2024 WRC Symposium on Advanced Robotics and Automation (WRC SARA 2024)

Beijing, China
23August 2024

Technical Program

FrS1A	Room B
Award Session (Regular Sessions)	

Chair: Wang, Zhidong	Chiba Institute of Technology

11:05-11:17	FrS1A.1

Enhancing the Adaptability of Hexapod Robots Via Multi-Agent Reinforcement Learning and Value Function Decomposition, pp. 1-8. Attachment

Zhan, Weishu	Dartmouth College
Ray, Laura	Dartmouth College

11:17-11:29	FrS1A.2

Deep Reinforcement Learning-Based Path Planning with Dynamic Collision Probability for Mobile Robots, pp. 9-14. Attachment

Tariq, Muhammad Taha	Nanjing University of Aeronautics and Astronautics
Wang, Congqing	Nanjing University of Aeronautics and Astronautics
Hussain, Yasir	Nanjing University of Aeronautics and Astronautics

11:29-11:41	FrS1A.3

Continuous Motion Planning for Mobile Robots Using Fuzzy Deep Reinforcement Learning, pp. 15-21.

Wu, Fenghua	Nanyang Technological University
Tang, Wenbing	East China Normal University
Zhou, Yuan	Zhejiang Sci-Tech University
Lin, ShangWei	Nanyang Technological University
Liu, Yang	Nanyang Technological University
Ding, Zuohua	Zhejiang Sci-Tech University

11:41-11:53	FrS1A.4

An Optimized Variational Bayesian Point Set Matching Approach Using Coordinate Ascent and Simulated Annealing, pp. 22-27.

Luan, Fangjun	Shenyang Jianzhu University, School of Information and Control E
Liu, Shitong	Shenyang Jianzhu University
Yuan, Shuai	Shenyang Jianzhu University

11:53-12:05	FrS1A.5

Optimal Viewpoints Selection for Monitoring Teleoperators Based on Event Artificial Potential Method, pp. 28-33.

Liu, Xinyu	The University of Hong Kong
Ye, Jiajie	The University of Hong Kong
Xue, Yuxuan	The University of Hong Kong
Sheng, Yongji	The University of Hong Kong
Wang, Yichen	The University of HongKong
Lin, Jianfeng	The University of Hong Kong
SONG, ZEKUN	The University of Hong Kong
Chen, Jiangcheng	The University of Hong Kong
Xi, Ning	The University of Hong Kong

12:05-12:17	FrS1A.6

Humanoid Grasping with Multi-Finger Dexterous Hands Based on DM-KMP, pp. 34-39.

Wang, Jiashuai	Shandong University
Li, Ke	School of Control Science and Engineering, Shandong University

FrS1B	Room A
Brain-Machine Interface & Human-Robot Interaction and Cooperation (Regular Sessions)	

Chair: Xie, Ping	Yanshan University

11:05-11:17	FrS1B.1

Bayesian Optimization Based Dempster-Shafer Fusion for Brain-Robot Cooperation to Navigate a Mobile Robot, pp. 40-45.

Han, Jixin	Yanshan University
Gao, Chen	Yanshan University
Cheng, Jian	Yanshan University
Chen, Lin	Yanshan University
Zhao, Jing	Yanshan University

11:17-11:29	FrS1B.2

A Pain Assessment Method Based on Decoding Local Field Potential Signals, pp. 46-50.

Cui, Yunlong	Yanshan University
Zhang, Baojia	Yanshan University
GAO, Peijie	Yanshan University
Zhao, Jing	Yanshan University

11:29-11:41	FrS1B.3

Classification of Five Control/Non-Control States to Enhance Asynchronous Brain-Computer Interfaces, pp. 51-54.

Liu, Xueshuo	Yanshan Univerity
Zhang, Qian	Yanshan Univerity
Li, Jiaxin	Yanshan Univerity
Wang, Hantao	Yanshan Univerity
Zhao, Jing	Yanshan Univerity

11:41-11:53	FrS1B.4

Effect of Decision Way on the EEG Signal Classification Performance of Motor Imagery, pp. 55-60.

Lu, Yanzheng	Yanshan University
Wang, Hong	Northeastern University
Niu, Jianye	Yanshan University
Fu, Rongrong	Yanshan University

11:53-12:05	FrS1B.5

LSTM Based Reinforcement Learning for Electroencephalogram Music Generation, pp. 61-68.

Wang, Hua	Nanchang Hangkong University
Cheng, Shan	Nanchang Hangkong University
Tong, lijun	Nanchang Hangkong University
Dong, Hua	Nanchang Hangkong University

12:05-12:17	FrS1B.6

Physical Human-Robot Interaction Control with Human Behavior Comprehension, pp. 69-75.

Hou, Zhimin	National University of Singapore
Li, Dongyu	Beihang University

FrS2A	Room B

Innovations of Technology for Medical Robotics and Devices: Boosting Healthcare (Invited Sessions)

Chair: Su, Baiquan	Beijing University of Posts and Telecommunications

14:40-14:52	FrS2A.1

Single Segment Controllable Continuum Robot: A Pilot Study (I), pp. 76-81.

Ma, Xudong	Beijing University of Posts and Telecommunications
Yang, Qian	Beijing University of Posts and Telecommunications
Wu, Fengtong	Beijing University of Posts and Telecommunications
Zhang, Yinjia	Beijing University of Posts and Telecommunications
Hu, Yida	Harvard Medical School
Liu, Wenyong	Beihang University
Wang, Junchen	Beihang University
Li, Changsheng	Beijing Institute of Technology
Tang, Jie	Beijing Tian Tan Hospital, Capital Medical University
Kuang, Shaolong	Shenzhen Technology University
Su, Baiquan	Beijing University of Posts and Telecommunications

14:52-15:04	FrS2A.2

Clamping Tool Holder of Replaceable Tools for Medical Robot (I), pp. 82-87.

Zhang, Yinjia	Beijing University of Posts and Telecommunications
Yang, Qian	Beijing University of Posts and Telecommunications
Zhang, Dengbo	Beijing University of Posts and Telecommunications
Ma, Xudong	Beijing University of Posts and Telecommunications
Tang, Jie	Beijing Tian Tan Hospital, Capital Medical University
Hou, Yuanzheng	Xuanwu Hospital, Capital Medical University
Hu, Yida	Harvard Medical School
Wang, Junchen	Beihang University
Li, Changsheng	Beijing Institute of Technology

Kuang, Shaolong	Shenzhen Technology University
Liu, Wenyong	Beihang University
Su, Baiquan	Beijing University of Posts and Telecommunications

15:04-15:16	FrS2A.3

Design of Medium Contact 3D Printed Guides in Robot-Assisted Laminectomy: Finite Element Analysis and Animal Experiment (I), pp. 88-93.

Ji, Xuquan	Beihang University
Zhang, Xiaojuan	Beijing Zhuzheng Robot Co., LTD
Zhu, Yuanyuan	Beihang University
Zhang, Yonghong	Beihang University
Hu, Lei	Beihang University
Liu, Wenyong	Beihang University

15:16-15:28	FrS2A.4

Compact Multiple Functional Integrated Medical Robotic End-Effector for Neurosurgery (I), pp. 94-99.

Zhang, Yinjia	Beijing University of Posts and Telecommunications
Li, Weihan	The University of Tokyo
Wang, Haotian	Beijing University of Posts and Telecommunications
Ma, Xudong	Beijing University of Posts and Telecommunications
Yang, Qian	Beijing University of Posts and Telecommunications
Tang, Jie	Beijing Tian Tan Hospital, Capital Medical University
Hou, Yuanzheng	Xuanwu Hospital, Capital Medical University
Hu, Yida	Harvard Medical School
Li, Changsheng	Beijing Institute of Technology
Liu, Wenyong	Beihang University
Wang, Junchen	Beihang University
Su, Baiquan	Beijing University of Posts and Telecommunications

15:28-15:40	FrS2A.5

A Bone Tumor Boundary Extraction Method Incorporating Envelope and Responsive Region for Robot-Assisted R0 Resection (I), pp. 100-105.

Liu, Yanwen	Beihang University
Fan, Daoyang	Beijing Jishuitan Hospital, Capital Medical University
Liu, Weifeng	Beijing Jishuitan Hospital, Capital Medical University, Pe
Liu, Wenyong	Beihang University

15:40-15:52	FrS2A.6

Hair Direction Detection (I), pp. 106-112.

Ba, Peng	Beijing University of Posts and Telecommunications
Wang, Pengyi	Beijing University of Posts and Telecommunications
Wu, Hongde	Beijing University of Posts and Telecommunications
Yang, Qian	Beijing University of Posts and Telecommunications
Feng, Yongqiang	Plastic Surgery Hospital, Chinese Academy of MedicalSciences And
Wang, Junchen	Beihang University
Hu, Yida	Harvard Medical School
Li, Changsheng	Beijing Institute of Technology
Liu, Wenyong	Beihang University
Kuang, Shaolong	Shenzhen Technology University
Su, Baiquan	Beijing University of Posts and Telecommunications

FrS2B	Room A
Robotic Learning and Vision (Regular Sessions)	
Chair: Chen, Fei	T-Stone Robotics Institute, the Chinese University of Hong Kong

14:40-14:55	FrS2B.1

Invited Talk: *Intelligent Robotics and Machine Learning for Manufacturing Automation*

Chen, Heping	Texas State University

14:55-15:07	FrS2B.2

Methodology on Robot-Based Complex Surface Processing Using 2D and 3D Visual Combination, pp. 113-120.

Wu, Haodong	Memorial University
Zou, Ting	Memorial University
Burke, Heather	Memorial University of Newfoundland

| King, Stephen | Memorial University of Newfoundland |
| Burke, Brian | Nunavut Fisheries Association (NFA) |

| 15:07-15:19 | FrS2B.3 |

MSD-YOLO: A Novel Method for Detecting Microscopic Surface Defects in Metal Spray-Painted Thermal Mugs, pp. 121-128.

Yan, Zhibo	Zhejiang Normal University
Zhang, Teng	Xi'an Jiaotong University；Zhejiang Normal University
Liu, Yu	The 722nd Research Institute of China Shipbuilding Corporation,
Li, Rui	Xi'an Jiaotong University
Wang, Dongyun	Zhejiang Normal University

| 15:19-15:31 | FrS2B.4 |

Res2net Based Siamese Network for Object Tracking Via Efficient Multi-Scale Attention and Border Region Reppoints, pp. 129-134.

Yuan, Shuai	Shenyang Jianzhu University
Geng, Jinyu	Shenyang Jianzhu University
Dou, Huize	Shenyang Jianzhu University

| 15:31-15:43 | FrS2B.5 |

Combining VLM and LLM for Enhanced Semantic Object Perception in Robotic Handover Tasks, pp. 135-140.

Huang, Jiayang	Shenzhen Technology University
Limberg, Christian	Bielefeld University
Arshad, Syed Muhammad Nashit	National University of Sciences and Technology
Zhang, Qifeng	Shenyang Institute of Automation, CAS
Li, Qiang	Shenzhen Technology University

| 15:43-15:55 | FrS2B.6 |

Research on Enhanced YOLOv8 Gesture Recognition Method for Complex Environments, pp. 141-146.

Yuan, Shuai	Shenyang Jianzhu University
Kong, Xiangjie	Shenyang Jianzhu University
Zhang, Shuai	Shenyang Jianzhu University

FrS3A	Room B
Revolutionizing Interaction II: Embodied Intelligence and the New Era of Human-Robot Collaboration (Invited Sessions)	
Chair: Li, Qiang	Shenzhen Technology University

| 16:15-16:27 | FrS3A.1 |

Mechatronic Development of Highly Integrated Electromagnetic Actuator (HIERA) for Scalable Adolescent Exoskeletons, pp. 147-152.

KARDOFAKI, Mohamad	UVSQ
FOUZ, Moustafa	UVSQ
Tabti, Nahla	Université Paris-Sud
Su, Hang	Politecnico Di Milano
Alfayad, Samer	Paris-Saclay Universit -Evry University
DYCHUS, Eric	Sandyc

| 16:27-16:39 | FrS3A.2 |

Mechanical Design of a Humanoid Robotic Head for Human Robot Interaction, pp. 153-157.

Yahnian, Sevag	Kalysta
Sleiman, Maya	Paris Saclay
Ait Oufroukh, Naima	University of Paris-Saclay
Su, Hang	Politecnico Di Milano
Alfayad, Samer	Paris-Saclay Universit -Evry University

| 16:39-16:51 | FrS3A.3 |

HydROS 104: Interactive ROS Compatible Electro-Hydraulic Educational Platform, pp. 158-162.

Sleiman, Maya	Paris Saclay
Ghandour, Maysoon	Université Paris Saclay
KARDOFAKI, Mohamad	UVSQ
Jleilaty, Subhi	Paris-Saclay University
Su, Hang	Politecnico Di Milano
Alfayad, Samer	Paris-Saclay Universit -Evry University

FrS3B	Room A
Robot Design and Control (Regular Sessions)	
Chair: Liu, Wenyong	Beihang University

16:15-16:27	FrS3B.1

System Design and Kinematic Analysis of a Dexterous Hand with Humanoid Characteristics, pp. 163-169.

Liu, Linjie	Shandong University
Sun, Ning	Shandong Normal University
Li, Ke	School of Control Science and Engineering, Shandong University

16:27-16:39	FrS3B.2

Structural Design of Multi-Functional Caregiving & Rehabilitation Robot and Its Motion Simulation Analysis of Multi-Posture Adjustment Mechanism, pp. 170-175.

Zhang, Xiaodong	Xi'an Jiaotong University
Yang, Xinyu	Xinjiang University
Zha, Wenyu	Shaanxi Xiaodong Aid Robotics Technology Co
Mu, Tong	Xinjiang University

16:39-16:51	FrS3B.3

Design and Implementation of a Quadrotor UAV with a Soft Gripper, pp. 176-181.

Wang, Xiaobo	Zhejiang Lab

FrS4A	Room B
Modern Control of Marine Robotics (Invited Sessions)	
Chair: Ji, Daxiong	Zhejiang University

16:55-17:10	FrS4A.2

Invited Talk: *Marine Vehicle Model Predictive Control Using an Implicit Sliding Mode Feedback*

Ji, Daxiong	Zhejiang University

17:10-17:22	FrS4A.2

Composite Controller Design for AUV with Uncertainties and Noises Based on Combined Kalman Filter and RBFO (I), pp. 182-187.

Zhang, Qiang	Zhejiang University
Ji, Daxiong	Zhejiang University

17:22-17:34	FrS4A.3

Enhanced PSO-Tuned Fractional-Order Adaptive Model Predictive Control for Robust UAV-Quadrotor Trajectory Tracking (I), pp. 188-195.

Sheharyar, Hussain	Zhejiang University
Ji, Daxiong	Zhejiang University
Xu, Lie	Zhejiang University

17:34-17:46	FrS4A.4

Model-Free Fault Diagnosis for Autonomous Underwater Vehicles Using Multi-Layer Convolution and Attention Mechanism (I), N/A

lu, enhao	Zhejiang Ocean University
Ji, Daxiong	Zhejiang University
Wang, Xia	Zhejiang Ocean University
Zhang, Qiang	Zhejiang University

17:46-17:58	FrS4A.5

SCKAN: A Lightweight Model-Free Fault Diagnosis Method for Autonomous Underwater Vehicles (I), pp. 202-207.

Xu, Lie	Zhejiang University
Ji, Daxiong	Zhejiang University

FrS4B	Room A
Advanced Robot Control (Regular Sessions)	
Chair: Yuan, Shuai	Shenyang Jianzhu University

16:55-17:07	FrS4B.1

Fast Safe Rectangular Corridor-Based Online AGV Trajectory Optimization with Obstacle Avoidance, pp. 208-215.
Attachment

Liang, shaoqiang	Huazhong University of Science and Technology
Fa, Songyuan	HUST
Li, Yiqun	Huazhong University of Science and Technology

17:07-17:19	FrS4B.2

Variational Bayesian Based Adaptive CKF-SLAM Algorithm under Non-Steady Noise, pp. 216-221.

Zhang, feng	Shenyang Jianzhu University
Li, Aichun	Shenyang Jianzhu University
Yuan, Shuai	Shenyang Jianzhu University

17:19-17:31	FrS4B.3

Model Reference Adaptive Control for a Manned eVTOL Aircraft, pp. 222-227.

Wang, Xiaobo	Zhejiang Lab

17:31-17:43	FrS4B.4

Reorientation of a Bio-Cat Falling Legged Robot Driven by Pneumatic Muscles with Energy Optimization, pp. 228-234.

Zhu, Xiaocong	Zhejiang University
Tan, Mingao	The University of Hong Kong
Cao, Jian	Hefei University of Technology
Huang, Lixi	The University of Hong Kong

17:43-17:55	FrS4B.5

New GCC-TDOA Compensation Method Combined with the Wavelet Threshold Filtering, pp. 235-242.

Kan, Yue	Henan Polytechnic University
Hu, Yapeng	Henan Polytechnic University
Zhang, Tengfei	Henan Polytechnic University
Shi, Chenzhe	Henan Polytechnic University
Gao, Wa	Nanjing Forestry University
Zha, Fusheng	Harbin Institute of Technology

FrPP1	Hall
Poster Session (Poster Sessions)	

10:45-17:30	FrPP1.1

An Efficient Human Activity Recognition Framework Based on Graph Convolutional Network for Human-Robot Collaboration (I), pp. 243-248.

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

10:45-17:30	FrPP1.2

NEHand: Enhancing Hand Pose Estimation in the Wild through Synthetic and Motion Capture Datasets, pp. 249-256.

Jiao, Xiuzhen	Dianke Data (Beijing) Information Technology Services Co., Ltd
Li, Xiangnan	Yantai Science and Technology Innovation Promotion Center
Wen, Haonan	Yantai University

10:45-17:30	FrPP1.3

Optimized YOLO-Based Model for Real-Time Hand Keypoint Detection in Robotics (I), pp. 257-262.

hu, lingxiang	Paris Saclay University
zhu, xingfei	Jiangnan University
LI, Dun	Tsinghua University
Jiang, Zhinan	Qingdao University
Zhang, Fukai	Shandong University
zhang, chengqiu	Shandong University

10:45-17:30	FrPP1.4

Integrating Wireless Sensor Networks in Construction Project Risk Management: A Cyber-Physical Approach to Enhancing Robustness and Security in Smart Building Developments (I), pp. 263-268.

Shuai, Li	Shenyang University of Technology, Shenyang 110870, Liaoning
Aimin, Zhu	Shenyang University of Technology, Shenyang 110870, Liaoning

10:45-17:30	FrPP1.5

Real-Time Human Motion Intention Recognition for Powered Wearable Hip Exoskeleton Using LSTM Networks (I), pp. 269-273.

Ding, fan	Capital University of Physical Education and Sports
Yu, Yang	Capital University of Physical Education and Sports
Dong, Lin	Capital University of Physical Education and Sports

10:45-17:30	FrPP1.6

Design and Control of a Novel Powered Wearable Knee Exoskeleton for Lower Limb Rehabilitation (I), pp. 274-279.

Du, Kui	Beijing Institute of Technology
Yu, Yang	Capital University of Physical Education and Sports
Dong, Lin	Capital University of Physical Education and Sports

10:45-17:30	FrPP1.7

A Hybrid Approach to Real-Time Robotic Visual Navigation: Integrating Detection and Scene Segmentation (I), pp. 280-285.

hu, lingxiang	Paris Saclay University
zhu, xingfei	Jiangnan University
LI, Dun	Tsinghua University
Zhang, Fukai	Shandong University
zhang, chengqiu	Shandong University

10:45-17:30	FrPP1.8

A Comprehensive Study of Deep Learning Visual Odometry for Mobile Robot Localization in Indoor Environments, pp. 286-291.

hu, lingxiang	Paris Saclay University
LI, Xiangjun	Université Paris-Saclay
Bonardi, Fabien	Université D'Évry
Ait Oufroukh, Naima	University of Paris-Saclay
AHMED ALI, SOFIANE	IBISC, Evry-Val-d'Essonne University, Universite Paris-Saclay, E

10:45-17:30	FrPP1.9

Design of Photovoltaic Panel Vehicle Cleaning Robot (I), pp. 292-296.

Xu, Feng	Beijing Information Science & Technology University
Liu, Quan	Beijing Information Science and Technology University
Li, Zhenfeng	Beijing Information Science and Technology University

10:45-17:30	FrPP1.10

Design of Dictyophora Rubrovolvata Picking Robot (I), pp. 297-302.

Li, Zhenfeng	Beijing Information Science and Technology University
Liu, Quan	Beijing Information Science and Technology University
Xu, Feng	Beijing Information Science & Technology University
YE, Lingbo	Beijing Information Science and Technology University

10:45-17:30	FrPP1.11

A Control Method for Electric Cylinder Based on Three-Order ADRC (I), pp. 303-308.

Jiang, ZhiFan	Nanchang Hangkong University
Chen, Zhihua	Nanchang Hangkong University
Tong, lijun	Nanchang Hangkong University
Huang, Jiale	School of Information Engineering, Nanchang Hangkong University
Che, Yufei	Nanchang Hangkong University

10:45-17:30	FrPP1.12

Research on the Strike Strategy of Quadcopter Unmanned Aerial Vehicles for Mobile Targets (I), pp. 309-314.

Zhang, Wencai	Norinco Group Liao Shen Industries Group Co., ltd
Sun, Junjie	Norinco Group Liao Shen Industries Group Co., ltd
Li, Yanying	Norinco Group Liao Shen Industries Group Co., ltd
Yan, Shen	Norinco Group Liao Shen Industries Group Co., ltd
Zhang, Ning	Norinco Group Liao Shen Industries Group Co., ltd
Wang, Jiaqi	Norinco Group Liao Shen Industries Group Co., ltd
Chen, Zhihua	Nanchang Hangkong University
Pan, Mingran	Norinco Group Liao Shen Industries Group Co., ltd

10:45-17:30	FrPP1.13

Heart Rate Generation Algorithm Using Generative Adversarial Networks Based on Time-Frequency Domain Composite Loss Values, pp. 315-320.

Lianlian, Cai	Changchun University of Architecture and Civil Engineering
Ziyao, Xu	Changchun University of Architecture and Civil Engineering
Zhao, Wanrong	Changchun University of Science and Technology
Ma, Jiayue	Changchun University of Science and Technology

Gao, Ziyi	Changchun University of Science and Technology
Huang, XuPeng	Changchun University of Science and Technology

10:45-17:30	FrPP1.14

Time Series Prediction of EEG Signals Based on a Multi-Scale Approach, pp. 321-326.

Fei, Gao	Changchun University of Architecture and Civil Engineering
Yunfei, Teng	Changchun University of Architecture and Civil Engineering
Jing, Li	Jilin Xinzhou Intelligent Technology Co., Ltd
Pang, Weizhi	Changchun University of Science and Technology
Huang, Guanhua	Changchun University of Science and Technology
Tianyun, Luan	Changchun University of Science and Technology

10:45-17:30	FrPP1.15

Multi-Scale Heart Rate Anomaly Detection Based on Temporal Convolutional Networks, pp. 327-332.

Lianlian, Cai	Changchun University of Architecture and Civil Engineering
Qiao, Wu	Changchun University of Architecture and Civil Engineering
Di, Zhang	Changchun University of Architecture and Civil Engineering
Liang, Qizhe	Changchun University of Science and Technology
Cong, Xinxin	Changchun University of Science and Technology
Huang, XuPeng	Changchun University of Science and Technology

10:45-17:30	FrPP1.16

Research on Wearable Discharge Fault Detection Technology for Electrical Equipment within the Audible Range Using Deep Learning, pp. 333-337.

Gao, Hongyi	Changchun University of Science and Technology
Bai, Xuemei	Changchun University of Science and Technology
Wang, Zhijun	High-Performance Computing Center of Changchun Normal University
Zhang, Chenjie	Changchun University of Science and Technology

10:45-17:30	FrPP1.17

GHTPAN: A Graph Head-Tail Partner Attention Network for Traf-Fic Flow Prediction, pp. 338-343.

Yang, Yang	Changchun University of Architecture and Civil Engineering
Lin, Kai	Changchun University of Architecture and Civil Engineering
yusong, ke	Tongji
Xu, Cecheng	Changchun University of Science and Technology
Huang, Fuzhong	Changchun University of Science and Technology
Guo, Hongxi	Changchun University of Architecture and Civil Engineering
Huang, XuPeng	Changchun University of Science and Technology

10:45-17:30	FrPP1.18

Deep Learning-Based Low-Light Image Enhancement Method for Driving Behavior Recognition, pp. 344-349.

Zhang, Chenjie	Changchun University of Science and Technology
Li, Jialu	Changchun University of Science and Technology
Hu, Hanping	Changchun University of Science and Technology
Bai, Xuemei	Changchun University of Science and Technology

10:45-17:30	FrPP1.19

Lightweight UAV Image Drowning Detection Method Based on Improved YOLOv7, pp. 350-356.

Cui, Yuhao	Changchun University of Science and Technology
Li, Mingqiu	Changchun University of Science and Technology
Huang, XuPeng	Changchun University of Science and Technology
Yang, Yang	Changchun University of Science and Technology

10:45-17:30	FrPP1.20

A Method for Generating Environmental Maps Based on the Improved YOLOv8, pp. 357-362.

YAN, Mingtao	Qingdao University
Sun, Chuanzhu	Qingdao University
Fu, Chaoxing	Qingdao University

10:45-17:30	FrPP1.21

Research on the Impact of Types of Knowledge Workers' Co-Creation with AI on Purchase Intention of Product, pp. 363-367.

tu, yangjun	Hunan University
Jiang, Simin	Hunan University
Qian, Guanyu	Hunan University
yang, zhi	Hunan University

10:45-17:30	FrPP1.22

Defect Detection in Solar Panels Based on PV-Flow, pp. 368-373.

Niu, Minghao	Yanshan University
Li, Jiaqi	University
Li, Mengyu	Yanshan University
Zhao, Yifan	Yanshan University
Liu, Ying	The Yingli Energy Development Co., Baoding
Wen, Shuhuan	Yanshan University

10:45-17:30	FrPP1.23

A Model-Based Control Framework for a Novel Combined Octopod Robot, pp. 374-379.

Zhang, Yi	Shandong University
Zhou, Lelai	Shandong University
Sun, Jingyu	Shandong University
Fan, Shenglin	Shandong University
Li, Guowei	Shandong University
Sui, Mingjun	National Innovation Center of High-Speed Rail Technology (Qingd
Dai, Xiaomeng	China Railway Construction Corporation Bridge Engineering Bureau
Li, Yibin	Shandong University

10:45-17:30	FrPP1.24

Regularization Continual Learning Based on Bayesian Uncertainty Modeling for P300 Brain-Computer Interface, pp. 380-385.

Huang, Qianqi	South China University of Technology
Gu, Zhenghui	South China University of Technology

10:45-17:30	FrPP1.25

A Collaborative Action Sequence Planning Method for Dual-Arm Piano Playing Robot Arm-Hand Based on Elite Retention Multi-Objective Optimization, pp. 386-393. Attachment

Sun, Wei Dong	Nanjing University of Aeronautics and Astronautics
Jiang, Jincheng	Nanjing University of Aeronautics and Astronautics
Bin, YiMing	Nanjing University of Aeronautics and Astronautics
Yu, Yanzhao	Nanjing University of Aeronautics and Astronautics, Qinhuai Dist
Wang, Lingyu	Nanjing University of Aeronautics and Astronautics
Zhang, Siwen	Nanjing University of Aeronautics and Astronautics
Gui, Kai	Shanghai Jiaotong University
Wan, Minhong	Zhejiang Lab
Duan, Jinjun	Nanjing University of Aeronautics and Astronaut

10:45-17:30	FrPP1.26

An Aviation Plug Regrasping Strategy Fused with Prior Knowledge Perception for Dual-Arm Collaborative Assembly Task, pp. 394-400. Attachment

Jiang, Jincheng	Nanjing University of Aeronautics and Astronautics
Gui, Kai	Shanghai Jiaotong University
Sun, Wei Dong	Nanjing University of Aeronautics and Astronautics
GUO, AN	Nanjing University of Aeronautics and Astronautics
Wang, Zhengwei	Nanjing University of Aeronautics and Astronautics
Wang, Lingyu	Nanjing University of Aeronautics and Astronautics
Duan, Jinjun	Nanjing University of Aeronautics and Astronaut

10:45-17:30	FrPP1.27

EM-SAM: Eye-Movement-Guided Segment Anything Model for Object Detection and Recognition in Complex Scenes, pp. 401-408.

li, jinqi	National University of Defense Technology
Yu, Yang	National University of Defense Technology
Zhou, Junfan	National University of Defense Technology
Wang, Chinan	National University of Defense Technology
zeng, ling-li	National University of Defense Technology

10:45-17:30	FrPP1.28

Research on Robotic Grinding Technology of Precision Forged Blade Edge for Aero Engine, pp. 409-414.

Tao, Yong	Beijing University of Aeronautics and Astronautics
Yang, lin	Beihang University
Xue, Jiao	Beihang University
Liu, Yazui	Beihang University

Li, Zhiyong	Changhe Aircraft Industries (GROUP) Ltd
Li, Wen	Changhe Aircraft Industries (GROUP) Ltd

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Stiffness Performance Optimization Method of Drilling Robot Based on QPSO Algorithm, pp. 415-422.

Zhang, Yufan	Beihang University
Tao, Yong	Beijing University of Aeronautics and Astronautics
Wei, Hongxing	Beihang University
Liu, Haitao	BUAA
Wan, Jiahao	Beihang University
Guo, Ruijun	Beijing C.H.L. Robotics Co., Ltd

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Application of Fuzzy PID Algorithm in Path Control of Intelligent Tracking Vehicles, pp. 423-429.

Zhou, Wenlong	University of Jinan
Jun, Wei	University of Jinan
HU, Yan	Beihang University, Beijing, China. or University ofJinan, Jinan,
Liu, Lei	University of Jinan
Wang, Yiran	University of Jinan

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Time-Frequency Domain Transformation Space-Time Graph Convolution, pp. 430-436.

Huang, XuPeng	Changchun University of Science and Technology
Yang, Yang	Changchun University of Science and Technology
Yang, Chao	Beijing Aerospace Times Laser Inertial Technology Company
Cui, Yuhao	Changchun University of Science and Technology

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Autonomous Prediction of UAV Launch Parameters Based on SSA-BP Model, pp. 437-442.

Jia, Huayu	University of Chinese Academy of Sciences
Zheng, HuiLong	University of Chinese Academy of Sciences
Huo, Shunbo	University of Chinese Academy of Sciences
Zhou, Hong	University of Chinese Academy of Sciences
Zhang, Qian	University of Chinese Academy of Sciences

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Obstacle Avoidance Path Planning for Robotic Arm Based on EIT Tactile Sensing (I), pp. 443-450.

Meng, Kai	Hebei University of Technology
Zheng, Wendong	Tianjin University of Technology
Weng, Ling	Hebei University of Technology
Liu, Huaping	Tsinghua University

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AvTF: A Visual-Tactile Fingertip with Active Sensing and Manipulation, pp. 451-457. Attachment

zhao, jie	Anhui University of Technology
Wang, Sicheng	New York University
Shan, Jianhua	Anhui University of Technology
Sun, Yuhao	Anhui University of Technology
Zhang, Shixin	China University of Geosciences (Beijing), Tsinghua Univer
Sun, Fuchun	Tsinghua University
Fang, Bin	Beijing University of Posts and Telecommunications / Tsinghua Un

10:45-17:30	FrPP1.35

Virtual Variable Stiffness Control Method for Quadruped Robot Leg Based on Contact Event, pp. 458-463.

Sun, Jingyu	Shandong University
Zhou, Lelai	Shandong University
Zhang, Yi	Shandong University
Li, Guowei	Shandong University
Fan, Shenglin	Shandong University
Sui, Mingjun	National Innovation Center of High-Speed Rail Technology (Qingd
Dai, Xiaomeng	China Railway Construction Corporation Bridge Engineering Bureau
Li, Yibin	Shandong University

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Design and Realization of a Multimodal Wheel-Leg Hybrid Mobile Robot, pp. 464-469.

Xie, Zijian	Beijing University of Civil Engineering and Architecture
qin, jianjun	Beijing University of Civil Engineering and Architecture
Li, haibo	Beijing University of Civil Engineering and Architecture
Fang, Shihao	Beijing University of Civil Engineering and Architecture

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Indoor Mobile Robot Map Construction Based on Improved Cartographer Algorithm, pp. 470-475.

Zheng, Zhong	School of Electrical and Electronic Engineering , Changchun Unive
Xie, Mujun	Changchun University of Technology
Jiang, Changhong	School of Electrical and Electronic Engineering, Changchun Unive
Bian, HeYu	School of Electrical and Electronic Engineering , Changchun Univ
wang, wei	School of Electrical and Electronic Engineering , Changchun Univ

10:45-17:30	FrPP1.38

Robot Navigation Based on 3D Scene Graphs with the LLM Tooling, pp. 476-482.

Cheng, Yao	Shandong New Generation Information Industrial Technology Resear
Jiang, Fengyang	Shandong New Generation Information Industrial Technology Resear
Han, Zhe	Shandong New Generation Information Industrial Technology Resear
Wang, Huaizhen	Inspur Group
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Intelligent Spatial Perception by Building Hierarchical 3D Scene Graphs for Indoor Scenarios with the Help of LLMs, pp. 483-490.

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Wei, Lei	Inspur Intelligent Terminal Co., Ltd

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Combining A* and Dynamic Window Algorithm for Dynamic Path Planning of Visually Impaired People Using Auxiliary Travel Equipment, pp. 491-497.

Guo, Hongxi	Changchun University of Architecture and Civil Engineering
Huang, Fuzhong	Changchun University of Science and Technology
Jie, Jingfeng	Changchun University of Science and Technology
Xu, Cecheng	Changchun University of Science and Technology
Yang, Yang	Changchun University of Architecture and Civil Engineering

10:45-17:30	FrPP1.41

Path Planing Using Multiple Random Trees Algorithm Based on Adaptive Step Adjustment, pp. 498-503.

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Zhang, Wenhe	China Railway Construction Corporation Bridge Engineering Bureau
Li, Yibin	Shandong University