRON SINIC X Corporation
Hamaya, Masashi	OMRON SINIC X Corporation

10:45-11:00 FrAT3.4

Multi-Agent Behavior Retrieval: Retrieval-Augmented Policy Training for Cooperative Push Manipulation by Mobile Robots, pp. 12670-12677. Attachment

Kuroki, So	The University of Tokyo
Nishimura, Mai	Omron Sinic X
Kozuno, Tadashi	Omron Sinic X

FrAT4 Room 4

Underactuated Robots (Regular session)

Chair: Fiorini, Paolo — University of Verona

10:00-10:15 FrAT4.1

On Performing Non-Prehensile Rolling Manipulations: Stabilizing Synchronous Motions of Butterfly Robots, pp. 12678-12684. Attachment

Surov, Maksim	Arrival R&D
Pchelkin, Stepan	Huawei
Shiriaev, Anton	Norwegian University of Science and Technology
Gusev, Sergei V.	St. Petersburg State University
Freidovich, Leonid	Umeå University

10:15-10:30 FrAT4.2

Dynamic Walking on Highly Underactuated Point Foot Humanoids: Closing the Loop between HZD and HLIP, pp. 12685-12692. Attachment

Ghansah, Adrian	California Institute of Technology
Kim, Jeeseop	Caltech
Li, Kejun	California Institute of Technology
Ames, Aaron	Caltech

10:30-10:45 FrAT4.3

Reinforcement Learning Control for Autonomous Hydraulic Material Handling Machines with Underactuated Tools, pp. 12693-12700. Attachment

Spinelli, Filippo Alberto	ETH Zürich
Egli, Pascal Arturo	RSL, ETHZ
Nubert, Julian	ETH Zürich
Nan, Fang	ETH Zurich
Bleumer, Thilo	Liebherr Hydraulikbagger GmbH
Goegler, Patrick	Liebherr Hydraulikbagger GmbH
Brockes, Stephan	Liebherr Hydraulikbagger GmbH
Hofmann, Ferdinand	Liebherr Hydraulikbagger GmbH
Hutter, Marco	ETH Zurich

10:45-11:00 FrAT4.4

Motion Primitives Planning for Center-Articulated Vehicles, pp. 12701-12708. Attachment

Hu, Jiangpeng	ETH
Yang, Fan	ETH Zurich
Nan, Fang	ETH Zurich
Hutter, Marco	ETH Zurich

FrAT5 Room 5

Robust and Adaptive Control II (Regular session)

Chair: Kumar, Shivesh — DFKI GmbH

10:00-10:15 — FrAT5.1

Grow-To-Shape Control of Variable Length Continuum Robots Via Adaptive Visual Servoing, pp. 12709-12716. Attachment

Gandhi, Abhinav — Worceser Polytechnic Institute
Chiang, Shou-Shan — Worcester Polytechnic Institute
Onal, Cagdas — WPI
Calli, Berk — Worcester Polytechnic Institute

10:15-10:30 — FrAT5.2

Feasibility-Guided Safety-Aware Model Predictive Control for Jump Markov Linear Systems, pp. 12717-12724. Attachment

Laouar, Zakariya — University of Colorado
Ho, Qi Heng — University of Colorado Boulder
Mazouz, Rayan — University of Colorado Boulder
Becker, Tyler — University of Colorado Boulder
Sunberg, Zachary — University of Colorado

10:30-10:45 — FrAT5.3

Adaptive Stochastic Nonlinear Model Predictive Control with Look-Ahead Deep Reinforcement Learning for Autonomous Vehicle Motion Control, pp. 12725-12732.

Zarrouki, Baha — Technical University of Munich
Wang, Chenyang — Technical University of Munich
Betz, Johannes — Technical University of Munich

10:45-11:00 — FrAT5.4

Accelerating Model Predictive Control for Legged Robots through Distributed Optimization, pp. 12733-12740. Attachment

Amatucci, Lorenzo — Istituto Italiano Di Tecnologia
Turrisi, Giulio — Istituto Italiano Di Tecnologia
Bratta, Angelo — Istituto Italiano Di Tecnologia
Barasuol, Victor — Istituto Italiano Di Tecnologia
Semini, Claudio — Istituto Italiano Di Tecnologia

FrAT6 — Room 6

Aerial Systems: Applications III (Regular session)

Chair: Loianno, Giuseppe — New York University

10:00-10:15 — FrAT6.1

Det-Recon-Reg: An Intelligent Framework towards Automated Large-Scale Infrastructure Inspection, pp. 12741-12748. Attachment

Yang, Guidong — The Chinese University of Hong Kong
Zhang, Jihan — Chinese University of Hong Kong
Zhao, Benyun — The Chinese University of Hong Kong
Gao, Chuanxiang — The Chinese University of Hong Kong
Huang, Yijun — The Chinese University of Hong Kong
Wen, Junjie — The Chinese University of Hong Kong
Li, Qingxiang — The Chineses University of Hong Kong
Tang, Haoyun (Jerry) — UC Berkeley
Chen, Xi — The Chinese University of Hong Kong
Chen, Ben M. — Chinese University of Hong Kong

10:15-10:30 — FrAT6.2

Kinodynamic Motion Planning for a Team of Multirotors Transporting a Cable-Suspended Payload in Cluttered Environments, pp. 12749-12756. Attachment

Wahba, Khaled — Technical University of Berlin
Ortiz-Haro, Joaquim — TU Berlin
Toussaint, Marc — TU Berlin
Hoenig, Wolfgang — TU Berlin

10:30-10:45 — FrAT6.3

Learning Long-Horizon Predictions for Quadrotor Dynamics, pp. 12757-12764. Attachment

Rao, Pratyaksh — New York University
Saviolo, Alessandro — New York University
Castiglione Ferrari, Tommaso — Technology Innovation Institute

Loianno, Giuseppe	New York University

10:45-11:00 FrAT6.4

Design of an Adaptive Lightweight LiDAR to Decouple Robot-Camera Geometry (I), N/A

Chen, Yuyang	University at Buffalo
Wang, Dingkang	University of Florida
Thomas, Lenworth	University of Florida
Dantu, Karthik	University of Buffalo
Koppal, Sanjeev	University of Florida

FrAT7 Room 7

Medical Robotics IV (Regular session)

Chair: Arai, Fumihito	The University of Tokyo
Co-Chair: Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

10:00-10:15 FrAT7.1

Single Protoplasts Pickup System Combining Brightfield and Confocal Images, pp. 12773-12778. Attachment

Ando, Daito	The University of Tokyo
Turan, Bilal	The University of Tokyo
Amaya, Satoshi	The University of Tokyo
Ukai, Yuko	Nagoya University
Sato, Yoshikatsu	Nagoya University
Arai, Fumihito	The University of Tokyo

10:15-10:30 FrAT7.2

SuPerPM: A Surgical Perception Framework Based on Deep Point Matching Learned from Physical Constrained Simulation Data, pp. 12779-12785. Attachment

Lin, Shan	University of California, San Diego
Miao, Albert	University of California, San Diego
Alabiad, Ali	University of California San Diego
Liu, Fei	University of Tennessee Knoxville
Wang, Kaiyuan	University of California, San Diego
Lu, Jingpei	University of California San Diego
Richter, Florian	University of California, San Diego
Yip, Michael C.	University of California, San Diego

10:30-10:45 FrAT7.3

Towards Design and Development of a Soft Pressure Sensing Sleeve for Performing Safe Colonoscopic Procedures, pp. 12786-12791. Attachment

Rafiee Javazm, Mohammad	University of Texas at Austin
Kiehler, Sonika	The University of Texas at Austin
Kara, Ozdemir Can	University of Texas at Austin
Alambeigi, Farshid	University of Texas at Austin

10:45-11:00 FrAT7.4

Online Adaptive Impedance Control with Gravity Compensation for an Interactive Lower-Limb Exoskeleton, pp. 12792-12799. Attachment

Janna, Run	Vidyasirimedhi Institute of Science and Technology
Tarapongnivat, Kanut	Vidyasirimedhi Institute of Science and Technology
Sricom, Natchaya	VISTEC
Akkawutvanich, Akkawutvanich	Vidyasirimedhi Institute of Science and Technology
Xiong, Xiaofeng	University of Southern Denmark
Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

FrAT8 Room 8

Mapping II (Regular session)

Co-Chair: Verdoja, Francesco	Aalto University

10:00-10:15 FrAT8.1

Bayesian Floor Field: Transferring People Flow Predictions across Environments, pp. 12800-12806.

Verdoja, Francesco	Aalto University
Kucner, Tomasz Piotr	Aalto University
Kyrki, Ville	Aalto University

10:15-10:30 FrAT8.2

Leveraging GNSS and Onboard Visual Data from Consumer Vehicles for Robust Road Network Estimation, pp. 12807-12814.

Opra, István Balázs	Woven by Toyota / University of Bonn
Le Dem, Betty	Woven by Toyota
Walls, Jeffrey	University of Michigan
Lukarski, Dimitar	Woven by Toyota
Stachniss, Cyrill	University of Bonn

10:30-10:45 FrAT8.3

Refractive COLMAP: Refractive Structure-From-Motion Revisited, pp. 12815-12822.

She, Mengkun	Kiel University
Seegräber, Felix	Kiel University
Nakath, David	University Kiel
Koeser, Kevin	University of Kiel

10:45-11:00 FrAT8.4

Evaluation and Deployment of LiDAR-Based Place Recognition in Dense Forests, pp. 12823-12830. Attachment

Oh, Haedam	University of Oxford
Chebrolu, Nived	University of Oxford
Mattamala, Matias	University of Oxford
Freißmuth, Leonard	Technical University Munich
Fallon, Maurice	University of Oxford

FrAT9 Room 9

Optimization and Optimal Control (Regular session)

Co-Chair: Kyriakopoulos, Kostas — New York University - Abu Dhabi

10:00-10:15 FrAT9.1

Centroidal State Estimation Based on the Koopman Embedding for Dynamic Legged Locomotion, pp. 12831-12838. Attachment

Khorshidi, Shahram	University of Bonn
Elnagdi, Murad	University of Bonn
Bennewitz, Maren	University of Bonn

10:15-10:30 FrAT9.2

Perfecting Periodic Trajectory Tracking: Model Predictive Control with a Periodic Observer, pp. 12839-12846. Attachment

Pabon, Luis	Stanford University
Köhler, Johannes	ETH Zurich
Alora, John Irvin	Stanford University
Eberhard, Patrick Benito	ETH Zurich
Carron, Andrea	ETH Zurich
Zeilinger, Melanie N.	ETH Zurich
Pavone, Marco	Stanford University

10:30-10:45 FrAT9.3

Pose Graph Optimization Over Planar Unit Dual Quaternions: Improved Accuracy with Provably Convergent Riemannian Optimization, pp. 12847-12854.

Warke, William	University of Florida
Ramos, J Humberto	University of Florida
Ganesh, Prashant	EpiSys Science Inc
Brink, Kevin	AFRL
Hale, Matthew	Georgia Institute of Technology

10:45-11:00 FrAT9.4

Probabilistic Homotopy Optimization for Dynamic Motion Planning, pp. 12855-12862.

Chignoli, Matthew	Massachusetts Institute of Technology
Pardis, Shayan	MIT
Kim, Sangbae	Massachusetts Institute of Technology

FrAT10 Room 10

Deep Learning for Perception (Regular session)

Chair: Jayasuriya, Suren — Arizona State University

10:00-10:15 FrAT10.1

DarkGS: Learning Neural Illumination and 3D Gaussians Relighting for Robotic Exploration in the Dark, pp. 12863-12870.

Zhang, Tianyi — Carnegie Mellon University
Huang, Kaining — Carnegie Mellon University
Zhi, Weiming — Carnegie Mellon University
Johnson-Roberson, Matthew — Carnegie Mellon University

10:15-10:30 FrAT10.2

NeuralFloors++: Consistent Street-Level Scene Generation from BEV Semantic Maps, pp. 12871-12878. Attachment

Musat, Valentina — University of Oxford
De Martini, Daniele — University of Oxford
Gadd, Matthew — University of Oxford
Newman, Paul — Oxford University

10:30-10:45 FrAT10.3

PathFinder: Attention-Driven Dynamic Non-Line-Of-Sight Tracking with a Mobile Robot, pp. 12879-12886. Attachment

Kannapiran, Shenbagaraj — Arizona State University
Chandran, Sreenithy — Arizona State University, USA
Jayasuriya, Suren — Arizona State University
Berman, Spring — Arizona State University

10:45-11:00 FrAT10.4

Text3DAug – Prompted Instance Augmentation for LiDAR Perception, pp. 12887-12894.

Reichardt, Laurenz — HS Mannheim
Uhr, Luca — Hochschule Mannheim
Wasenmüller, Oliver — Mannheim University of Applied Sciences

FrAT11 Room 11

Legged Robots I (Regular session)

Co-Chair: Zimmermann, Karel — Ceske Vysoke Uceni Technicke V Praze, FEL

10:00-10:15 FrAT11.1

MonoForce: Self-Supervised Learning of Physics-Informed Model for Predicting Robot-Terrain Interaction, pp. 12895-12902. Attachment

Agishev, Ruslan — Czech Technical University in Prague, FEE
Zimmermann, Karel — Ceske Vysoke Uceni Technicke V Praze, FEL
Kubelka, Vladimir — Örebro University
Pecka, Martin — Ceske Vysoke Uceni Technicke V Praze, FEL
Svoboda, Tomas — Ceske Vysoke Uceni Technicke V Praze, FEL

10:15-10:30 FrAT11.2

LEEPS: Learning End-To-End Legged Perceptive Parkour Skills on Challenging Terrains, pp. 12903-12908.

Qian, Tangyu — University of Science and Technology of China
Zhang, Hao — University of Science and Technology of China
Zhou, Zhangli — University of Science and Technology of China
Wang, Hao — University of Science and Technology of China
Mingyu, Cai — University of California Riverside
Kan, Zhen — University of Science and Technology of China

10:30-10:45 FrAT11.3

DexDribbler: Learning Dexterous Soccer Manipulation Via Dynamic Supervision, pp. 12909-12916. Attachment

Hu, Yutong — ETH Zurich
Wen, Kehan — ETH Zurich
Yu, Fisher — ETH Zürich

10:45-11:00 FrAT11.4

Modeling and Gait Analysis of Passive Rimless Wheel with Compliant Feet, pp. 12917-12922. Attachment

Zheng, Yanqiu — Ritsumeikan University
Yan, Cong — Ritsumeikan University
He, Yuetong — Japan Advanced Institute of Science and Technology
Asano, Fumihiko — Japan Advanced Institute of Science and Technology
Tokuda, Isao — Ritsumeikan University

FrAT12 Room 12

Semantic Scene Understanding II (Regular session)

Chair: Bezerra, Ranulfo — Tohoku University

10:00-10:15 FrAT12.1

Volumetric Semantically Consistent 3D Panoptic Mapping, pp. 12923-12930. Attachment

Miao, Yang — ETH Zurich
Armeni, Iro — Stanford University
Pollefeys, Marc — ETH Zurich
Barath, Daniel — MTA SZTAKI; Visual Recognition Group in CTU Prague

10:15-10:30 FrAT12.2

Answerability Fields: Answerable Location Estimation Via Diffusion Models, pp. 12931-12937. Attachment

Azuma, Daichi — Sony Semiconductor Solutions
Miyanishi, Taiki — Advanced Telecommunications Research Institute International
Kurita, Shuhei — RIKEN
Sakamoto, Koya — Kyoto University, ATR
Kawanabe, Motoaki — Advanced Telecommunications Research Institutte International

10:30-10:45 FrAT12.3

Multi-Modal NeRF Self-Supervision for LiDAR Semantic Segmentation, pp. 12938-12945. Attachment

Timoneda, Xavier — CARIAD SE
Herb, Markus — Technische Universität München
Duerr, Fabian — Audi AG
Goehring, Daniel — Freie Universität Berlin
Yu, Fisher — ETH Zürich

10:45-11:00 FrAT12.4

PanopticRecon: Leverage Open-Vocabulary Instance Segmentation for Zero-Shot Panoptic Reconstruction, pp. 12946-12953. Attachment

Yu, Xuan — Zhejiang University
Liu, Yili — Zhejiang University
Han, Chenrui — Zhejiang University
Mao, Sitong — ShenZhen Huawei Cloud Computing Technologies Co., Ltd
Zhou, Shunbo — The Chinese University of Hong Kong
Xiong, Rong — Zhejiang University
Liao, Yiyi — Zhejiang University
Wang, Yue — Zhejiang University

FrAT13 Room 13

Computer Vision for Automation III (Regular session)

Chair: Fang, Yi — New York University
Co-Chair: Menezes, Paulo — Institute of Systems and Robotics

10:00-10:15 FrAT13.1

NRDF - Neural Region Descriptor Fields As Implicit ROI Representation for Robotic 3D Surface Processing, pp. 12954-12961. Attachment

Pratheepkumar, Anish — Profactor Gmbh
Ikeda, Markus — PROFACTOR GmbH
Hofmann, Michael — Profactor Gmbh
Widmoser, Fabian — Profactor Gmbh
Pichler, Andreas — Profactor Gmbh
Vincze, Markus — Vienna University of Technology

10:15-10:30 FrAT13.2

Sparse Points to Dense Clouds: Enhancing 3D Detection with Limited LiDAR Data, pp. 12962-12969. Attachment

Kumar, Aakash — University of Central Florida
Chen, Chen — University of Central Florida
Mian, Ajmal — University of Western Australia
Lobo, Niels — University of Central Florida
Shah, Mubarak — University of Central Florida

10:30-10:45 FrAT13.3

Conditional Generative Denoiser for Nighttime UAV Tracking, pp. 12970-12977.

Wang, Yucheng — Tongji University

Fu, Changhong	Tongji University
Lu, Kunhan	Tongji University
Yao, Liangliang	Tongji University
Zuo, Haobo	University of Hong Kong

FrBT1 Room 1

Vision-Based Navigation II (Regular session)

Chair: Shim, David Hyunchul — KAIST

11:00-11:15 FrBT1.1

DD-VNB: A Depth-Based Dual-Loop Framework for Real-Time Visually Navigated Bronchoscopy, pp. 12978-12985. Attachment

Tian, Qingyao	University of Chinese Academy of Sciences
Liao, Huai	Department of Pulmonary and Critical Care Medicine, the First Af
Huang, Xinyan	Department of Pulmonary and Critical Care Medicine, the First Af
Chen, Jian	Hong Kong Institute of Science and Innovation, Chinese Academy O
Zhang, Zihui	Institute of Automation, Chinese Academy of Sciences
Yang, Bingyu	Institute of Automation, Chinese Academy of Sciences ; Sch
Ourselin, Sebastien	University College London
Liu, Hongbin	Institute of Automation, Chinese Academy of Sciences

11:15-11:30 FrBT1.2

RNR-Nav: A Real-World Visual Navigation System Using Renderable Neural Radiance Maps, pp. 12986-12991. Attachment

Kim, Minsoo	Seoul National University
Kwon, Obin	Seoul Natl University
Jun, Howoong	Seoul National University
Oh, Songhwai	Seoul National University

11:30-11:45 FrBT1.3

Mind the Error! Detection and Localization of Instruction Errors in Vision-And-Language Navigation, pp. 12992-12999. Attachment

Taioli, Francesco	University of Verona
Rosa, Stefano	Istituto Italiano Di Tecnologia
Castellini, Alberto	Verona University
Natale, Lorenzo	Istituto Italiano Di Tecnologia
Del Bue, Alessio	Istituto Italiano Di Tecnologia
Farinelli, Alessandro	University of Verona
Cristani, Marco	University of Verona
Wang, Yiming	Fondazione Bruno Kessler

11:45-12:00 FrBT1.4

Distilling Knowledge for Short-To-Long Term Trajectory Prediction, pp. 13000-13007. Attachment

Das, Sourav	University of Padova
Camporese, Guglielmo	University of Padova
Cheng, Shaokang	Northwestern Polytechnical University
Ballan, Lamberto	University of Padova

FrBT2 Room 2

Human-Aware Motion Planning (Regular session)

Chair: Khalaf, Kinda — Khalifa University of Science, Technology and Research

11:00-11:15 FrBT2.1

SparseGTN: Human Trajectory Forecasting with Sparsely Represented Scene and Incomplete Trajectories, pp. 13008-13015. Attachment

Liu, Jianbang	The Chinese University of Hong Kong
Li, Guangyang	Harbin Institute of Technology, Shenzhen
Mao, Xinyu	The Chinese University of Hong Kong
Meng, Fei	The Chinese University of Hong Kong
Mei, Jie	Harbin Institute of Technology
Meng, Max Q.-H.	The Chinese University of Hong Kong

11:15-11:30 FrBT2.2

GazeMotion: Gaze-Guided Human Motion Forecasting, pp. 13016-13021.

Hu, Zhiming	University of Stuttgart
Schmitt, Syn	University of Stuttgart, Germany
Haeufle, Daniel Florian Benedict	Heidelberg University, Germany
Bulling, Andreas	University of Stuttgart

11:30-11:45 FrBT2.3

Hyp2Nav: Hyperbolic Planning and Curiosity for Crowd Navigation, pp. 13022-13029. Attachment

D'Amely di Melendugno, Guido Maria	Sapienza University of Rome
Flaborea, Alessandro	Sapienza University of Rome
Mettes, Pascal	University of Amsterdam
Galasso, Fabio	Sapienza University of Rome

11:45-12:00 FrBT2.4

Map-Aware Human Pose Prediction for Robot Follow-Ahead, pp. 13030-13037. Attachment

Jiang, Qingyuan	University of Minnesota
Susam, Burak	University of Minnesota
Chao, Jun-Jee	University of Minnesota
Isler, Volkan	University of Minnesota

FrBT3 Room 3

Micro/Nano Robots I (Regular session)

Co-Chair: Liu, Song — ShanghaiTech University

11:00-11:15 FrBT3.1

Learning a Tracking Controller for Rolling μbots, N/A

Beaver, Logan	Old Dominion University
Max, Sokolich	University of Delaware
Alsalehi, Suhail	Boston Unviersity
Weiss, Ron	Massachusettes Institute of Technology
Das, Sambeeta	University of Delaware
Belta, Calin	Boston University

11:15-11:30 FrBT3.2

The Design of a Layered Brain-Computer Interface System with Target Identification Module to Control Home Service Robot, N/A

Wang, Wenzhi	Nankai University
Mao, Yuqing, Troy	University of California, Davis
Duan, Feng	Nankai University

11:30-11:45 FrBT3.3

A Magnetic Helical Miniature Robot with Soft Magnetic-Controlled Gripper, N/A

Zhu, Aoji	Fudan University
Bai, Chenyao	Fudan University
Lu, Xiwen	Fudan University
Zhu, Yunlong	Fudan University
Wang, Kezhi	Brunel University London
Zhu, Jiarui	Fudan University

11:45-12:00 FrBT3.4

ActNeRF: Uncertainty-Aware Active Learning of NeRF-Based Object Models for Robot Manipulators Using Visual and Re-Orientation Actions, pp. 13061-13068. Attachment

Dasgupta, Saptarshi	Indian Institute of Technology Delhi
Gupta, Akshat	Indian Institute of Technology Delhi
Tuli, Shreshth	Indian Institute of Technology Delhi
Paul, Rohan	Indian Institute of Technology Delhi

FrBT4 Room 4

Micro/Nano Robots II (Regular session)

Co-Chair: Liu, Song — ShanghaiTech University

11:00-11:15 FrBT4.1

Learning the Inverse Kinematics of Magnetic Continuum Robot for Teleoperated Navigation, pp. 13069-13074.

Xiang, Pingyu	Zhejiang University
Qiu, Ke	Zhejiang University
Sun, Danying	Zhejiang University
Zhang, Jingyu	Zhejiang University
Fang, Qin	Zhejiang University
Mi, Xiangyu	Zhejiang University
Wang, Shudong	Xi'an Jiaotong University
Chen, Mengxiao	Zhejiang Lab
Wang, Yue	Zhejiang University
Xiong, Rong	Zhejiang University
Lu, Haojian	Zhejiang University

11:15-11:30 FrBT4.2

Real-Time Particle Cluster Manipulation with Holographic Acoustic End-Effector under Microscope, pp. 13075-13080. Attachment

An, Siyuan	Shanghaitech University
Zhong, Chengxi	ShanghaiTech University
Wang, Mingyue	Shanghaitech Univerisity
Wang, Shudong	Xi'an Jiaotong University
Lu, Haojian	Zhejiang University
Li, Jiaqi	ShanghaiTech University
Li, Y.F.	City University of Hong Kong
Liu, Song	ShanghaiTech University

11:30-11:45 FrBT4.3

Absolute Pose Estimation for a Millimeter-Scale Vision System, pp. 13081-13088. Attachment

Ozturk, Derin	Cornell University
Wang, Zilin	Cornell University
Helbling, E. Farrell	Cornell University

11:45-12:00 FrBT4.4

Design and Control of a Three-Dimensional Electromagnetic Drive System for Micro-Robots, pp. 13089-13094.

Zhang, Yunrui	Jiangnan University
Liu, Yueyue	Jiangnan University
Fan, Qigao	Jiangnan University

FrBT5 Room 5

Grasping Control (Regular session)

Chair: Abu-Dakka, Fares	New York University Abu Dhabi
Co-Chair: Heppert, Nick	University of Freiburg

11:00-11:15 FrBT5.1

AO-Grasp: Articulated Object Grasp Generation, pp. 13095-13102. Attachment

Pares-Morlans, Carlota	Stanford University
Chen, Claire	Stanford University
Weng, Yijia	Stanford
Yi, Michelle	Stanford University
Huang, Yuying	Stanford University
Heppert, Nick	University of Freiburg
Zhou, Linqi	Stanford University
Guibas, Leonidas	Stanford University
Bohg, Jeannette	Stanford University

11:15-11:30 FrBT5.2

Evaluating a Movable Palm in Caging Inspired Grasping Using a Reinforcement Learning-Based Approach, pp. 13103-13110. Attachment

Beddow, Luke Jonathan	University College London
Wurdemann, Helge Arne	University College London
Kanoulas, Dimitrios	University College London

11:30-11:45 FrBT5.3

Learning a Shape-Conditioned Agent for Purely Tactile In-Hand Manipulation of Various Objects, pp. 13111-13118. Attachment

Pitz, Johannes	German Aerospace Center

Röstel, Lennart	German Aerospace Center (DLR)
Sievers, Leon	German Aerospace Center
Burschka, Darius	Technische Universitaet Muenchen
Bäuml, Berthold	Technical University of Munich

11:45-12:00 FrBT5.4

Fine Manipulation Using a Tactile Skin: Learning in Simulation and Sim-To-Real Transfer, pp. 13119-13126. Attachment

Kasolowsky, Ulf	Technical University of Munich
Bäuml , Berthold	Technical University of Munich

FrBT6 Room 6

Aerial Systems: Motion Control and Planning (Regular session)

Chair: Saska, Martin	Czech Technical University in Prague
Co-Chair: Agarwal, Saurav	University of Pennsylvania

11:00-11:15 FrBT6.1

Identifying Optimal Launch Sites of High-Altitude Latex-Balloons Using Bayesian Optimisation for the Task of Station-Keeping, pp. 13127-13134.

Saunders, Jack	University of Bath
Saeedi, Sajad	Toronto Metropolitan University
Hartshorne, Adam	University of Bath
Xu, Binbin	University of Toronto
Şimşek, Özgür	University of Bath
Hunter, Alan Joseph	University of Bath
Li, Wenbin	University of Bath

11:15-11:30 FrBT6.2

TOPPQuad: Dynamically-Feasible Time-Optimal Path Parametrization for Quadrotors, pp. 13135-13142. Attachment

Mao, Katherine	University of Pennsylvania
Spasojevic, Igor	University of Pennsylvania
Hsieh, M. Ani	University of Pennsylvania
Kumar, Vijay	University of Pennsylvania

11:30-11:45 FrBT6.3

Model Predictive Path Integral Control for Agile Unmanned Aerial Vehicles, pp. 13143-13150. Attachment

Minařík, Michal	Czech Technical University in Prague
Penicka, Robert	Czech Technical University in Prague
Vonasek, Vojtech	Czech Technical University in Prague
Saska, Martin	Czech Technical University in Prague

11:45-12:00 FrBT6.4

CoDe: A Cooperative and Decentralized Collision Avoidance Algorithm for Small-Scale UAV Swarms Considering Energy Efficiency, pp. 13151-13158.

Huang, Shuangyao	Xi'an Jiaotong-Liverpool University
Zhang, Haibo	University of Otago
Huang, Zhiyi	University of Otago

FrBT7 Room 7

Computer Vision for Medical Robotics (Regular session)

Co-Chair: Nasseri, M. Ali	Technische Universitaet Muenchen

11:00-11:15 FrBT7.1

DeepBHMR: Learning Bidirectional Hybrid Mixture Models for Generalized Rigid Point Set Registration, pp. 13159-13166.

Min, Zhe	University College London
Zhang, Zhengyan	Harbin Institute of Technology, Shenzhen
Zhang, Ang	The Chinese University of Hong Kong
Song, Rui	Shandong University
Li, Yibin	Shandong University
Meng, Max Q.-H.	The Chinese University of Hong Kong

11:15-11:30 FrBT7.2

A CT-Guided Control Framework of a Robotic Flexible Endoscope for the Diagnosis of the Maxillary Sinusitis, pp. 13167-13174. Attachment

Zhu, Puchen	The Chinese University of Hong Kong

Zhang, Huayu	The Chinese University of Hong Kong
Ma, Xin	Chinese Univerisity of HongKong
Zheng, Xiaoyin	XMotors.ai
Wang, Xuchen	The Chinese University of Hong Kong
Au, K. W. Samuel	The Chinese University of Hong Kong

11:30-11:45 FrBT7.3

Estimating the Joint Angles of a Magnetic Surgical Tool Using Monocular 3D Keypoint Detection and Particle Filtering, pp. 13175-13181. Attachment

Fredin, Erik	University of Toronto
Diller, Eric D.	University of Toronto

11:45-12:00 FrBT7.4

Intraocular Reflection Modeling and Avoidance Planning in Image-Guided Ophthalmic Surgeries, pp. 13182-13188.

Yang, Junjie	TUM
Zhao, Zhihao	Technische Universität München
Zhao, Yinzheng	Klinikum Rechts Der Isar
Zapp, Daniel	Klinikum Rechts Der Isar Der TU München
Maier, Mathias	Klinikum Rechts Der Isar Der TU München
Huang, Kai	Sun Yat-Sen University
Navab, Nassir	TU Munich
Nasseri, M. Ali	Technische Universitaet Muenchen

FrBT8 Room 8

Autonomous Vehicle Navigation II (Regular session)

Chair: Yang, Ming	Shanghai Jiao Tong University
Co-Chair: Qin, Tong	Shanghai Jiao Tong University

11:00-11:15 FrBT8.1

METAVerse: Meta-Learning Traversability Cost Map for Off-Road Navigation, pp. 13189-13196. Attachment

Seo, Junwon	Carnegie Mellon University
Kim, Taekyung	University of Michigan
Ahn, Seongyong	KAIST
Kwak, Kiho	Agency for Defense Development

11:15-11:30 FrBT8.2

MapLocNet: Coarse-To-Fine Feature Registration for Visual Re-Localization in Navigation Maps, pp. 13197-13204. Attachment

Wu, Hang	Huawei Technology
Zhang, Zhenghao	Huawei Technology
Lin, Siyuan	Huawei Technology
Mu, Xiangru	Shanghai Jiao Tong University
Zhao, Qiang	Huawei
Yang, Ming	Shanghai Jiao Tong University
Qin, Tong	Shanghai Jiao Tong University

11:30-11:45 FrBT8.3

ParkingE2E: Camera-Based End-To-End Parking Network, from Images to Planning, pp. 13205-13211. Attachment

Li, Changze	Shanghai Jiao Tong University
Ji, Ziheng	Shanghai Jiao Tong University
Chen, Zhe	Shanghai Jiao Tong University
Qin, Tong	Shanghai Jiao Tong University
Yang, Ming	Shanghai Jiao Tong University

11:45-12:00 FrBT8.4

M3-GMN: A Multi-Environment, Multi-LiDAR, Multi-Task Dataset for Grid Map Based Navigation, pp. 13212-13219. Attachment

Xie, Guanglei	National University of Defense Technology
Fu, Hao	National University of Defense Technology
Xue, Hanzhang	National University of Defense Technology
Liu, Bokai	National University of Defense Technology
Xu, Xin	National University of Defense Technology
Li, Xiaohui	National University of Defense Technology
Sun, Zhenping	National University of Defense Technology

FrBT9 Room 9

Path Planning for Multiple Robots (Regular session)

Chair: Indelman, Vadim — Technion - Israel Institute of Technology
Co-Chair: Bezzo, Nicola — University of Virginia

11:00-11:15 FrBT9.1

Multi-Robot Communication-Aware Cooperative Belief Space Planning with Inconsistent Beliefs: An Action-Consistent Approach, pp. 13220-13227.

Kundu, Tanmoy — Technion - Israel Institute of Technology
Rafaeli, Moshe — Technion - Israel Institute of Technology
Indelman, Vadim — Technion - Israel Institute of Technology

11:15-11:30 FrBT9.2

Robust Online Epistemic Replanning of Multi-Robot Missions, pp. 13228-13235. Attachment

Bramblett, Lauren — University of Virginia
Miloradovic, Branko — Mälardalen University
Sherman, Patrick — University of Virginia
Papadopoulos, Alessandro Vittorio — Mälardalen University
Bezzo, Nicola — University of Virginia

11:30-11:45 FrBT9.3

A Heterogeneous System of Systems Framework for Proactive Path Planning of a UAV-Assisted UGV in Uncertain Environments, pp. 13236-13243. Attachment

Sherman, Patrick — University of Virginia
Bezzo, Nicola — University of Virginia

11:45-12:00 FrBT9.4

IR2: Implicit Rendezvous for Robotic Exploration Teams under Sparse Intermittent Connectivity, pp. 13244-13251. Attachment

Tan, Derek Ming Siang — National University of Singapore
Ma, Yixiao — National University of Singapore
Liang, Jingsong — National University of Singapore
Chng, Yi Cheng — Singapore Technologies Engineering Land Systems
Cao, Yuhong — National University of Singapore
Sartoretti, Guillaume Adrien — National University of Singapore (NUS)

FrBT10 Room 10

Computer Vision for Transportation II (Regular session)

Chair: Valada, Abhinav — University of Freiburg

11:00-11:15 FrBT10.1

PCT: Perspective Cue Training Framework for Multi-Camera BEV Segmentation, pp. 13252-13259. Attachment

Ishikawa, Haruya — Keio University
Iida, Takumi — SenseTime Japan
Konishi, Yoshinori — SenseTime Japan Ltd
Aoki, Yoshimitsu — Keio University

11:15-11:30 FrBT10.2

A Point-Based Approach to Efficient LiDAR Multi-Task Perception, pp. 13260-13267. Attachment

Lang, Christopher — University of Freiburg
Braun, Alexander — Robert Bosch GmbH
Schillingmann, Lars — Robert Bosch GmbH
Valada, Abhinav — University of Freiburg

11:30-11:45 FrBT10.3

Depth Completion Using Galerkin Attention, pp. 13268-13272.

Xu, Yinuo — Beijing University of Posts and Telecommunications
Zhang, Xuesong — Beijing University of Posts and Telecommunications

11:45-12:00 FrBT10.4

BEV^{2}PR: BEV-Enhanced Visual Place Recognition with Structural Cues, pp. 13273-13280. Attachment

Ge, Fudong — Institute of Automation, Chinese Academy of Sciences
Zhang, Yiwei — Institute of Automation, Chinese Academy of Sciences
Shen, Shuhan — Institute of Automation, Chinese Academy of Sciences

Hu, Weiming	University of Chinese Academy of Sciences
Wang, Yue	Zhejiang University
Gao, Jin	Institute of Automation Chinese Academy of Sciences

FrBT11 Room 11

Legged Robots II (Regular session)

Co-Chair: Zimmermann, Karel — Ceske Vysoke Uceni Technicke V Praze, FEL

11:00-11:15 FrBT11.1

Accurate Power Consumption Estimation Method Makes Walking Robots Energy Efficient and Quiet, pp. 13281-13287. Attachment

Valsecchi, Giorgio	Robotic System Lab, ETH
Vicari, Andrea	Scuola Superiore Sant'Anna
Tischhauser, Fabian	ETH Zurich
Garabini, Manolo	Università Di Pisa
Hutter, Marco	ETH Zurich

11:15-11:30 FrBT11.2

Co-RaL: Complementary Radar-Leg Odometry with 4-DoF Optimization and Rolling Contact, pp. 13288-13295. Attachment

Jung, Sangwoo	Seoul National University
Yang, Wooseong	Seoul National University
Kim, Ayoung	Seoul National University

11:30-11:45 FrBT11.3

Experience-Learning Inspired Two-Step Reward Method for Efficient Legged Locomotion Learning towards Natural and Robust Gaits, pp. 13296-13301. Attachment

Li, Yinghui	Shanghai Jiao Tong University
Wu, Jinze	Shanghai Jiao Tong University
Liu, Xin	Shanghai Jiao Tong University
Guo, Weizhong	Shanghai Jiao Tong University
Xue, Yufei	Shanghai Jiao Tong University

11:45-12:00 FrBT11.4

CaT: Constraints As Terminations for Legged Locomotion Reinforcement Learning, pp. 13302-13309.

Chane-Sane, Elliot	LAAS, CNRS
Leziart, Pierre-Alexandre	Laboratory for Analysis and Architecture of Systems (LAAS-CNRS),
Flayols, Thomas	LAAS, CNRS
Stasse, Olivier	LAAS, CNRS
Soueres, Philippe	LAAS-CNRS
Mansard, Nicolas	CNRS

FrBT12 Room 12

Semantic Scene Understanding III (Regular session)

Chair: Beltrame, Giovanni — Ecole Polytechnique De Montreal

11:00-11:15 FrBT12.1

QueSTMaps: Queryable Semantic Topological Maps for 3D Scene Understanding, pp. 13310-13316. Attachment

Mehan, Yash	International Institute of Information Technology
Gupta, Kumaraditya	IIIT Hyderabad
Jayanti, Rohit	Robotics Research Center, IIIT Hyderabad
Govil, Anirudh	Robotics Research Center, International Institute of Information
Garg, Sourav	University of Adelaide
Krishna, Madhava	IIIT Hyderabad

11:15-11:30 FrBT12.2

Commonsense Scene Graph-Based Target Localization for Object Search, pp. 13317-13324. Attachment

Ge, Wenqi	Southern University of Science and Technology
Tang, Chao	Southern University of Science and Technology
Zhang, Hong	SUSTech

11:30-11:45 FrBT12.3

Language-Embedded Gaussian Splats (LEGS): Incrementally Building Room-Scale Representations with a Mobile Robot, pp. 13325-13331. Attachment

Yu, Justin	University of California Berkeley
Hari, Kush	UC Berkeley
Srinivas, Kishore	UC Berkeley
El-Refai, Karim	University of California, Berkeley
Rashid, Adam	UC Berkeley
Kim, Chung Min	University of California, Berkeley
Kerr, Justin	University of California, Berkeley
Cheng, Richard	California Institute of Technology
Irshad, Muhammad Zubair	Georgia Institute of Technology
Balakrishna, Ashwin	Toyota Research Institute
Kollar, Thomas	Toyota Research Institute
Goldberg, Ken	UC Berkeley

11:45-12:00 FrBT12.4

SSCBench: A Large-Scale 3D Semantic Scene Completion Benchmark for Autonomous Driving, pp. 13332-13339.

Li, Yiming	New York University
Li, Sihang	New York University
Liu, Xinhao	New York University
Gong, Moonjun	New York University
Li, Kenan	New York University
Nuo, Chen	New York University
Wang, Zijun	AI4CE
Li, Zhiheng	New York University
Jiang, Tao	Tsinghua
Yu, Fisher	ETH Zürich
Wang, Yue	USC
Zhao, Hang	Tsinghua University
Yu, Zhiding	NVIDIA
Feng, Chen	New York University

FrBT13 Room 13

Computer Vision for Automation IV (Regular session)

Chair: Lim, Yongseob	DGIST
Co-Chair: Popovic, Marija	TU Delft

11:00-11:15 FrBT13.1

Exploiting Priors from 3D Diffusion Models for RGB-Based One-Shot View Planning, pp. 13340-13347. Attachment

Pan, Sicong	University of Bonn
Jin, Liren	University of Bonn
Huang, Xuying	University of Bonn
Stachniss, Cyrill	University of Bonn
Popovic, Marija	TU Delft
Bennewitz, Maren	University of Bonn

11:15-11:30 FrBT13.2

*Shape-Prior Free Space-Time Neural Radiance Field for 4D Semantic Reconstruction of Dynamic Scene from Sparse-View RGB Videos**. pp. 14233-14240.

Biswas, Sandika	IIT Bombay
Banerjee, Biplab	Indian Institute of Technology, Bombay
Rezatofighi, Hamid	Monash University

11:30-11:45 FrBT13.3

Hybrid Stereo Dense Depth Estimation for Robotics Tasks in Industrial Automation, pp. 13348-13353.

Singh, Suhani	Roboception GmbH
Suppa, Michael	Roboception GmbH and University of Bremen
Suarez, Raul	Universitat Politecnica De Catalunya (UPC)
Rosell, Jan	Universitat Politècnica De Catalunya (UPC)

11:45-12:00 FrBT13.4

Recovering Missed Detections in an Elevator Button Segmentation Task, pp. 13354-13361. Attachment

Verzic, Nicholas	University of Texas at Austin
Chadaga, Abhinav	The University of Texas at Austin
Hart, Justin	University of Texas at Austin

FrF10O	Auditorium
Forum 10 - Marine Robotics in the Ocean Decade Initiative for Sustainable Development (Forum)	
Chair: De Masi, Giulia	Khalifa University
Co-Chair: Renda, Federico	Khalifa University of Science and Technology
09:00-12:00	FrF10O.1
*Marine Robotics in the Ocean Decade Initiative for Sustainable Development**. N/A	
De Masi, Giulia	Khalifa University
Renda, Federico	Khalifa University of Science and Technology
Ferri, Gabriele	NATO Centre for Maritime Research and Experimentation

FrPI7T1	Room 1
Aerial and Marine Robots and Multi-Robot Systems (Teaser Session)	
Chair: Ferrante, Eliseo	Vrije Universiteit Amsterdam
Co-Chair: Lee, Kyuman	Kyungpook National University
15:30-16:30	FrPI7T1.1
Multirotor UAV with Tilting Frame and Bidirectional Thrusters, N/A	
Paul, Hannibal	Ritsumeikan University
Rosales Martinez, Ricardo	Ritsumeikan University
Shimonomura, Kazuhiro	Ritsumeikan University
15:30-16:30	FrPI7T1.2
Remote Situational Awareness for Coastal Vessels Using AIS Data-Based Navigation Pattern DB, N/A	
Kim, Chaewon	Keimyung University
Hong, Seonghun	Keimyung University
Park, Jeonghong	KRISO
Choi, Jinwoo	KRISO, Korea Research Institute of Ships & Ocean Engineering
Hyejin, Kim	KRISO
15:30-16:30	FrPI7T1.3
*Search of Missing Persons and Objects Using an Autonomous Aerial Robot**. N/A	
Lee, Joohyuk	Kyungpook National University
Lee, HoJun	Kyungpook national university
Song, JeongHoon	Kyungpook National University
Joe, Hyun-Min	Kyungpook National University
Lee, Kyuman	Kyungpook National University
15:30-16:30	FrPI7T1.4
*Motion Planning of an Aerial Striking Robot for Counter-Unmanned Aircraft Systems**. N/A	
Lee, HoJun	Kyungpook national university
Lee, Joohyuk	Kyungpook National University
Song, JeongHoon	Kyungpook National University
Joe, Hyun-Min	Kyungpook National University
Lee, Kyuman	Kyungpook National University
15:30-16:30	FrPI7T1.5
Collective Source Localization in 3D with a Flocking Nano UAV Swarm, N/A	
Karagüzel, Tugay Alperen	Vrije Universiteit Amsterdam
Ferrante, Eliseo	Vrije Universiteit Amsterdam
15:30-16:30	FrPI7T1.6
*Emergency Landing Site Search for Advanced Air Mobility Using Geographic Information Systems and Real-Time Visual Information**. N/A	
Song, JeongHoon	Kyungpook National University
Lee, Joohyuk	Kyungpook National University
Lee, HoJun	Kyungpook national university
Joe, Hyun-Min	Kyungpook National University
Lee, Kyuman	Kyungpook National University
15:30-16:30	FrPI7T1.7
PairTilt: Design and Control of an Active Tilt-Rotor Quadcopter for Improved Efficiency and Agility, N/A	
Tang, Haoyun (Jerry)	UC Berkeley
Mueller, Mark Wilfried	University of California, Berkeley
15:30-16:30	FrPI7T1.8

$/pi$-MPPI: A Projection-Based Model Predictive Path Integral Scheme for Smooth Optimal Control of Fixed-Wing Aerial Vehicles, N/A

Andrejev, Edvin Martin	University of Tartu
Manoharan, Amith	University of Tartu
Unt, Karl-Eerik	Estonian Aviation Academy
Singh, Arun Kumar	University of Tartu

15:30-16:30 FrPI7T1.9

*Towards Efficient Underwater Robotic Swarms: Accurate Localization and Heading Estimation in Resource-Constrained Environments**. N/A

Eltobgui, Rim	Khalifa University
Zayer, Fakhreddine	khalifa University
Iacoponi, Saverio	Khalifa University
De Masi, Giulia	Khalifa University
Renda, Federico	Khalifa University of Science and Technology
Dias, Jorge	Khalifa University

15:30-16:30 FrPI7T1.10

*Affective Behaviors in Close-Proximity Interactions with Inflatable Flapping-Wing Robots**. N/A

Xu, Mingyang	Keio University
Ju, Yulan	Keio University Graduate School of Media Design
Meng, Xiaru	Keio University
Gao, Qingyuan	Keio University
Zhang, Qing	The University of Tokyo
Hoppe, Matthias	Keio University Graduate School of Media Design
Minamizawa, Kouta	Keio University
Barbareschi, Giulia	Keio University
Kunze, Kai	Keio University

15:30-16:30 FrPI7T1.11

*Lie Theory-Based Sensor Fusion for Heading Estimation in Unmanned Surface Vehicles**. N/A

Ko, Nak Yong	Chosun University
Jeong, Da Bin	Chosun university
Choi, Hyun-Taek	Korea Research Institute of Ships and Oceans Engineering

15:30-16:30 FrPI7T1.12

Mission Planning for Efficient Undersea Surveys Via Multi-Fleet Marine Vehicle Operations, N/A

Kim, Donghyun	KAIST
Kim, Jinwhan	KAIST

15:30-16:30 FrPI7T1.13

Signal Temporal Logic Compliant Co-Design of Planning and Control for Single and Multi-Agent Systems, N/A

Juvvi, Manas Sashank	Indian Institute of Science, Bengaluru
Kurne, Tushar	Indian Institute of Science
J, Vaishnavi	Indian Institute of Science
Kolathaya, Shishir	Indian Institute of Science
Jagtap, Pushpak	Indian Institute of Science

15:30-16:30 FrPI7T1.14

*Prescribed-Time Distributed MRAC for Multi-Agent Systems with Closed-Loop Reference Model**. N/A

Zheng, Leyi	Shenzhen Institute of Advanced Technology Chinese Academy of Sciences
Zhou, Yimin	Chinese Academy of Sciences

15:30-16:30 FrPI7T1.15

RL-Based Variable Horizon Model Predictive Control of Multi-Robot Systems in Dynamic Environments, N/A

Gupta, Shreyash	Indian Institute of Technology, Jodhpur
Tripathy, Niladri Sekhar	IIT Jodhpur
Shah, Suril Vijaykumar	Indian Institute of Technology Jodhpur

FrPI7T2 Room 2

Human-Robot Interaction and Collaboration (Teaser Session)

Chair: Tortora, Stefano	University of Padova
Co-Chair: Canal, Gerard	King's College London

15:30-16:30 FrPI7T2.1

How to Improvehuman-Robot Interaction, N/A

Bertuccelli, Margherita	Università Degli Studi Di Padova
Tortora, Stefano	University of Padova
Trombin, Edoardo	University of Padua
Pasinato, Mariasole	Università Degli Studi Di Padova
Tasinazzo, William	Università Degli Studi Di Padova
Sparacino, Giovanni	Università Degli Studi Di Padova
Menegatti, Emanuele	The University of Padua
Del Felice, Alessandra	University of Padova

15:30-16:30 FrPI7T2.2

Trajectory Generation Method Based on DDP Considering Manipulaiblity Measure, N/A

Lee, Jaesoon	Kookmin
Cho, Baek-Kyu	Kookmin University

15:30-16:30 FrPI7T2.3

Revisiting Flow-Based Interaction Recognition: Social Robots' Understanding of Behavioral Cues in Elderly Care, N/A

Jeon, HoBeom	Korea University of Science and Technology
Kim, Hyungmin	Korea University of Science and Technology
Kim, DoHyung	Electronics and Telecommunications Research Institute
Kim, Jaehong	ETRI

15:30-16:30 FrPI7T2.4

REBALANCE - REinforcing BALANCE with a Neurally-Driven Wearable Assistive Device, N/A

Tortora, Stefano	University of Padova
Bertuccelli, Margherita	Università Degli Studi Di Padova
Monari, Eugenio	University of Bologna
Muscolo, Giovanni Gerardo	University of Verona
Conconi, Michele	University of Bologna, Faculty of Engineering
Sancisi, Nicola	University of Bologna
Menegatti, Emanuele	The University of Padua
Chiari, Lorenzo	Alma Mater Studiorum, Università Di Bologna
Del Felice, Alessandra	University of Padova

15:30-16:30 FrPI7T2.5

Collaborative Robot-Based Surface Defect Inspection System for Machined Products Using Image Detection and 3D Reconstruction, N/A

Kim, Taeseok	Kyungpook National University
Choe, Seongsig	Kyungpook National University
Park, Hwijin	Kyungpook National University
Kwon, Hyeokjun	Kyungpook
Hu, Shengqiao	Kyoungpook National University
Yi, Hak	Kyungpook National University

15:30-16:30 FrPI7T2.6

A Physical Rehabilitation Robot Coaching Patients: A Long-Term Dataset for Body Movement Analysis, N/A

Nguyen, Sao Mai	U2IS Ensta Paris

15:30-16:30 FrPI7T2.7

*Exploring Feedback Dynamics for Human Teachers in Robot Programming Using Biometric and Performance Insights**. N/A

Mehak, Shakra	Pilz Ireland
Kelleher, John D.	Trinity Colege Dublin
Guilfoyle, Michael	Pilz Ireland
Leva, Maria Chiara	Technological University Dublin

15:30-16:30 FrPI7T2.8

Exploring the Impact of Robot Intentions and Beliefs on Motor Learning Via Human Physical Tutoring Based on the Free Energy Principle, N/A

Fukushima, Rui	Okinawa Institute of Science and Technology
Tani, Jun	Okinawa Institute of Science and Technology

15:30-16:30 FrPI7T2.9

Decoding User's Walking Intentions to Provide Active Assistance in Smart Walkers, N/A

Polato, Anna	University of Padua

Zanchi, Luca	University
Tortora, Stefano	University of Padova
Menegatti, Emanuele	The University of Padua
Tonin, Luca	University of Padova

15:30-16:30 FrPI7T2.10

VR-Based Teleoperation and Data Collection for Dual Hand-Arm Robots with Fine Manipulation Capabilities, N/A

Kim, Donghyung	Electronics and Telecommunications Research Institute
Kim, Taewoo	Electronics and Telecommunications Research Institute
Kim, Wansoo	Hanyang University ERICA
Hwang, Soonwoong	Hanyang University
Kim, Joonhyun	Hanyang University
Lee, Jungsoo	Hanyang University
Kim, Jaehong	ETRI

15:30-16:30 FrPI7T2.11

Engineering Design, Humans vs. Machines, N/A

Isakhani, Hamid	University of Birmingham
Nefti-Meziani, Samia	University of Salford
Davis, Steven	University of Birmingham

15:30-16:30 FrPI7T2.12

Designing Workplace Robots: A Social Impact Assessment Tool for Automation and Augmentation in Construction, N/A

Wu, Sihui	Swiss Federal Institutes of Technology in Zurich (ETH Zurich)
Helmersen, Kim Norgaard	Swiss Federal Institute of Technology in Zurich (ETH Zurich)
Chen, Li	Swiss Federal Institute of Technology in Zurich (ETH Zurich)
Grote, Gudela	Swiss Federal Institute of Technology in Zurich (ETH Zurich)

15:30-16:30 FrPI7T2.13

*Beyond Linear Connections: Explore New Embodiment Potentials between People with Disabilities and Their Robotic Avatars**. N/A

Barbareschi, Giulia	Keio University
Yukawa, Hikari	Nagoya Institute of Technology
Hatada, Yuji	The University of Tokyo
Kawaguchi, Midori	Keio University
Hiroaki, Kato	Ory Laboratory
Nishimura, Takumi	Nagoya Institute of Technology
Takeuchi, Kazuaki	Ory Laboratory
Tanada, Ryohei	Nagoya Institute of Technology
Shiiba, Yoshifumi	Ory Laboratory
Ema, Arisa	the University of Tokyo
Kasahara, Shunichi	Sony Computer Science Laboratories, Inc
Spoden, Celia	German Institute for Japanese Studies
Karino, Manaka	Chuo University
Saraiji, MHD Yamen	Keio University
Dogus Ates, Eren	avatarin Inc.
Charith, Fernando	Avatarin Inc
Osawa, Hirotaka	Keio University
Yoshifuji, Ory	Ory Laboratory
Kunze, Kai	Keio University
Tanaka, Yoshihiro	Nagoya Institute of Technology
Narumi, Takuji	Graduate School of Information Science and Technology, The University of Tokyo
Minamizawa, Kouta	Keio University

15:30-16:30 FrPI7T2.14

*Enhancing Embodied & Proprioception Experience for ALS Patients by Haptic Feedback in Using Integrated Robotic Augmentation Limbs**. N/A

Minamizawa, Kouta	Keio University
Barbareschi, Giulia	Keio University
Hu, Zheng	Keio University
Zhou, Songchen	Keio University
Horie, Arata	Keio University
Ando, Ryoichi	Keio University

Yoshifuji, Ory	Ory Laboratory
Muto, Masatane	WITH ALS General Incorporated Foundation
Zhu, Yufan	Keio University, Graduate School of Media Design,

15:30-16:30 FrPI7T2.15

*Design and Evaluation of a Human-Comparable Modeless and Featureless General Visual-Servoing Robot Controller Based on Closed-Loop GPT-4O**. N/A

Yang, Jialun	Clemson University
Yan, Yuchen	Clemson University
Jia, Yunyi	Clemson University

15:30-16:30 FrPI7T2.16

Deep Active Inference for Engagement Recognition in Robot-Assisted Autism Therapy, N/A

Shaldambayeva, Shyrailym	Nazarbayev University
Kassymbekov, Saparkhan	Nazarbayev University
Sandygulova, Anara	Nazarbayev University
Shintemirov, Almas	Nazarbayev University

FrPI7T3 Room 3

Mobile Robotics (Teaser Session)

Chair: Tanaka, Kanji	University of Fukui
Co-Chair: Kyung, Ki-Uk	Korea Advanced Institute of Science & Technology (KAIST)

15:30-16:30 FrPI7T3.1

Training Self-Localization Models for Unseen Unfamiliar Places Via Teacher-To-Student Data-Free Knowledge Transfer, N/A

Tsukahara, Kenta	University of Fukui
Tanaka, Kanji	University of Fukui
Iwata, Daiki	University of Fukui

15:30-16:30 FrPI7T3.2

Comparison of Path Following Performance in Autonomous Vehicles Using Model Predictive Control, N/A

Choi, KangHyeon	University of Seoul
Lee, Taegyeom	University of Seoul
Jo, Sung Bin	University of Seoul
Moon, DongWook	University of Seoul
Choi, KyuHwan	Univeristy of Seoul
Choi, JungHyun	University of Seoul
Hwang, Myun Joong	University of Seoul

15:30-16:30 FrPI7T3.3

*Enhancing OCR-Based Indoor Place Recognition with Visitor Map Image by Mitigating Noise from Distracting Words**. N/A

Lee, Chaehyeuk	KC
Jinmyoung, Lee	KC-ML2
Zaheer, Sheir Afgen	KC Machine Learning Lab
Lee, Seula	ML2
Park, Chan Y.	KC

15:30-16:30 FrPI7T3.4

Incorporating Road Topography and Bank Angle Estimation in Model Predictive Control for Enhancing Path Tracking Accuracy and Stability of Autonomous Vehicles, N/A

Choi, Jeongmin	DGIST
Choi, Joonyoung	Daegu Gyeongbuk Institute of Science and Technology
Lim, Sungjin	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
Sadiq, Bilal	Daegu Gyeongbuk Institute of Science and Technology
Lim, Yongseob	DGIST

15:30-16:30 FrPI7T3.5

Spatially Unconstrained Vehicle-In-The-Loop Testing Method for Autonomous Vehicles, N/A

Shim, Youngbo	Korea Electronics Technology Institute
Bae, Jiyeon	Korea Electronics Technology Institute
Jung, Howon	Korea Electronics Technology Institute (KETI)
Hyun, Sang Hwa	Korea Electronics Technology Institute
Giho, Sung	Korea Electronics Technology Institute

15:30-16:30 FrPI7T3.6

A Magnetic-Tracked Mobile Robot for Navigating Corrugated Container Ceiling, N/A

Yi, Yesung	Korea Advanced Institute of Science and Technology
Kim, Jun Young	Ujin Technology
Kim, Younggeun	KAIST
Kyung, Ki-Uk	Korea Advanced Institute of Science & Technology (KAIST)

15:30-16:30 FrPI7T3.7

Failure Event-Driven Scenario Reconstruction for Autonomous Vehicles: Enhancing Realism through Data Correction in Virtual Environments, N/A

Hyun, Sang Hwa	Korea Electronics Technology Institute
Bae, Jiyeon	Korea Electronics Technology Institute
Jung, Howon	Korea Electronics Technology Institute (KETI)
Lee, Seonyoung	Korea Electronics Technology Institute
Shim, Youngbo	Korea Electronics Technology Institute

15:30-16:30 FrPI7T3.8

Spatially Coherent Costmap: A Weakly Supervised Pipeline for Outdoor Traversability, N/A

Thomas, Guillaume	ENSTA
Bouchabou, Damien	ENSTA IP Paris
Ravaud, Tom	ENSTA Paris
Filliat, David	ENSTA ParisTech
Chapoutot, Alexandre	ENSTA Paris

15:30-16:30 FrPI7T3.9

Line Segment-Based SLAM Using Downward Perspective Images in Indoor Environments, N/A

Kim, Dongwoo	Keimyung University
Hong, Seonghun	Keimyung University

15:30-16:30 FrPI7T3.10

Slip Detection and Relocalization Using LiDAR Data and Particle Filter in Autonomous Navigation, N/A

Oh, Jun Seok	Kyungpook National University
Lee, Jong Hyuk	Kyungpook National University
Kim, Seong Kyeoung	Kyungpook National University
Kim, Min Young	Kyungpook National University

15:30-16:30 FrPI7T3.11

GRU-Based Trajectory Tracking Controller Design for Autonomous Vehicles: A Data-Driven Approach to Stability and Performance, N/A

Jin, Yongsik	Electronics and Telecommunications Research Institute
Choi, Joonyoung	Daegu Gyeongbuk Institute of Science and Technology
Lim, Yongseob	DGIST

15:30-16:30 FrPI7T3.12

A Prototype Mobile Robot with a Passive Self-Balancing Mechanism, N/A

Ahmad, Huthaifa	RIKEN Information R&D and Strategy Headquarters, RIKEN, Kyoto, J
Nakamura, Yutaka	RIKEN

15:30-16:30 FrPI7T3.13

*NMPC-Based Smooth Path Planning with Snap Minimization for Wheeled Mobile Robot(WMR)**. N/A

Kim, Sunhong	Hanyang University
Choi, Youngjin	Hanyang University
Won, Daehee	Korea Institute of Industrial Technology

15:30-16:30 FrPI7T3.14

Integrating Specialized and Generic Agent Motion Prediction with Dynamic Occupancy Grid Maps, N/A

Asghar, Rabbia	INRIA / Univ. Grenoble Alpes
Liu, Wenqian	Southeast University
Rummelhard, Lukas	INRIA
Spalanzani, Anne	INRIA / Univ. Grenoble Alpes
Laugier, Christian	INRIA

15:30-16:30 FrPI7T3.15

*TUM CONTROL: Open Source Controller-Vehicle in Loop Simulation Framework for ultra-Rapid prototyping in Python**. N/A

Zarrouki, Baha	Technical University of Munich
Betz, Johannes	Technical University of Munich

15:30-16:30 FrPI7T3.16

DRIVE: Datasets for Research in Intelligent Vehicles and Environments, N/A

Berrio Perez, Julie Stephany — ACFR - the University of Sydney
Shan, Mao — The University of Sydney
Worrall, Stewart — University of Sydney

FrPI7T4 — Room 4
Robot Learning and Vision (Teaser Session)
Chair: Tasaki, Tsuyoshi — Meijo University

15:30-16:30 — FrPI7T4.1

Motion-Aware Data Generation: Incorporating Dynamic Object Kinematics in LiDAR Datasets, N/A

Jung, Howon — Korea Electronics Technology Institute (KETI)
Bae, Jiyeon — Korea Electronics Technology Institute
Hyun, Sang Hwa — Korea Electronics Technology Institute
Son, Haengseon — Korea Electronics Technology Institute
Shim, Youngbo — Korea Electronics Technology Institute

15:30-16:30 — FrPI7T4.2

Metric Scale Obstacle Distance Estimation Using 3D Map and Monocular Camera Based on the Semantic Segmentation, N/A

Higashi, Daijiro — University
Kurake, Kotaro — University
Tasaki, Tsuyoshi — Meijo University

15:30-16:30 — FrPI7T4.3

Incremental Learning in Human-Robot Interaction Using Predictive Coding-Inspired Variational RNNs, N/A

Sawada, Hiroki — Okinawa Institute of Science and Technology Graduate University
Tani, Jun — Okinawa Institute of Science and Technology

15:30-16:30 — FrPI7T4.4

*Reinforcement Learning for Shepherding Control in Multi-Robot Systems**. N/A

Napolitano, Italo — Scuola Superiore Meridionale
Lama, Andrea — Scuola Superiore Meridionale
De Lellis, Francesco — University of Napoli Federico II
Di Bernardo, Mario — University of Naples Federico II

15:30-16:30 — FrPI7T4.5

Reliable Reinforcement Learning Framework for Multi-Agent Cooperation under Complex Mission Environment, N/A

Yoon, Sukmin — Agency for Defense Development
Park, Junho — Agency for Defense Development
Kim, Yong-Duk — Agency for Defense Development

15:30-16:30 — FrPI7T4.6

Reinforcement Learning Based Control for Robotic Flexible Element Disassembly, N/A

Tapia Sal Paz, Benjamin — IKERLAN
Sorrosal, Gorka — IKERLAN
Mancisidor, Aitziber — University of the Basque Country (UPV/EHU)

15:30-16:30 — FrPI7T4.7

Machine Vision AI-Based Parcel Detection for Automated Robotic Depalletization through Adaptive Boundary Detection Using 3D Vision, N/A

Seongje, Kim — Hanyang University
KwangHee, Lee — KITECH
Yoon, Jonghun — Hanyang University ERICA

15:30-16:30 — FrPI7T4.8

Camera Projection Based Auto-Labeling Method for Transfer Learning of Depth CNNs, N/A

Song, Chanho — KMEDIhub

15:30-16:30 — FrPI7T4.9

Movement Analysis for Activities of Daily Living Using Infrared Cameras: an Evaluation of Deep Learning Human Pose Estimation, N/A

Nguyen, Sao Mai — U2IS Ensta Paris
Gan, Qi — Télécom Paris

15:30-16:30 — FrPI7T4.10

Deep Reinforcement Learning on Two-Wheeled Bipedal Robot: FlaminGO with Zero-Shot Sim2Real Transfer, N/A

Cho, Jaehyung	POSTECH
Kwon, Wookyong	ETRI
Han, Soohee	Pohang University of Science and Technology (POSTECH)

15:30-16:30 FrPI7T4.11

Agile Maneuvers and Tactical Decisions: Multi-Agent Reinforcement Learning in Two-On-Two Air Combat, N/A

Jung, Hoseong	Agency for Defense Development

15:30-16:30 FrPI7T4.12

*Safe Deep Reinforcement Learning (RL) Agent Adapts the Cost Function Weights of a Weights-Varying MPC (WMPC)**. N/A

Zarrouki, Baha	Technical University of Munich
Betz, Johannes	Technical University of Munich

15:30-16:30 FrPI7T4.13

*Deep Reinforcement Learning Driven Adaptive Stochastic and Robust NMPCs**. N/A

Zarrouki, Baha	Technical University of Munich
Betz, Johannes	Technical University of Munich

15:30-16:30 FrPI7T4.14

Enhancement of Reinforcement Learning Algorithm through Design of Deep Learning Networks for Jumping Robot, N/A

Kim, Hyeonjin	Seoul National University of Science and Technology
Kim, Jinhyun	Seoul National University of Science and Technology

15:30-16:30 FrPI7T4.15

*A Two-Layered Approach to Situational Awareness System: Flexible Structure and Modular Algorithms**. N/A

Choi, Hyun-Taek	Korea Research Institute of Ships and Oceans Engineering
Park, Jeonghong	KRISO
Choi, Jinwoo	KRISO, Korea Research Institute of Ships & Ocean Engineering
Kang, Minju	KOREA RESEARCH INSTITUTE OF SHIPS & OCEAN ENGINEERING
Ha, Namhoon	Korea Research Institute of Ships and Oceans Engineering
Choo, Ki-Beom	KOREA RESEARCH INSTITUTE OF SHIPS & OCEAN ENGINEERING(KRISO)
Kim, Jinwhan	KAIST
Ko, Nak Yong	Chosun University

FrPI7T5 Room 5

Robot Manipulation (Teaser Session)

Chair: Swikir, Abdalla	Technical University of Munich
Co-Chair: Mueller, Andreas	Johannes Kepler University

15:30-16:30 FrPI7T5.1

Human-Guidied Task Using VIEF Motion Planner for a Mobile Manipulator, N/A

Choi, JungHyun	University of Seoul
Sagong, Uihun	University of Seoul
Choi, KangHyeon	University of Seoul
Lee, Taegyeom	University of Seoul
Hwang, Myun Joong	University of Seoul

15:30-16:30 FrPI7T5.2

A Gaze-Based Augmented Reality Interface for Fast Telemanipulation, N/A

Lahoud, Marcel	Italian Institute of Technology
MoradiMaryamnegari, Hoomaan	Free University of Bozen-Bolzano (Unibz)
Marchello, Gabriele	Istituto Italiano Di Tecnologia
D'Imperio, Mariapaola	Istituto Italiano Di Tecnologia
Mueller, Andreas	Johannes Kepler University
Cannella, Ferdinando	Istituto Italiano Di Tecnologia

15:30-16:30 FrPI7T5.3

Object Detection by Selecting Anomaly Detection for Product Arrangement, N/A

Kondo, Ryota	Meijo University
Tasaki, Tsuyoshi	Meijo University

15:30-16:30 FrPI7T5.4

Automated Microrobotic Manipulation Using Reconfigurable Magnetic Microswarms, N/A

Jiang, Jialin	The Chinese University of HONG KONG
Yang, Lidong	The Hong Kong Polytechnic University
Hao, Bo	The Chinese University of Hong Kong
Xu, Tiantian	Chinese Academy of Sciences
Wu, Xinyu	SIAT
Zhang, Li	The Chinese University of Hong Kong

15:30-16:30 FrPI7T5.5

Adaptable Robotic Grasping and Actuation through Discrete Variable Stiffness Mechanisms, N/A

Gan, Dongming	Purdue University

15:30-16:30 FrPI7T5.6

Study on High Payload Gripper with Woven Structure According to Strip Material Properties, N/A

Kang, Gyeongji	Korea Advanced Institute of Science and Technology
Choe, Junpil	Korea University
Lee, Dae-Young	Korea Advanced Institute of Science and Technology
Song, Kahye	Korea Institute of Science and Technology

15:30-16:30 FrPI7T5.7

In-Situ Pose Estimation of an Industrial Manipulator with a 2D Laser Profiler, N/A

Chen, Tao	National Taiwan University
Liu, Jia-Xin	National Taiwan University
Tsai, Yao-Yang	National Taiwan University
Lin, Pei-Chun	National Taiwan University

15:30-16:30 FrPI7T5.8

RIM Hand: Design of a Robotic Hand Based on Human Anatomy, N/A

Lee, Joon	Sogang University
Han, Jeongyoon	Sogang University
Jeong, Seokhwan	Mechanical Eng., Sogang University

15:30-16:30 FrPI7T5.9

*DISG: Driving-Integrated Spherical Gear Enables Singularity-Free Full-Range Joint Motion**. N/A

Liang, Guanqi	The Chinese University of Hong Kong, Shenzhen
Zong, Lijun	The Chinese University of Hong Kong, Shenzhen
Lam, Tin Lun	The Chinese University of Hong Kong, Shenzhen

15:30-16:30 FrPI7T5.10

*Stacked Four-Bar Gripper Mechanism for Grasping Launcher Adapter Ring**. N/A

Hong, Geun Young	Hanyang University
Choi, Youngjin	Hanyang University
Won, Daehee	Korea Institute of Industrial Technology

15:30-16:30 FrPI7T5.11

UMAPS: An Application for Robotized Horizontal Directional Drilling, N/A

Colazo, Agustín	University Carlos III of Madrid
Salvador, Elisabeth Menendez	Universidad Carlos III De Madrid
Martínez, Santiago	Universidad Carlos III De Madrid
Balaguer, Carlos	Universidad Carlos III De Madrid

15:30-16:30 FrPI7T5.12

*Exploring the Potential of Robotic Arms for Enhancing Interactions of People with ALS**. N/A

Zhou, Songchen	Keio University
Ando, Ryoichi	Keio University
Kawaguchi, Midori	Keio University
Armstrong, Mark	Keio University
Barbareschi, Giulia	Keio University
Fu, Zening	Keio University
Hu, Zheng	Keio University
Ajioka, Toshihiro	Keio University
Yoshifuji, Ory	Ory Laboratory
Ogino, Mikito	University of Tokyo
Muto, Masatane	WITH ALS General Incorporated Foundation

Minamizawa, Kouta	Keio University
15:30-16:30	FrPI7T5.13
*Grasping Performance Comparison of Bell-Shaped Soft Suction Cup on Design Parameters**. N/A	
Choi, Jeongil	Chonnam National University
Park, Jiyeon	Hanyang University ERICA
Jang, Bumjin	Hanyang University ERICA Campus
Hong, Ayoung	Chonnam National University
15:30-16:30	FrPI7T5.14
Development of a Two-Degree-Of-Freedom Wrist for the Wearable Haptic Interface, N/A	
Kim, Hongmin	Yonsei University
Yun, SeongSeop	Yonsei Univercity
Park, Jong Hoon	Yonsei University
Shin, Dongjun	Yonsei University
15:30-16:30	FrPI7T5.15
Data-Driven Spatiotemporal Tubes for Temporal Reach-Avoid-Stay Specifications, N/A	
Das, Ratnangshu	Indian Institute of Science, Bangalore
Basu, Ahan	Indian Institute of Science
Jagtap, Pushpak	Indian Institute of Science

FrPI7T6	Room 6
Robot Sensing, Control and Algorithms (Teaser Session)	
Chair: Nakamura, Yutaka	RIKEN
15:30-16:30	FrPI7T6.1
Modelling Herding Behaviours: From Simulations to Human-Machine Teaming, N/A	
bin Kamruddin, Ayman	Scuola Superiore Meridionale
Lam, Christopher	Macquarie University
Patil, Gaurav	Macquarie University
Musolesi, Mirco	University College London
Di Bernardo, Mario	University of Naples Federico II
Richardson, Michael	Univeristy of Cincinnati
15:30-16:30	FrPI7T6.2
Enhanced VCC with Adaptive Neighborhood Selection for Improved Covariance Calculation in GICP, N/A	
Moon, Youngtae	Pohang University of Science and Technology
Kwon, Wookyong	Polaris3D
Han, Soohee	Pohang University of Science and Technology (POSTECH)
15:30-16:30	FrPI7T6.3
A Study on a Generative Model of Motion and Observation for Situation-Dependent Motion Generation, N/A	
Xu, Chenfei	Osaka University
Okadome, Yuya	Tokyo University of Science
Ishiguro, Hiroshi	Osaka University
Nakamura, Yutaka	RIKEN
15:30-16:30	FrPI7T6.4
Local-To-Global Feature Fusion for Robust Point Cloud Registration, N/A	
Slimani, Karim	Sorbonne Université, CNRS
Achard, Catherine	ISIR-Sorbonne Université
Tamadazte, Brahim	CNRS
15:30-16:30	FrPI7T6.5
Preliminary Analysis of Synthetic-To-Real Domain Shifts in the Daily Action Recognition with KENT Benchmark for Service Robots, N/A	
Kim, Hyungmin	Korea University of Science and Technology
Jeon, HoBeom	Korea University of Science and Technology
Kim, DoHyung	Electronics and Telecommunications Research Institute
Kim, Jaehong	ETRI
15:30-16:30	FrPI7T6.6
A Multi-Dimensional Spatial Informationization and Control Implementation Approach for 3D Mobility Management Platform, N/A	

Seongwon, Jo	CLROBUR
Choi, Taein	Clrobur Co., Ltd
Bae, Joon Ho	Clrobur
Pak, InKyu	Clrobur

15:30-16:30 FrPI7T6.7

Necessity Feature Correspondence for Large-Scale Global Place Recognition and Relocalization, N/A

Kang, Kyeongsu	Sungkyunkwan University
Lee, Sibaek	Sungkyunkwan University (SKKU)
Yu, Hyeonwoo	SungKyunKwan University

15:30-16:30 FrPI7T6.8

Observability-Aware Active Calibration of Multi-Sensor Extrinsics, N/A

Wang, Jiang	Southern University of Science and Technology
Kang, Yaozhong	Southern University of Science and Technology
Fu, Linya	Southern University of Science and Technology
Kong, He	Southern University of Science and Technology

15:30-16:30 FrPI7T6.9

Adaptive Impedance Control of Free-Floating Space Robot Capturing a Non-Cooperative Target, N/A

Dal, Prasad	Indian Institute of Technology Jodhpur
Shah, Suril Vijaykumar	Indian Institute of Technology Jodhpur

15:30-16:30 FrPI7T6.10

Evaluation of Autoencoder-Based Data Compression Techniques for Enhancing Communication Bandwidth Efficiency of Time Series Data, N/A

Joo, Subin	Korea Institute of Machinery and Metals

15:30-16:30 FrPI7T6.11

Stochastic Model Predictive Control of Space Robot in Pre-Capture Phase Using Sparse Gaussian Process, N/A

Chaudhary, Saurabh	Indian Institute of Technology, Jodhpur
Tripathy, Niladri Sekhar	IIT Jodhpur
Shah, Suril Vijaykumar	Indian Institute of Technology Jodhpur

15:30-16:30 FrPI7T6.12

*A Multi-Axis Hybrid Levitation-Based Precision Positioning Stage**. N/A

Moheimani, S. O. Reza	The University of Texas at Dallas
Kumar Singh, Vikrant	The University of Texas at Dallas
Mahmoodi Nasrabadi, Hazhir	The University of Texas at Dallas

15:30-16:30 FrPI7T6.13

Unknown Input Observer for Takagi-Sugeno Fuzzy Bilinear System with Input Disturbance, N/A

Yoneyama, Jun	Aoyama Gakuin University

15:30-16:30 FrPI7T6.14

*2-DOF Tensegrity Sensor Mechanism with Dual Functionality As Universal Joint and Angle Sensor**.N/A

Choi, Yuna	Hanyang University
Lee, Daehun	Hanyang University
Choi, Youngjin	Hanyang University

15:30-16:30 FrPI7T6.15

*CyberRunner: An Inexpensive Research and Education Robotics Platform**. N/A

Bi, Thomas	ETH Zurich
D'Andrea, Raffaello	ETHZ

FrPI7T7 Room 7

Soft Robotics and Bioinspired Robotics (Teaser Session)

Chair: Shigemune, Hiroki	Shibaura Institute of Technology
Co-Chair: Joe, Hyun-Min	Kyungpook National University

15:30-16:30 FrPI7T7.1

Design and Implementation of Planetary Gear-Based Pipe Cleaning Robot, N/A

Jeong, Byeongchan	Sungkyunkwan University
Choi, Hyouk Ryeol	Sungkyunkwan University

15:30-16:30 FrPI7T7.2

Formation Control of Multi-Agent System with Local Interaction and Artificial Potential Field, N/A

Zhao, Luoyin — National University of Singapore
Yan, Zheping — Harbin Engineering University
Wang, Yuqing — Harbin University of Science and Technology
Yeow, Chen-Hua — National University of Singapore

15:30-16:30 FrPI7T7.3

Design of a 4-DoF Robot Leg with Dual Differential Gear Mechanisms for Amphibious Locomotion, N/A
Ji, Won-Suk — Kookmin University
Jang, JeongHwan — Kookmin University
Cho, Baek-Kyu — Kookmin University

15:30-16:30 FrPI7T7.4

A Combination of CPG-RBFN-RL in Crawling-Quadruped Walking, N/A
Hu, Shengqiao — Kyoungpook National University
Choe, Seongsig — Kyungpook National University
Yi, Hak — Kyungpook National University

15:30-16:30 FrPI7T7.5

*Aircraft Skin Defect Inspection Using a Double Frame Climbing Robot and Deep Learning Algorithm**. N/A
Wang, Congqing — University of Aeronautics and Astronautics

15:30-16:30 FrPI7T7.6

Torque Reduction of 1-DOF Transformable Wheel with Spring Mechanism, N/A
Lee, Jaebaek — Pusan National University
Park, Jaeseong — Pusan National University
Kim, Youngsoo — Pusan National University

15:30-16:30 FrPI7T7.7

Design of a Soft Material Foot for Humanoid Robot to Reduce Ground Reaction Force, N/A
Lee, Jin-Deok — Kyungpook National University
Kwon, Hyeokjun — Kyungpook National University
Lee, Kyuman — Kyungpook National University
Joe, Hyun-Min — Kyungpook National University

15:30-16:30 FrPI7T7.8

Soft Wearable Robotic Suit with Gait Phase Estimation System Using Embedded Stretch Sensors and Incremental Phase Shift Estimation Method, N/A
Kim, Jeongmin — Yonsei University
Yun, SeongSeop — Yonsei Univercity
Shin, Dongjun — Yonsei University

15:30-16:30 FrPI7T7.9

Biodegradable and Disposable Corrugated Self-Folding Origami Devices, N/A
Harada, Takuma — Shibaura Institute of Technology
Fukatsu, Yuki — Shibaura Institute of Technology
Okamoto, Shuta — Shibaura Institute of Technology
Shigemune, Hiroki — Shibaura Institute of Technology

15:30-16:30 FrPI7T7.10

An Origami Amphibious Soft Robot with Omnidirectional Motion and Self-Sensing Obstacle Avoidance, N/A
Gong, Shoulu — Shanghai Jiao Tong University
Zhang, Wen-Ming — Shanghai Jiao Tong University
Shao, Lei — Shanghai Jiao Tong University

15:30-16:30 FrPI7T7.11

Estimating Hysteresis through Tension Detection in Antagonistic Tendon-Sheath Mechanisms, N/A
Im, Hankyung — Pusan National University
Kim, Minhyo — Pusan National University
Zhang, Youqiang — Pusan National University
Kim, Taehoon — Pusan National University
Mun, Jongchan — Pusan National University
Park, Kyuna — Pusan National University
Jin, Sangrok — Pusan National University

15:30-16:30 FrPI7T7.12

*Programmable Soft Electromagnetic Sliding Actuator for Compliant Planar and Curved Surface Motion**. N/A
Choi, YeongJin — Seoul National University

Shin, Gyowook	Samsung Research
Yoon, Sohee John	Seoul National University
Park, Yong-Lae	Seoul National University

15:30-16:30 FrPI7T7.13

Investigation of Arm Stiffness Effects on Cavitation Impact in a Mantis Shrimp-Inspired Striking Mechanism, N/A

Ito, Fumio	Chuo University
Kurumaya, Shunichi	Chuo University
Katsushi, Kagaya	Kitami Institute of Technology
Nakamura, Taro	Chuo University

15:30-16:30 FrPI7T7.14

Towards a Robust Starfish Robot for AI Research, N/A

Alhakami, Mohannad	King Abdullah University of Science and Technology
Ashley, Dylan Robert	King Abdullah University of Science and Technology
Dunham, Joel	OptoXense, Inc
Dai, Yanning	King Abdullah University of Science and Technology (KAUST)
Faccio, Francesco	King Abdullah University of Science and Technology
Feron, Eric	King Abdullah University of Science and Technology
Schmidhuber, Jurgen	Technische Universität München

15:30-16:30 FrPI7T7.15

Walking = Traversable? : Traversability Prediction Via Multiple Human Object Tracking under Occlusion, N/A

Tay Yu Liang, Jonathan	University of Fukui
Tanaka, Kanji	University of Fukui

FrCT1 Room 1

Vision-Based Navigation III (Regular session)

Co-Chair: Werghi, Naoufel — Khalifa University

16:30-16:45 FrCT1.1

AutoNeRF: Training Implicit Scene Representations with Autonomous Agents, pp. 13442-13449. Attachment

Marza, Pierre	INSA Lyon
Matignon, Laetitia	Université Lyon Claude Bernard
Simonin, Olivier	INSA De Lyon
Batra, Dhruv	Georgia Tech / Facebook AI Research
Wolf, Christian	Naver Labs Europe
Chaplot, Devendra Singh	CMU

16:45-17:00 FrCT1.2

In-Flight Initialization of Global Visual-Inertial Estimators Using Geospatial Data, pp. 13450-13457. Attachment

Li, Chunyu	Beijing Institute of Technology
He, Mengfan	TsinghuaUniversity
Lyu, Xu	Tsinghua University
Meng, Ziyang	Tsinghua University

17:00-17:15 FrCT1.3

CMR-Agent: Learning a Cross-Modal Agent for Iterative Image-To-Point Cloud Registration, pp. 13458-13465. Attachment

Yao, Gongxin	Zhejiang University
Xuan, Yixin	Zhejiang University
Li, Xinyang	Zhejiang University
Pan, Yu	Zhejiang University

17:15-17:30 FrCT1.4

Imagine2Servo: Intelligent Visual Servoing with Diffusion-Driven Goal Generation for Robotic Tasks, pp. 13466-13472. Attachment

Pathre, Pranjali	International Institute of Information Technology, Hyderabad
Gupta, Gunjan	International Institute of Information Technology (IIIT), Hydera
Qureshi, Mohammad Nomaan	International Institute of Information Technology (IIIT), Hydera
Mandyam, Brunda	International Institute of Information Technology, Hyderabad
Brahmbhatt, Samarth Manoj	Intel Corporation
Krishna, Madhava	IIIT Hyderabad

FrCT2 Room 2

Telerobotics and Teleoperation I (Regular session)

Chair: Kheddar, Abderrahmane — CNRS-AIST

16:30-16:45 FrCT2.1

Reducing Performance Variability and Overcoming Limited Spatial Ability: Targeted Training for Remote Robot Teleoperation, pp. 13473-13478. Attachment

Lin, Tsung-Chi — Johns Hopkins University
Chen, Juo-Tung — Johns Hopkins University
Huang, Chien-Ming — Johns Hopkins University

16:45-17:00 FrCT2.2

Interactive Multi-Stiffness Mixed Reality Interface: Controlling and Visualizing Robot and Environment Stiffness, pp. 13479-13486. Attachment

Díaz Rosales, Alejandro — CERN; Delft University of Technology
Rodriguez-Nogueira, Jose — CERN
Matheson, Eloise — CERN
Abbink, David A. — Delft University of Technology
Peternel, Luka — Delft University of Technology

17:00-17:15 FrCT2.3

GestRight: Understanding the Feasibility of Gesture-Driven Tele-Operation in Human-Robot Teams, pp. 13487-13494. Attachment

Rippy, Kevin — University of Maryland, Baltimore County
Gangopadhyay, Aryya — University of Maryland Baltimore County
Jayarajah, Kasthuri — New Jersey Institute of Technology

17:15-17:30 FrCT2.4

A Digital Twin-Driven Immersive Teleoperation Framework for Robot-Assisted Microsurgery, pp. 13495-13501. Attachment

Jiang, Peiyang — University of Bristol
Zhang, Dandan — Imperial College London

FrCT3 Room 3

Dexterous Manipulation (Regular session)

Chair: Romeres, Diego — Mitsubishi Electric Research Laboratories
Co-Chair: Ganguly, Amartya — Technical University of Munich

16:30-16:45 FrCT3.1

Object Augmentation Algorithm: Computing Virtual Object Motion and Object Induced Interaction Wrench from Optical Markers, pp. 13502-13509. Attachment

Herneth, Christopher — Technical University Munich
Li, Junnan — Technical University of Munich
Fatoni, Muhammad Hilman — Technical University of Munich
Ganguly, Amartya — Technical University of Munich
Haddadin, Sami — Technical University of Munich

16:45-17:00 FrCT3.2

Learning Generalizable Manipulation Policy with Adapter-Based Parameter Fine-Tuning, pp. 13510-13517. Attachment

Lu, Kai — University of Oxford
Ly, Kim Tien — University of Oxford
Hebberd, William — The University of Oxford
Zhou, Kaichen — University of Oxford
Havoutis, Ioannis — University of Oxford
Markham, Andrew — Oxford University

17:00-17:15 FrCT3.3

In-Hand Following of Deformable Linear Objects Using Dexterous Fingers with Tactile Sensing, pp. 13518-13524. Attachment

Yu, Mingrui — Tsinghua University
Liang, Boyuan — University of California, Berkeley
Zhang, Xiang — University of California, Berkeley
Zhu, Xinghao — University of California, Berkeley
Sun, Lingfeng — University of California, Berkeley

Wang, Changhao	University of California, Berkeley
Song, Shiji	Tsinghua University
Li, Xiang	Tsinghua University
Tomizuka, Masayoshi	University of California

17:15-17:30 FrCT3.4

Autonomous Robotic Assembly: From Part Singulation to Precise Assembly, pp. 13525-13532. Attachment

Ota, Kei	Tokyo Institute of Technology
Jha, Devesh	Mitsubishi Electric Research Laboratories
Jain, Siddarth	Mitsubishi Electric Research Laboratories (MERL)
Yerazunis, William	Mitsubishi Electric Research Laboratory
Corcodel, Radu	Mitsubishi Electric Research Laboratories
Shukla, Yash	Tufts University
Bronars, Antonia	MIT
Romeres, Diego	Mitsubishi Electric Research Laboratories

FrCT4 Room 4

Bio-Inspired Robots (Regular session)

Chair: Ijspeert, Auke	EPFL
Co-Chair: Manoonpong, Poramate	Vidyasirimedhi Institute of Science and Technology (VISTEC)

16:30-16:45 FrCT4.1

Bayesian Deep Predictive Coding for Snake-Like Robotic Control in Unknown Terrains, pp. 13533-13539.

Qu, William Ziming	Canadian Academy
Qu, Jessica Ziyu	Canadian Academy
Li, Li	Beijing Shouyejiehuo Company
Yang, Jie	Beijing Shouyejiehuo Company
Jia, Yuanyuan	Kyoto University

16:45-17:00 FrCT4.2

Importance of Translational Velocity for Bird-Scale Flapping Wing Vehicles Incapable of Hovering, pp. 13540-13546. Attachment

Zhou, Shijun	Purdue University
Orr, Aidan	Purdue University
Hyun, Nak-seung Patrick	Purdue University

17:00-17:15 FrCT4.3

Online Optimization of Central Pattern Generators for Quadruped Locomotion, pp. 13547-13554. Attachment

Zhang, Zewei	EPFL
Bellegarda, Guillaume	EPFL
Shafiee, Milad	EPFL
Ijspeert, Auke	EPFL

17:15-17:30 FrCT4.4

Heading Control for Obstacle Avoidance Using Dynamic Posture Manipulation During Tumbling Locomotion, pp. 13555-13560. Attachment

Salagame, Adarsh	Northeastern University
Gangaraju, Kruthika	Northeastern University
Sihite, Eric	California Institute of Technology
Schirner, Gunar	Northeastern U., Dept. of Electrical and Computer Engineering
Ramezani, Alireza	Northeastern University

FrCT5 Room 5

Force Sensing and Control (Regular session)

Chair: Hirai, Shinichi	Ritsumeikan Univ
Co-Chair: Chen, Xu	University of Washington

16:30-16:45 FrCT5.1

Deep Domain Adaptation Regression for Force Calibration of Optical Tactile Sensors, pp. 13561-13568.

Chen, Zhuo	King's College London
Ou, Ni	Beijing Institute of Technology
Jiang, Jiaqi	King's College London
Luo, Shan	King's College London

16:45-17:00 FrCT5.2

Learned Slip-Detection-Severity Framework Using Tactile Deformation Field Feedback for Robotic Manipulation, pp. 13569-13576. Attachment

Jawale, Neel Anand	University of Washington
Kaur, Navneet	University of Washington
Santoso, Elizabeth Amy	University of Washington
Hu, Xiaohai	University of Washington
Chen, Xu	University of Washington

17:00-17:15 FrCT5.3

Development Force Control of a Series Elastic Actuator to Excavator for Mechanization of Manual Work, pp. 13577-13583. Attachment

Hiramatsu, Toshifumi	Yanmar Holdings Co., Ltd
Saiki, Miyuki	Yanmar Holdings Co., Ltd
Hara, Naohiro	YANMAR Co., Ltd
Yamada, Masaki	Yanmar Holdings Co., Ltd
Momii, Masaki	Yanmar Holdings Co., Ltd
Uebayashi, Yuichi	Yanmar Holdings Co., Ltd
Sugiura, Hisashi	Yanmar Co., Ltd

17:15-17:30 FrCT5.4

Passive Underwater Robot Hand Utilizing Water Resistance, pp. 13584-13591. Attachment

Nate, Issei	Ritsumeikan University
Hirai, Shinichi	Ritsumeikan Univ

FrCT6 Room 6

Task and Motion Planning II (Regular session)

Chair: Ornik, Melkior	University of Illinois Urbana-Champaign

16:30-16:45 FrCT6.1

ComTraQ-MPC: Meta-Trained DQN-MPC Integration for Trajectory Tracking with Limited Active Localization Updates, pp. 13592-13598. Attachment

Puthumanaillam, Gokul	University of Illinois Urbana-Champaign
Vora, Manav Ketan	University of Illinois Urbana-Champaign
Ornik, Melkior	University of Illinois Urbana-Champaign

16:45-17:00 FrCT6.2

On Learning Scene-Aware Generative State Abstractions for Task-Level Mobile Manipulation Planning, pp. 13599-13606. Attachment

Förster, Julian	ETH Zurich
Chung, Jen Jen	The University of Queensland
Ott, Lionel	ETH Zurich
Siegwart, Roland	ETH Zurich

17:00-17:15 FrCT6.3

LGMCTS: Language-Guided Monte-Carlo Tree Search for Executable Semantic Object Rearrangement, pp. 13607-13612. Attachment

Chang, Haonan	Rutgers University
Gao, Kai	Rutgers University
Boyalakuntla, Kowndinya	Rutgers University
Lee, Alex	Rutgers University
Huang, Baichuan	Rutgers University
Yu, Jingjin	Rutgers University
Boularias, Abdeslam	Rutgers University

17:15-17:30 FrCT6.4

Task Planning for Long-Horizon Cooking Tasks Based on Large Language Models, pp. 13613-13619. Attachment

Shin, Jungkyoo	Chung Ang University
Han, Jieun	Hanyang University
Kim, Seungjun	Hanyang University
Oh, Yoonseon	Hanyang University
Kim, Eunwoo	Chung-Ang University

FrCT7 Room 7

Prosthetics and Exoskeleton (Regular session)

Chair: Tortora, Stefano — University of Padova

16:30-16:45 — FrCT7.1

A Velocity Dependent Delayed Output Feedback Control (v-DOFC) for Gait Assistance with an Ergonomically Designed Bi-Directional Cable-Driven Hip Assist Device, pp. 13620-13625.

Kim, Dong Hyun	Samsung Research
Park, Junghoon	Samsung Electronics Co., Ltd
Shin, Gyowook	Samsung Research
Yoon, Chiyul	Samsung Research
Kim, Yongtae Giovanni	Samsung Research
Kim, Sang-Hun	Samsung Research
Hyung, SeungYong	Samsung Electronics Co., Ltd
Kang, Sung-Chul	Samsung Research, Samsung Electronics
Lee, Minhyung	Samsung Advanced Institute of Technology

16:45-17:00 — FrCT7.2

A Closed-Loop Control for Lower Limb Exoskeleton Considering Overall Deformations: A Simple and Direct Application Method, pp. 13626-13633. Attachment

Li, Feng	Shenzhen Institute of Advanced Technology Chinere Academy of Sci
Yang, Ming	University of Science and Technology of China
Chen, Ziqiang	Shenzhen Institute of Advanced Technology, Chinese Academy of Sc
Luan, Mengbo	Shenzhen Institute of Advanced Technology, Chinese Academy
Tian, Dingkui	Shenzhen Advanced Technology Research Institute, Chinese Academy
Wu, Xinyu	CAS

17:00-17:15 — FrCT7.3

Effect of Tactile and Deep Sensory Feedback Synchronized with the Manipulation of Myoelectric Hand on Body Recognition, pp. 13634-13639.

Hamaoka, Rintaro	Yokohama National University
Kato, Ryu	Yokohama National University

17:15-17:30 — FrCT7.4

Environment-Adaptive Gait Planning for Obstacle Avoidance in Lower-Limb Robotic Exoskeletons, pp. 13640-13647. Attachment

Trombin, Edoardo	University of Padua
Tortora, Stefano	University of Padova
Menegatti, Emanuele	The University of Padua
Tonin, Luca	University of Padova

FrCT8 — Room 8

Intelligent Transportation Systems II (Regular session)

Chair: Matteucci, Matteo — Politecnico Di Milano

16:30-16:45 — FrCT8.1

Multi-Agent Traffic Prediction Via Denoised Endpoint Distribution, pp. 13648-13655. Attachment

Liu, Yao	Macquarie University
Wang, Ruoyu	University of New South Wales
Cao, Yuanjiang	Macquarie University
Sheng, Quan Z.	Macquarie University
Yao, Lina	Csiro & Unsw

16:45-17:00 — FrCT8.2

Towards Enhanced Fairness and Sample Efficiency in Traffic Signal Control, pp. 13656-13663. Attachment

Huang, Xingshuai	McGill University
Wu, Di	McGill University
Jenkin, Michael	York University
Boulet, Benoit	McGill University, Centre for Intelligent Machines

17:00-17:15 — FrCT8.3

Automatic 3D Road Surface Reconstruction Via Cross-Section Modeling and Interpolation, pp. 13664-13670.

Bellusci, Matteo	Politecnico Di Milano

Matteucci, Matteo	Politecnico Di Milano

17:15-17:30 FrCT8.4

EnduRL: Enhancing Safety, Stability, and Efficiency of Mixed Traffic under Real-World Perturbations Via Reinforcement Learning, pp. 13671-13678. Attachment

Poudel, Bibek	University of Tennessee Knoxville
Li, Weizi	University of Tennessee, Knoxville
Heaslip, Kevin	University of Tennessee Knoxville

FrCT9 Room 9

Planning, Scheduling and Coordination I (Regular session)

Chair: Bhounsule, Pranav	University of Illinois at Chicago
Co-Chair: Mettu, Ramgopal	Tulane University

16:30-16:45 FrCT9.1

Evaluating Dynamic Environment Difficulty for Obstacle Avoidance Benchmarking, pp. 13679-13686. Attachment

Shi, Moji	Delft University of Technology
Chen, Gang	Delft University of Technology
Serra-Gómez, Álvaro	Delft University of Technology
Wu, Siyuan	Delft University of Technology
Alonso-Mora, Javier	Delft University of Technology

16:45-17:00 FrCT9.2

An Attention-Aware Deep Reinforcement Learning Framework for UAV-UGV Collaborative Route Planning, pp. 13687-13694. Attachment

Mondal, Mohammad Safwan	University of Illinois Chicago
Ramasamy, Subramanian	University of Illinois at Chicago
Humann, James	DEVCOM Army Research Laboratory,
James, Dotterweich, Jim	Army Research Laboratory
Reddinger, Jean-Paul	DEVCOM Army Research Laboratory,
Childers, Marshal	DEVCOM Army Research Laboratory
Bhounsule, Pranav	University of Illinois at Chicago

17:00-17:15 FrCT9.3

*Coordinated Multi-Arm 3D Printing Using Reeb Decomposition**. pp. 14212-14218.

Khatkar, Jayant	University of Technology Sydney
Sukkar, Fouad	University of Technology Sydney
Clemon, Lee	University of Technology Sydney
Mettu, Ramgopal	Tulane University

17:15-17:30 FrCT9.4

Transformer-Based Multi-Agent Reinforcement Learning for Generalization of Heterogeneous Multi-Robot Cooperation, pp. 13695-13702. Attachment

Cai, Yuxin	Nanyang Technological University
He, Xiangkun	Nanyang Technological University
Guo, Hongliang	Agency for Science Technology and Research
Yau, Wei-Yun	I2R
Lv, Chen	Nanyang Technological University

FrCT10 Room 10

Object Detection, Segmentation and Categorization II (Regular session)

Chair: Song, Dezhen	Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI) and Texas A&M University (TAMU)
Co-Chair: Vu, Minh Nhat	TU Wien, Austria

16:30-16:45 FrCT10.1

IC-FPS: Instance-Centroid Faster Point Sampling Framework for 3D Point-Based Object Detection, pp. 13703-13710.

Hu, Haotian	Zhejiang Leapmotor Technology Co., Ltd
Wang, Fanyi	Zhejiang University
Wang, YaoNong	Zhejiang Leapmotor Technology Co., Ltd
Hu, Laifeng	Zhejiang Leapmotor Technology Co., Ltd
Zhang, Zhiwang	NingboTech University

16:45-17:00 FrCT10.2

Similarity Distance-Based Label Assignment for Tiny Object Detection, pp. 13711-13718.

Shi, Shuohao	National University of Defense Technology
Fang, Qiang	National University of Defense Technology
Zhao, Tong	National University of Defense Technology
Xu, Xin	National University of Defense Technology

17:00-17:15 FrCT10.3

Lightweight Language-Driven Grasp Detection Using Conditional Consistency Model, pp. 13719-13725. Attachment

Nguyen, Nghia	FPT Software Company Limited
Vu, Minh Nhat	TU Wien, Austria
Huang, Baoru	Imperial College London
Vuong, An Dinh	MBZUAI
Le, Ngan	University of Arkansas
Vo, Thieu	Ton Duc Thang University
Nguyen, Anh	University of Liverpool

17:15-17:30 FrCT10.4

Road Boundary Estimation Using Sparse Automotive Radar Inputs, pp. 13726-13733.

Kingery, Aaron	Texas A&M University
Song, Dezhen	Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI)

FrCT11 Room 11

Locomotion Control (Regular session)

Chair: Abu-Dakka, Fares	New York University Abu Dhabi
Co-Chair: Lamon, Edoardo	University of Trento

16:30-16:45 FrCT11.1

Motion Planning for Automata-Based Objectives Using Efficient Gradient-Based Methods, pp. 13734-13740.

Balakrishnan, Anand	University of Southern California
Atasever, Merve	University of Southern California
Deshmukh, Jyotirmoy	University of Southern California

16:45-17:00 FrCT11.2

Real-Time Model Predictive Control with Zonotope-Based Neural Networks for Bipedal Social Navigation, pp. 13741-13748. Attachment

Shamsah, Abdulaziz	Georgia Institute of Technology
Agarwal, Krishanu	Georgia Institute of Technology
Kousik, Shreyas	Georgia Institute of Technology
Zhao, Ye	Georgia Institute of Technology

17:00-17:15 FrCT11.3

FootstepNet: An Efficient Actor-Critic Method for Fast On-Line Bipedal Footstep Planning and Forecasting, pp. 13749-13756.

Gaspard, Clément	LaBRI - University of Bordeaux
Passault, Grégoire	LaBRI
Daniel, Mélodie	LaBRI - Université De Bordeaux
Ly, Olivier	LaBRI - Bordeaux University

17:15-17:30 FrCT11.4

On the Benefits of GPU Sample-Based Stochastic Predictive Controllers for Legged Locomotion, pp. 13757-13764. Attachment

Turrisi, Giulio	Istituto Italiano Di Tecnologia
Modugno, Valerio	University College London
Amatucci, Lorenzo	Istituto Italiano Di Tecnologia
Kanoulas, Dimitrios	University College London
Semini, Claudio	Istituto Italiano Di Tecnologia

FrCT12 Room 12

Semantic Scene Understanding IV (Regular session)

Chair: Beltrame, Giovanni	Ecole Polytechnique De Montreal

16:30-16:45 FrCT12.1

GRID: Scene-Graph-Based Instruction-Driven Robotic Task Planning, pp. 13765-13772. Attachment

Ni, Zhe	Tsinghua University
Deng, Xiaoxin	Tsinghua University

Tai, Cong	Tsinghua University
Zhu, Xinyue	Columbia University
Xie, Qinghongbing	Tsinghua University
Huang, Weihang	Tsinghua University
Wu, Xiang	Shenzhen Pudu Technology
Zeng, Long	Tsinghua University

16:45-17:00 FrCT12.2

ASI-Seg: Audio-Driven Surgical Instrument Segmentation with Surgeon Intention Understanding, pp. 13773-13779.

Chen, Zhen	Centre for Artificial Intelligence and Robotics (CAIR), Hong Kon
Zhang, Zongmin	CAIR
Guo, Wenwu	CAIR
Luo, Xingjian	Centre for Artificial Intelligence and Robotics (CAIR) Hong Kong
Bai, Long	The Chinese University of Hong Kong
Wu, Jinlin	Institute of Automation, Chinese Academy of Sciences
Ren, Hongliang	Chinese Univ Hong Kong (CUHK) & National Univ Singapore(NUS)
Liu, Hongbin	Hong Kong Institute of Science & Innovation, Chinese Academy Of

17:00-17:15 FrCT12.3

OV-MAP : Open-Vocabulary Zero-Shot 3D Instance Segmentation Map for Robots, pp. 13780-13786.

Kim, Juno	Seoul National University
Park, Yesol	Seoul National University
Yoon, Hye Jung	Seoul National University
Zhang, Byoung-Tak	Seoul National University

17:15-17:30 FrCT12.4

Active Semantic Mapping and Pose Graph Spectral Analysis for Robot Exploration, pp. 13787-13794.

Zhang, Rongge	Polytechnique Montreal
Bong, Haechan Mark	Polytechnique Montreal
Beltrame, Giovanni	Ecole Polytechnique De Montreal

FrCT13 Room 13

Robot Safety II (Regular session)

Co-Chair: Saveriano, Matteo — University of Trento

16:30-16:45 FrCT13.1

Exploiting Hybrid Policy in Reinforcement Learning for Interpretable Temporal Logic Manipulation, pp. 13795-13800.

Zhang, Hao	University of Science and Technology of China
Wang, Hao	University of Science and Technology of China
Huang, Xiucai	Chongqing University
Chen, Wenrui	Hunan University
Kan, Zhen	University of Science and Technology of China

16:45-17:00 FrCT13.2

CoBL-Diffusion: Diffusion-Based Conditional Robot Planning in Dynamic Environments Using Control Barrier and Lyapunov Functions, pp. 13801-13808. Attachment

Mizuta, Kazuki	University of Washington
Leung, Karen	University of Washington

17:00-17:15 FrCT13.3

ODD-diLLMma: Driving Automation System ODD Compliance Checking Using LLMs, pp. 13809-13816. Attachment

Hildebrandt, Carl	University of Virginia
Woodlief, Trey	University of Virginia
Elbaum, Sebastian	University of Virginia

17:15-17:30 FrCT13.4

MADE: Malicious Agent Detection for Robust Multi-Agent Collaborative Perception, pp. 13817-13823. Attachment

Zhao, Yangheng	Shanghai Jiao Tong University
Xiang, Zhen	University of Illinois, Urbana-Champaign
Yin, Sheng	Shanghai Jiao Tong University
Pang, Xianghe	Shanghai Jiao Tong University
Wang, Yanfeng	Shanghai Jiao Tong University
Chen, Siheng	Shanghai Jiao Tong University

FrDT1 Room 1

Vision-Based Navigation IV (Regular session)

Co-Chair: Werghi, Naoufel — Khalifa University

17:30-17:45 FrDT1.1

Enhancing Exploratory Capability of Visual Navigation Using Uncertainty of Implicit Scene Representation, pp. 13824-13829. Attachment

- Wang, Yichen — Shanghai Jiao Tong University
- Liu, Qiming — Shanghai Jiao Tong University
- Liu, Zhe — University of Cambridge
- Wang, Hesheng — Shanghai Jiao Tong University

17:45-18:00 FrDT1.2

ActiveRIR: Active Audio-Visual Exploration for Acoustic Environment Modeling, pp. 13830-13836. Attachment

- Somayazulu, Arjun — UT Austin
- Majumder, Sagnik — UT Austin
- Chen, Changan — UT Austin
- Grauman, Kristen — UT Austin and Facebook AI Research

18:00-18:15 FrDT1.3

CoNVOI: Context-Aware Navigation Using Vision Language Models in Outdoor and Indoor Environments, pp. 13837-13844. Attachment

- Sathyamoorthy, Adarsh Jagan — University of Maryland
- Kulathun Mudiyanselage, Kasun Weerakoon — University of Maryland, College Park
- Elnoor, Mohamed — University of Maryland
- Zore, Anuj — University of Maryland
- Ichter, Brian — Google Brain
- Xia, Fei — Google Inc
- Tan, Jie — Google
- Yu, Wenhao — Google
- Manocha, Dinesh — University of Maryland

18:15-18:30 FrDT1.4

Malicious Path Manipulations Via Exploitation of Representation Vulnerabilities of Vision-Language Navigation Systems, pp. 13845-13852.

- Islam, Chashi Mahiul — Florida State University
- Salman, Shaeke — Florida State University
- Shams, Montasir — Florida State University
- Liu, Xiuwen — Florida State University
- Kumar, Piyush — Florida State University

FrDT2 Room 2

Telerobotics and Teleoperation II (Regular session)

Co-Chair: Kheddar, Abderrahmane — CNRS-AIST

17:30-17:45 FrDT2.1

Feelit: Combining Compliant Shape Displays with Vision-Based Tactile Sensors for Real-Time Teletaction, pp. 13853-13860. Attachment

- Yu, Oscar — Purdue University
- She, Yu — Purdue University

17:45-18:00 FrDT2.2

Radiance Fields for Robotic Teleoperation, pp. 13861-13868. Attachment

- Wilder-Smith, Maximum — ETH Zurich
- Patil, Vaishakh — RSL ETH Zurich
- Hutter, Marco — ETH Zurich

18:00-18:15 FrDT2.3

Demonstrating Trustworthiness in Open-Loop Model Mediated Teleoperation for Collecting Lunar Regolith Simulant, pp. 13869-13874. Attachment

- Louca, Joe — University of Bristol
- Zemeny, Aliz — European Space Agency
- Tzemanaki, Antonia — University of Bristol
- Charles, Romain — European Space Agency

18:15-18:30 FrDT2.4

Towards Kbps-Level Vehicle Teleoperation Via Persistent-Transient Environment Modelling, pp. 13875-13882. Attachment

Zhao, Chunyang	Nanyang Technological University
Zhou, Zeyu	Nanyang Technological University
Liu, Haoran	Nanyang Technological University
Kircali, Dogan	Nanyang Technological University
Chi, Guoyi	Intelligent Robotics Lab, S2.1-B4-01, EEE, NTU, 50 Nanyang Avenue
Shen, Hongming	Nanyang Technological University
Wang, Yuanzhe	Nanyang Technological University
Wang, Danwei	Nanyang Technological University

FrDT3 Room 3

Manipulation Planning (Regular session)

Chair: Choset, Howie	Carnegie Mellon University
Co-Chair: Tzes, Anthony	New York University Abu Dhabi

17:30-17:45 FrDT3.1

Unified Control Framework for Real-Time Interception and Obstacle Avoidance of Fast-Moving Objects with Diffusion Variational Autoencoder, pp. 13883-13890. Attachment

Dastider, Apan	University of Central Florida
Fang, Hao	University of Central Florida
Mingjie, Lin	University of Central Florida

17:45-18:00 FrDT3.2

One-Shot Transfer of Long-Horizon Extrinsic Manipulation through Contact Retargeting, pp. 13891-13898. Attachment

Wu, Albert	Stanford University
Wang, Ruocheng	Stanford University
Chen, Sirui	Stanford University
Eppner, Clemens	NVIDIA
Liu, Karen	Stanford University

18:00-18:15 FrDT3.3

Motion Planning for Object Manipulation by Edge-Rolling, pp. 13899-13906. Attachment

Boroji, Maede	Stony Brook University
Danesh, Vahid	Stony Brook University
Kao, Imin	SUNY at Stony Brook
Fakhari, Amin	Stony Brook University

18:15-18:30 FrDT3.4

PINSAT: Parallelized Interleaving of Graph Search and Trajectory Optimization for Kinodynamic Motion Planning, pp. 13907-13914. Attachment

Natarajan, Ramkumar	Robotics Institute, Carnegie Mellon University
Mukherjee, Shohin	Carnegie Mellon University
Choset, Howie	Carnegie Mellon University
Likhachev, Maxim	Carnegie Mellon University

FrDT4 Room 4

Biomimetics (Regular session)

Chair: Kawaharazuka, Kento	The University of Tokyo
Co-Chair: Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

17:30-17:45 FrDT4.1

Wing Twist and Folding Work in Synergy to Propel Flapping Wing Animals and Robots, pp. 13915-13921. Attachment

Fan, Xiaozhou	Caltech
Gehrke, Alexander	Brown University
Breuer, Kenneth	Brown University

17:45-18:00 FrDT4.2

An Efficient Position Reconfiguration Approach for Maximizing Lifetime of Fixed-Wing Swarm Drones, pp. 13922-13929. Attachment

Liu, Han	Sun Yat-Sen University
Liu, Tian	Sun Yat-Sen University

Cui, Mingyue	Sun Yat-Sen University
Shan, Yunxiao	Sun Yat-Sen University
Zhao, Shuai	Sun Yat-Sen University
Huang, Kai	Sun Yat-Sen University

18:00-18:15 FrDT4.3

Patterned Structure Muscle : Arbitrary Shaped Wire-Driven Artificial Muscle Utilizing Anisotropic Flexible Structure for Musculoskeletal Robots, pp. 13930-13937. Attachment

Yoshimura, Shunnosuke	The University of Tokyo
Miki, Akihiro	The University of Tokyo
Miyama, Kazuhiro	The University of Tokyo
Sahara, Yuta	The University of Tokyo
Kawaharazuka, Kento	The University of Tokyo
Okada, Kei	The University of Tokyo
Inaba, Masayuki	The University of Tokyo

18:15-18:30 FrDT4.4

Learning-Based Hierarchical Control: Emulating the Central Nervous System for Bio-Inspired Legged Robot Locomotion, pp. 13938-13945. Attachment

Sun, Ge	National University of Singapore
Shafiee, Milad	EPFL
Li, Peizhuo	National University of Singapore
Bellegarda, Guillaume	EPFL
Ijspeert, Auke	EPFL
Sartoretti, Guillaume Adrien	National University of Singapore (NUS)

FrDT5 Room 5

Tactile Sensing (Regular session)

Chair: Althoefer, Kaspar	Queen Mary University of London
Co-Chair: Kudoh, Shunsuke	The University of Electro-Communications

17:30-17:45 FrDT5.1

Large-Scale Deployment of Vision-Based Tactile Sensors on Multi-Fingered Grippers, pp. 13946-13952. Attachment

Wang, Meng	Beijing Institute for General Artificial Intelligence
Li, Wanlin	Beijing Institute for General Artificial Intelligence (BIGAI)
Liang, Hao	Beijing Institute for General Artificial Intelligence (BIGAI)
Li, Boren	BIGAI
Althoefer, Kaspar	Queen Mary University of London
Su, Yao	Beijing Institute for General Artificial Intelligence
Liu, Hangxin	Beijing Institute for General Artificial Intelligence (BIGAI)

17:45-18:00 FrDT5.2

Multidirectional Slip Detection and Avoidance Using Dynamic 3D Tactile Meshes from Visuotactile Sensors, pp. 13953-13959. Attachment

Song, Peng	Agile Robots
Corrales Ramon, Juan Antonio	Universidade De Santiago De Compostela
Mezouar, Youcef	Clermont Auvergne INP - SIGMA Clermont

18:00-18:15 FrDT5.3

Learning Incipient Slip with GelSight Sensors: Attention Classification with Video Vision Transformers, pp. 13960-13966.

Parag, Amit	Sintef Ocean AS
Adelson, Edward	MIT
Misimi, Ekrem	SINTEF Ocean

18:15-18:30 FrDT5.4

Fingertip Tactile Sensor for Detecting Rope Slip, pp. 13967-13973.

Koga, Takayuki	The University of Electro-Communications
Sato, Junya	Japan Aviation Electronics Industry, Limited
Daigo, Takuya	Japan Aviation Electronics Industry
Kimura, Kohei	The University of Electro-Communications
Kudoh, Shunsuke	The University of Electro-Communications

FrDT6 Room 6

Towards Robot Autonomy (Regular session)

Chair: Bonsignorio, Fabio — FER, University of Zagreb
Co-Chair: Kyriakopoulos, Kostas — New York University - Abu Dhabi

17:30-17:45 FrDT6.1

Toward Universal and Scalable Road Graph Partitioning for Efficient Multi-Robot Path Planning, pp. 13974-13979.

Han, Xingyao — Shanghai Jiao Tong University
Cao, Bo — MoE Key Lab of Artificial Intelligence, AI Institute, Shanghai J
Liu, Zhe — University of Cambridge
Zhou, Shunbo — Huawei
Zhang, Heng — Huawei
Wang, Hesheng — Shanghai Jiao Tong University

17:45-18:00 FrDT6.2

Uncertainty-Aware Deep Imitation Learning and Deployment for Autonomous Navigation through Crowded Intersections, pp. 13980-13987.

Zhu, Zeyu — Key Labarotary of Machine Perception, Peking University
Wang, Shuai — Peking University
Zhao, Huijing — Peking University

18:00-18:15 FrDT6.3

Continual Learning for Autonomous Robots: A Prototype-Based Approach, pp. 13988-13995.

Hajizada, Elvin — Technical University of Munich; Intel
Swaminathan, Balachandran — Pennsylvania State University
Sandamirskaya, Yulia — ZHAW

18:15-18:30 FrDT6.4

*A Framework for Reproducible Benchmarking and Performance Diagnosis of SLAM Systems**. pp. 14225-14232.

Radulov, Nikola — University of Manchester
Zhang, Yuhao — University of Manchester
Bujanca, Mihai — University of Manchester
Ye, Ruiqi — The University of Manchester
Luján, Mikel — University of Manchester

FrDT7 — Room 7
Physical Human-Robot Interaction (Regular session)

Chair: Rajaei, Nader — Technical University of Munich

17:30-17:45 FrDT7.1

Four-Axis Adaptive Fingers Hand for Object Insertion: FAAF Hand, pp. 13996-14003. Attachment

Fukaya, Naoki — Preferred Networks, Inc
Yamane, Koki — University of Tsukuba
Masuda, Shimpei — Preferred Networks, Inc / University of Tsukuba
Ummadisingu, Avinash — Preferred Networks, Inc
Maeda, Shin-ichi — Preferred Networks
Takahashi, Kuniyuki — Preferred Networks, Inc

17:45-18:00 FrDT7.2

A Unified Interaction Control Framework for Safe Robotic Ultrasound Scanning with Human-Intention-Aware Compliance, pp. 14004-14011. Attachment

Yan, Xiangjie — Tsinghua University
Shaqi, Luo — State Key Laboratory of Mechanical Transmissions, College of Mec
Jiang, Yongpeng — Tsinghua University
Yu, Mingrui — Tsinghua University
Chen, Chen — Tsinghua University
Zhu, Senqiang — Midea Group
Huang, Gao — Tsinghua University
Song, Shiji — Tsinghua University
Li, Xiang — Tsinghua University

18:00-18:15 FrDT7.3

Towards Unconstrained Collision Injury Protection Data Sets: Initial Surrogate Experiments for the Human Hand, pp. 14012-14019. Attachment

Kirschner, Robin Jeanne — TU Munich, Institute for Robotics and Systems Intelligence
Yang, Jinyu — TU München

Elshani, Edonis	Technical University of Munich
Micheler, Carina M.	Technical University of Munich, TUM School of Medicine, Klinikum
Leibbrand, Tobias	TU München
Müller, Dirk	Department of Orthopaedics and Sports Orthopaedics, Klinikum Rec
Glowalla, Claudio	Department of Orthopaedics and Sports Orthopaedics, Klinikum Rec
Rajaei, Nader	Technical University of Munich
Burgkart, Rainer	Technische Universität München
Haddadin, Sami	Technical University of Munich

18:15-18:30 FrDT7.4

Tactile Comfort: Lowering Heart Rate through Interactions with a Pocket Robot, pp. 14020-14025.

Frederiksen, Morten Roed	IT-University of Copenhagen
Stoy, Kasper	IT University of Copenhagen
Mataric, Maja	University of Southern California

FrDT8 Room 8

Space Robotics (Regular session)

Co-Chair: Hamaza, Salua — TU Delft

17:30-17:45 FrDT8.1

Rocket Landing Control with Random Annealing Jump Start Reinforcement Learning, pp. 14026-14033.

Jiang, Yuxuan	Tsinghua University
Yang, Yujie	Tsinghua University
Lan, Zhiqian	Tsinghua University
Zhan, Guojian	Tsinghua University
Li, Shengbo Eben	Tsinghua University
Sun, Qi	Tsinghua University
Ma, Jian	LandSpace Technology Corporation
Yu, Tianwen	LandSpace Technology Corporation
Zhang, Changwu	LandSpace Technology Corporation

17:45-18:00 FrDT8.2

DRIFT: Deep Reinforcement Learning for Intelligent Floating Platforms Trajectories, pp. 14034-14041. Attachment

El Hariry, Matteo	University of Luxembourg
Richard, Antoine	University of Luxembourg
Muralidharan, Vivek	University of Luxembourg
Geist, Matthieu	Université De Lorraine
Olivares-Mendez, Miguel A.	Interdisciplinary Centre for Security, Reliability and Trust - U

18:00-18:15 FrDT8.3

Mobility Performance Characterization of Transformable Nano Rover for Lunar Exploration, pp. 14042-14049. Attachment

Sutoh, Masataku	Japan Aerospace Exploration Agency
Hirano, Daichi	Japan Aerospace Exploration Agency
Inazawa, Mariko	Japan Aerospace Exploration Agency
Kawai, Yuta	Japan Aerospace Exploration Agency
Sawada, Hirotaka	JAXA

18:15-18:30 FrDT8.4

Thermally-Resilient Soft Gripper for On-Orbit Operations, pp. 14050-14055. Attachment

Ruiz Vincueria, Fernando	Universidad De Sevilla
Arrue, Begoña C.	Universidad De Sevilla
Ollero, Anibal	AICIA. G41099946

FrDT9 Room 9

Planning, Scheduling and Coordination II (Regular session)

Chair: Indelman, Vadim	Technion - Israel Institute of Technology
Co-Chair: Dionigi, Alberto	University of Perugia

17:30-17:45 FrDT9.1

Priority-Based Deadlock Recovery for Distributed Swarm Obstacle Avoidance in Cluttered Environments, pp. 14056-14062. Attachment

He, Jiacheng	Zhejiang University
Zhao, Fangguo	Zhejiang University
Zhu, Shaohao	Zhejiang University
Li, Shuo	Zhejiang University
Xu, Jinming	Zhejiang University

17:45-18:00 FrDT9.2

Fast and Communication-Efficient Multi-UAV Exploration Via Voronoi Partition on Dynamic Topological Graph, pp. 14063-14070. Attachment

Dong, Qianli	Nankai University
Xi, Haobo	Nankai University
Zhang, Shiyong	Nankai University
Bi, Qingchen	NanKai
Li, Tianyi	Nankai University
Wang, Ziyu	Nankai University
Zhang, Xuebo	Nankai University,

18:00-18:15 FrDT9.3

A Slices Perspective for Incremental Nonparametric Inference in High Dimensional State Spaces, pp. 14071-14078.

Shienman, Moshe	Israel Institute of Technology
Levy-Or, Ohad	Technion, Israel Institute of Technology
Kaess, Michael	Carnegie Mellon University
Indelman, Vadim	Technion - Israel Institute of Technology

18:15-18:30 FrDT9.4

Infrastructure-Less UWB-Based Active Relative Localization, pp. 14079-14086. Attachment

Brunacci, Valerio	University of Perugia
Dionigi, Alberto	University of Perugia
De Angelis, Alessio	University of Perugia
Costante, Gabriele	University of Perugia

FrDT10 Room 10

Perception and Semantics (Regular session)

Chair: Myung, Hyun	KAIST (Korea Advanced Institute of Science and Technology)
Co-Chair: Hosseinzadeh, Mehdi	The Australian Institute for Machine Learning (AIML) -- the University of Adelaide

17:30-17:45 FrDT10.1

HeLiMOS: A Dataset for Moving Object Segmentation in 3D Point Clouds from Heterogeneous LiDAR Sensors, pp. 14087-14094. Attachment

Lim, Hyungtae	Massachusetts Institute of Technology
Jang, Seoyeon	Korea Advanced Institute of Science and Technology
Mersch, Benedikt	University of Bonn
Behley, Jens	University of Bonn
Myung, Hyun	KAIST (Korea Advanced Institute of Science and Technology)
Stachniss, Cyrill	University of Bonn

17:45-18:00 FrDT10.2

Learning from Spatio-Temporal Correlation for Semi-Supervised LiDAR Semantic Segmentation, pp. 14095-14102.

Lee, Seungho	Yonsei University
Lee, Hwijeong	KAIST
Shim, Hyunjung	Korea Advanced Institute of Science and Technology

18:00-18:15 FrDT10.3

TeFF: Tracking-Enhanced Forgetting-Free Few-Shot 3D LiDAR Semantic Segmentation, pp. 14103-14110. Attachment

Zhou, Junbao	Chinese Academy of Sciences
Mei, Jilin	Institute of Computing Technology, Chinese Academy of Sciences
Wu, Pengze	Institute of Computing Technology, Chinese Academy of Science
Chen, Liang	Institute of Computing Technology: Beijing, CN
Zhao, Fangzhou	Institute of Computing Technology, Chinese Academy of Sciences
Zhao, Xijun	China North Vehicle Research Institute, China North Artificial I
Hu, Yu	Institute of Computing Technology Chinese Academy of Sciences

18:15-18:30 FrDT10.4

BEVPose: Unveiling Scene Semantics through Pose-Guided Multi-Modal BEV Alignment, pp. 14111-14118. Attachment

Hosseinzadeh, Mehdi — The Australian Institute for Machine Learning (AIML) -- the Univ
Reid, Ian — University of Adelaide

FrDT11 — Room 11
Mobility and Locomotion (Regular session)

Chair: Guadarrama-Olvera, J. Rogelio — Technical University of Munich
Co-Chair: Piranda, Benoit — Université De Franche-Comté / FEMTO-ST Institute

17:30-17:45 — FrDT11.1

Efficient Balance Detection for Modular Robots, pp. 14119-14124. Attachment

Yazidi, C45 — FEMTO-ST Institute
Piranda, Benoit — Université De Franche-Comté / FEMTO-ST Institute
Ouisse, Morvan — FEMTO-ST Institute
Bourgeois, Julien — Institut FEMTO-ST

17:45-18:00 — FrDT11.2

SCOML: Trajectory Planning Based on Self-Correcting Meta-Reinforcement Learning in Hybird Terrain for Mobile Robot, pp. 14125-14132. Attachment

Yang, Andong — Institute of Computing Technology, Chinese Academy of Sciences
Li, Wei — Institute of Computing Technology, Chinese Academy of Sciences
Hu, Yu — Institute of Computing Technology Chinese Academy of Sciences

18:00-18:15 — FrDT11.3

Reconfigurable Robot Identification from Motion Data, pp. 14133-14140. Attachment

Hu, Yuhang — Columbia University
Wang, Yunzhe — Columbia University
Liu, Ruibo — Columbia University
Shen, Zhou — Columbia University
Lipson, Hod — Columbia University

18:15-18:30 — FrDT11.4

Contact Stability Control of Stepping Over Partial Footholds Using Plantar Tactile Feedback, pp. 14141-14147. Attachment

Guadarrama-Olvera, J. Rogelio — Technical University of Munich
Kajita, Shuuji — Chubu University
Kanehiro, Fumio — National Inst. of AIST
Cheng, Gordon — Technical University of Munich

FrDT12 — Room 12
Reinforcement Learning and Multi-Robot Systems (Regular session)

Chair: Kelly, Jonathan — University of Toronto

17:30-17:45 — FrDT12.1

Efficient Global Trajectory Planning for Multi-Robot System with Affinely Deformable Formation, pp. 14148-14155. Attachment

Sha, Hao — Zhejiang University
Cui, Yuxiang — Zhejiang University
Lu, Wangtao — Zhejiang University
Zhang, Dongkun — Zhejiang University
Wang, Chaoqun — Shandong University
Wu, Jun — Zhejiang University
Xiong, Rong — Zhejiang University
Wang, Yue — Zhejiang University

17:45-18:00 — FrDT12.2

MFC-EQ: Mean-Field Control with Envelope Q-Learning for Moving Decentralized Agents in Formation, pp. 14156-14163.

Lin, Qiushi — Simon Fraser University
Ma, Hang — Simon Fraser University

18:00-18:15 — FrDT12.3

Equivariant Ensembles and Regularization for Reinforcement Learning in Map-Based Path Planning, pp. 14164-14171. Attachment

Theile, Mirco — Technical University of Munich
Cao, Hongpeng — Technical University of Munich
Caccamo, Marco — Technical University of Munich

Sangiovanni Vincentelli, Alberto	University of California, Berkeley

18:15-18:30 FrDT12.4

Competitive Multi-Team Behavior in Dynamic Flight Scenarios, pp. 14172-14179. Attachment

Seyde, Tim Niklas	MIT, ETH Zurich
Lechner, Mathias	Massachusetts Institute of Technology
Rountree, Joshua	United States Air Force
Rus, Daniela	MIT

FrDT13 Room 13

RGB-D Perception (Regular session)

Co-Chair: Siegwart, Roland	ETH Zurich

17:30-17:45 FrDT13.1

PoCo: Point Context Cluster for RGBD Indoor Place Recognition, pp. 14180-14187. Attachment

Liang, Jing	University of Maryland
Deng, Zhuo	Amazon
Zhou, Zheming	Amazon.com LLC
Ghasemalizadeh, Omid	Amazon Lab126
Manocha, Dinesh	University of Maryland
Sun, Min	National Tsing Hua University
Kuo, Cheng-Hao	Amazon
Sen, Arnab	Amazon

17:45-18:00 FrDT13.2

DMFuser: Distilled Multi-Task Learning for End-To-End Transformer-Based Sensor Fusion in Autonomous Driving, pp. 14188-14195.

Agand, Pedram	Simon Fraser University
Mahdavian, Mohammad	Simon Fraser University
Savva, Manolis	Simon Fraser University
Chen, Mo	Simon Fraser University

18:00-18:15 FrDT13.3

Efficient Multimodal Semantic Segmentation Via Dual-Prompt Learning, pp. 14196-14203. Attachment

Dong, Shaohua	University of North Texas
Feng, Yunhe	University of North Texas
Yang, Qing	University of North Texas
Huang, Yan	University of North Texas
Liu, Dongfang	Rochester Institute of Technology
Fan, Heng	University of North Texas

18:15-18:30 FrDT13.4

Zero123-6D: Zero-Shot Novel View Synthesis for RGB Category-Level 6D Pose Estimation, pp. 14204-14211. Attachment

Di Felice, Francesco	Mechanical Intelligence Institute, Sant'Anna School of Advanced
Remus, Alberto	Sant'Anna School of Advanced Studies
Gasperini, Stefano	Technical University of Munich
Busam, Benjamin	Technical University of Munich
Ott, Lionel	ETH Zurich
Tombari, Federico	Technische Universität München
Siegwart, Roland	ETH Zurich
Avizzano, Carlo Alberto	Scuola Superiore Sant'Anna

FrF12O Auditorium

Forum 12 - Industrial Opportunities and Socio-Economic Impact of Medical Robotics (Forum)

Chair: Stefanini, Cesare	Scuola Superiore Sant'Anna
Co-Chair: Ciuti, Gastone	Scuola Superiore Sant'Anna

15:30-18:30 FrF12O.1

*Industrial Opportunities and Socio-Economic Impact of Medical Robotics**.

Stefanini, Cesare	Scuola Superiore Sant'Anna
Ciuti, Gastone	Scuola Superiore Sant'Anna