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Pages 1-583



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Monday, February 19

Monday, February 19 8:20 - 8:30

Opening Remarks

Room: Keauhou II

Chair: Ruidong Li

Monday, February 19 8:30 - 9:30

Keynote I:

On Label Efficient Learning

Prof. Aggelos Katsaggelos

Room: Keauhou II

Chair: Haohong Wang

Monday, February 19 9:30 - 10:00

Coffee Break

Monday, February 19 10:00 - 12:00

Distinguished Lectures:

Prof.: Georgios Giannakis

Prof. Xiuzhen Cheng

Room: Keauhou II

Chair: Sooyoung Kim

CNS-1: CNS I

Room: Keauhou III

Chair: Min Chen

Adaptive Honey Pot Defense Deployment: A Stackelberg Game Approach with Decentralized DRL for AMI Protection

Abdullatif Albaseer, Moqbel Hamood and Mohamed M. Abdallah
pp. 1-5

Visual Question Answering

Ahmed Nada and Min Chen
pp. 6-10

On the Experimental Performance Measurement of Quantum Teleportation

Ved Dharkar and Suman Kumar
pp. 11-15

A High-fidelity Partial Face Manipulation Dataset for Enhanced Deepfake Detection

Kaitai Tong, Junbin Zhang, Yixiao Wang, Hamid Reza Tohidypour and Panos Nasiopoulos

pp. 16-20

Algorithm for Server Allocation in Delay-Sensitive Internet-of-Things Monitoring Services

Shoya Imanaka, Akio Kawabata, Bijoy Chand Chatterjee and Eiji Oki

pp. 21-25

Credit Card Transactions Fraud Detection for Multiple Consumer Behaviors

Baker Al Smadi, William B Glisson, Majd Tahat, Hosam Alamleh and Ali Abdullah S. AlQahtani

pp. 26-32

Revisiting Multi-Factor Authentication Token Cybersecurity: A TLS Identity Module Use Case

Pascal Urien

pp. 33-38

CNS-2: CNS II

Room: Keauhou IV

Chair: Michal Aibin

Dragonfly Algorithm Application for Solving the Nurse Scheduling Problem

Arghavan Ayoughi, Chi Zhang., Stephen Okeleke, Shufei Li, Wei Xin, Yuhan Yue, Ania Aibin and Michal Aibin

pp. 39-43

Multi-task optical performance monitoring using a transfer learning assisted cascaded deep neural network in WDM systems

Yameng Cao, Di Zhang, Hanyu Zhang and Yan Ling Xue

pp. 44-47

Synergized QoE-centric Streaming for Telerobotics

Madhurima Ganguly, Abhijan Bhattacharyya, Ashis Sau and Suraj Kumar Mahato

pp. 48-54

Regulating Covert Communication Capacity with Full-Duplex Receiver Against Location-Uncertain Eavesdropper

Rui Xu, Gaolei Li, Yuchen Liu, Yue Zhao, Jiawen Kang and Jianhua Li

pp. 55-59

Optimal Balancing of Data Transfer Time and Cost in High-Performance Networks

Liudong Zuo and Daqing Yun

pp. 60-64

Path Computation in Multi-switching Multi-layer Networks

Lin Chen and Zihe Yi

pp. 65-69

Security Dataset Augmentation Invariance and Distribution Independence

Gavin Black, William McCullough and Paul Roysdon

pp. 70-75

CNS-3: CNS III

Room: Mauna Kea

Chair: Ahmed A Ahmed

Performance Evaluation of MIMO-FTN Signaling under Multipath Fading Channels with PA Non-linearity

Hao-Tse Chiu, Shuhei Saito, Keita Kuriyama, Kentaro Tanaka, Hitoshi Hasegawa, Toshifumi Miyagi, Takeshi Onizawa and Fumiaki Maehara
pp. 76-80

Multi-armed Bandit Algorithm for Online Offloading and Scheduling in Edge Computing Environment

Xiaoying Han and Xiaohua Xu
pp. 81-87

Ensuring a Semantically Effective IoT Network Through Blockchain with Delayed Feedback

Omer Gencay, Alperen Balci, Elif Tugce Ceran and Elif Uysal
pp. 88-92

An Impression-Based Video Analysis Method for Video Recommender Systems

Akito Sasahara, Fumiya Yamaguchi, Da Li, Mayumi Ueda and Shinsuke Nakajima
pp. 93-99

Reliable and Low-Latency Communications for Critical Infrastructures Utilizing Wireless Mesh Networks

Ritayan Biswas, Joonas Säe, Juho Pirskanen and Jukka Lempiäinen
pp. 100-105

Selfish Mining Attacks in Sharded Blockchains

Sheng-Wei Wang
pp. 106-110

A Game Theory Based Rational Mining Strategy in Blockchains With Multiple Rational Miners

Sheng-Wei Wang
pp. 111-115

CNS-4: CNS IV

Room: Mauna Loa

Chair: Xinyue Zhang

Prompt Fix: Vulnerability Automatic Repair Technology Based on Prompt Engineering

Peng Liu, Zhang Yu qing, He Wang and Chen Zheng
pp. 116-120

A segmentation-based data contention resolution method for optical named data networking

Shimin Chen, Lingyun Zhou and Rui Hou
pp. 121-126

Capacity Improvement with NOMA-CI Precoding for MU-MISO Downlink Systems

Yanfei Lu, Qing Li, Qinghe Gao, Yingzhen Wu, Yan Huo and Tao Jing
pp. 127-132

Delayed broadcast-based data forwarding strategy for vehicular named data networks

Fei Wang and Rui Hou

pp. 133-138

Smart-Watcher: An AI-Powered IoT Monitoring System for Small-Medium Scale Premises

Ahmed A Ahmed and Bernard Nyarko

pp. 139-143

Measurements of Shadowing Loss at 3 and 7 GHz for Small-Cell Planning in University Building

Soon-Soo Oh and Dong-Woo Kim

pp. 144-146

Research on SSL/TLS Security Differences Based on RFC Documents

Zheng Zi qiu, Xuejun Li, He Wang, Gaofei Wu and Zhang Yu qing

pp. 147-151

Monday, February 19 12:00 - 13:30

Lunch

Monday, February 19 13:30 - 15:30

CNS-5: CNS V

Room: Keauhou II

Chair: Razvan Cristian Voicu

Weighted Multi-Task Vision Transformer for Distraction and Emotion Detection in Driving Safety

Yixiao Wang, Zhe Li, Guowei Guan, Yipin Sun, Chunyu Wang, Hamid Reza Tohidypour, Panos Nasiopoulos and Victor C.M. Leung

pp. 152-156

A Product Feature Mentioned Timestamp Extraction Method in Review Videos for Online Shopping

Fumiya Yamaguchi, Da Li, Mayumi Ueda and Shinsuke Nakajima

pp. 157-162

Semi-blind Channel Estimation on 802.11 OFDM Data Symbols

Christopher Hansen

pp. 163-167

Foundational Models for Malware Embeddings Using Spatio-Temporal Parallel Convolutional Networks

Dhruv Nandakumar, Devin Quinn, Elijah Soba, Eunyoung Kim, Christopher Redino, Chris Chan, Kevin Choi, Abdul Rahman and Edward Bowen

pp. 168-174

Communication Interchange For Artificial Intelligence Systems

Razvan Cristian Voicu, Aarush K Pande, Muhammad Hassan Tanveer and Yusun Chang

pp. 175-181

Semantic-Aware and Goal-Oriented Communications for Object Detection in Wireless End-to-End Image Transmission

Fatemeh Zahra Safaeipour and Morteza Hashemi

pp. 182-187

Deception-based IDS against ARP Spoofing Attacks in Software-Defined Networks

Fabrice Mvah, Vianney Kengne Tchendji, Clémentin Tayou Djamegni, Ahmed H. Anwar Hemida,
Deepak K Tosh and Charles A Kamhoua
pp. 188-192

CNS-6: CNS VI

Room: Keauhou III

Chair: Yong Wang

An Image-based Plant Weed Detector using Machine Learning

Ahmed A Ahmed and Jamil Ahmed
pp. 193-197

Social Media Development and Multi-modal Input for Stock Market Prediction: A Review

Jinshui Huang, Jun Wang, Qing Li and Xiaoman Jin
pp. 198-202

Advanced Cyber Deception Framework (ACDF): A Comprehensive Study

Mark A Maldonado, Caleb R Johnson, Manbir S Gulati, Todd M Jaspers and Paul Roysdon
pp. 203-208

Variable Code Size Autoencoder (VCSA) Meets CSI Compression in Model Generalization

Yifei Song, Juan Roa, Renjian Zhao, Zhigang Rong, Weimin Xiao, Jalal Jalali and Baoling S Sheen
pp. 209-214

Guaranteeing Partial State Synchronization for UAV Platoon under Message or UAV Loss

Baisakhi Chatterjee and Rudra Dutta
pp. 215-220

A Comprehensive Study of Supervised Machine Learning Assisted Approaches for IoT Device Identification

Yong Wang, Bhaskar P. Rimal, Carson Koball, Michael Fahnlander, Julia Scheaffer, Joshua Hammrich,
Paolo Gentry, Dylan Westlund, Tyler Salmen and Connor Ford
pp. 221-227

Performance of SPAD-Detector in The Presence of Atmospheric Turbulence

Abdulmajeed Awadh Alanazi
pp. 228-232

CNS-7: CNS VII

Room: Keauhou IV

Chair: Jiahui Jin

Towards Automatically Matching Security Advisories to CPEs: String Similarity-based Vendor Matching

Kylie L McClanahan and Qinghua Li
pp. 233-238

A Lightweight Obfuscated Malware Multi-class Classifier for IoT Using Machine Learning

William Cassel and Nahid Ebrahimi Majd
pp. 239-243

Edge Computing Ransomware Detection in IoT using Machine Learning

Tejesh Radhakrishna and Nahid Ebrahimi Majd
pp. 244-248

Real-time Detection of Optical Cross-talk for Autonomous Network Diagnosis

Mirei Onodera and Akira Hirano
pp. 249-253

Towards Effective Network Intrusion Detection in Imbalanced Datasets: A Hierarchical Approach

Md. Shamim Towhid, Nasik Sami Khan, Md Mahibul Hasan and Nashid Shahriar
pp. 254-258

Machine Learning for Caching Placement in Edge Computing Networks

Liang Zhang and Bijan Jabbari
pp. 259-264

Enhancing Walking Experience: A Walking Route Recommendation System Considering Nearby Spots

Katsuyuki Yamauchi, Da Li, Panote Siriaraya, Yukiko Kawai and Shinsuke Nakajima
pp. 265-270

CNS-8: CNS VIII

Room: Mauna Kea

Chair: Ahmed A Ahmed

Cloud Load Balancing Algorithms Performance Evaluation Using a Unified Testing Platform

Bingyan Li, Weiliang Liu, Salim Nader, Jiaqi Song, Chengyu Zhang and Michal Aibin
pp. 271-277

Wireless Instant Fault Detection through Finite-Element Trained Machine Learning

Kalon Bienz and Behnam Ghalamchi
pp. 278-283

Nanocommunication: PHY Advancements in Electromagnetic and Molecular Approaches

Pankaj Singh, Sujin Kim and Sung-yoon Jung
pp. 284-290

Machine Learning in Sensors for Collision Avoidance

Erkan Karakus, Tao Wei and Qing Yang
pp. 291-295

Low-Cost Tree Health Categorization and Localization Using Drones and Machine Learning

Hovannes K. Kulhandjian, Brian Irineo, Jacob Sales and Michel Kulhandjian
pp. 296-300

AI-based Road Inspection Framework using Drones with GPS-less Navigation

Hovannes K. Kulhandjian, Jose M Torres, Nicholas Amely, Cruz Nieves, Christian Reeves and Michel

Kulhandjian
pp. 301-305

Classification of BLE packet according to AGC index with detection of non-ideal reception cases

Morgane Joly, Eric Renault and Fabian Riviere
pp. 306-310

CNS-9: CNS IX

Room: Mauna Loa

Chair: Abdullatif Albaseer

Proof-of-QoE NOMA Token: A Crypto Rewarding Concept To Incentivize Local Relay In Non-Orthogonal Multiple Access Wireless Networks

Krishna Murthy Kattiyam Ramamoorthy, Wei Wang, Kazem Sohraby and Yanxiao Zhao
pp. 311-315

Aol-Aware Adaptive Relaying in Buffer-Aided Wireless-Powered NOMA Network with Random Arrivals

Shi Zhou, Chen Qing Chun, Yaxuan Chen and Lei Zheng
pp. 316-322

Performance Evaluation of Loose Beamforming Using Direct-Binary Search in Massive MIMO Systems

Yuta Hayashi, Toshihiko Nishimura, Takanori Sato, Yasutaka Ogawa and Takeo Ohgane
pp. 323-328

Performance Analysis of High-dimensional NOMA system with In-Phase/ Quadrature Index Modulation

Zhi Xiang Wang and Jia Hou
pp. 329-333

Effect of Beam Broadening in Directional Beamforming-Based Cellular Networks

Gosan Noh
pp. 334-338

An Efficient PLS Scheme for Coded MIMO Systems under Imperfect Channel Estimation

Thara Son and Sooyoung Kim
pp. 339-343

Edge computing that utilizes in-network CPUs to achieve high capacity and interruption tolerance with fewer edge servers

Koki Muramatsu, Yoshihiko Uematsu, Satoru Okamoto and Naoaki Yamanaka
pp. 344-348

Monday, February 19 15:30 - 16:00

Coffee Break

Monday, February 19 16:00 - 18:00

DL: Distinguished Lectures

Prof. Honggang Wang

Prof. Xinbin Wang

Room: Keauhou II

Chair: Xinwen Fu

CNS-10: CNS X

Room: Keauhou III

Chair: JingTao Yao

Incorporating Game Theory with Soft Sets

ChenQi Li and JingTao Yao

pp. 349-354

DRL-Based Energy Efficient Power Adaptation for Fast HARQ in the Finite Blocklength Regime

Xinyi Wu and Deli Qiao

pp. 355-360

Peak Cancellation Signal-Based Parallel PAPR Reduction Method Using Low-Dimensional Null Space in Massive MIMO-OFDM

Jun Saito, Takanori Hara and Kenichi Higuchi

pp. 361-365

Transmitter Filtering-aided Sparse Activity Detection for TDD-based Random Access

Hiroki Fujimoto, Takanori Hara and Kenichi Higuchi

pp. 366-370

DCCTA: Age of Information in Slotted ALOHA under Duty Cycle Constraints

Orhan Tahir Yavascan, Mutlu Ahmetoglu, Elif Uysal, Umut Gurbuz, Omer Gencay and Alperen Balci

pp. 371-375

Multi-Objective Cognitive Routing in Space DTNs

Ricardo Lent

pp. 376-381

Power-scheduled Routing Strategy for Quantum Key Distribution over Classical Optical Networks

Yuhang Liu, Xiaosong Yu, Yongli Zhao and Avishek Nag

pp. 382-386

CNS-11: CNS XI

Room: Keauhou IV

Chair: Xinyue Zhang

Bayesian Game for Cyber Deception Against Remote Attack on Automotive Systems

Priva Kamdem Chassem, Charles A Kamhoua, Alain Zemkoho, Laurent Njilla and Marcelin Nkenlifack
pp. 387-393

Measuring Data Similarity for Efficient Federated Learning: A Feasibility Study

Fernanda Famá, Charalampos Kalalas, Sandra Lagen and Paolo Dini
pp. 394-400

Infrastructure Cost Analysis for Running Timetabling Software Using Various Deployment Architectures in the Cloud

Sommer Harris, Jaelyn Ma, Meet Patel, Kshitij Nair, Niranjana Velraj and Michal Aibin
pp. 401-406

Parameter tuning for accurate heart rate measurement using Wi-Fi signals

Brenda Gouveia, Iandra Galdino, Egberto Caballero, Julio César Huarachi Soto, Sr., Taiane Ramos, Raphael Guerra, Debora Muchaluat-Saade and Célio Vinicius Neves de Albuquerque
pp. 407-411

Dynamic Online Modulation Recognition using Incremental Learning

Ali Owfi, Ali Abbasi, Fatemeh Afghah, Jonathan Ashdown and Kurt Turck
pp. 412-416

Deep Learning-based Malicious Energy Attack Detection in Sustainable IoT Network

Xinyu Zhang, Long Li, Jing Yang, Lina Pu, Zichen Wang, Rong Fu and Zhipeng Jiang
pp. 417-422

CNS-12: CNS XII

Room: Mauna Kea

Chairs: Lutong Chen, Nadieh Moghadam

Cross-temporal Detection of Novel Ransomware Campaigns: A Multi-Modal Alert Approach

Sathvik Murli, Dhruv Nandakumar, Prabhat K Kushwaha, Cheng Wang, Christopher Redino, Abdul Rahman, Shalini Israni, Tarun Singh and Edward Bowen
pp. 423-429

Demystifying Cyberattacks: Potential for Securing Energy Systems With Explainable AI

Shuva Paul, Sanjana Vijayshankar and Richard Macwan
pp. 430-434

Managing Failures and Service Quality in the Context of NFV

Siamak Azadiabad and Ferhat Khendek
pp. 435-440

Generating Synthetic Time-Series Data on Edge Devices Using Generative Adversarial Networks

Md Faishal Yousuf and Md Shaad Mahmud
pp. 441-445

Speed Testing for measuring Network Traffic in a Smart Network Switch

Souryendu Das and Stavros Kalafatis
pp. 446-450

Adaptive Channel Switching for Connected Vehicles under Extreme Weather Conditions: A Reinforcement Learning Based Approach

Jian Liu and Chin-Tser Huang
pp. 451-455

Detecting Deepfakes Using GAN Manipulation Defects in Human Eyes

Elisabeth Tchapchet, Elie Tagne, Jaime C Acosta, Danda B. Rawat and Charles A Kamhoua
pp. 456-462

CNS-13: CNS XIII

Room: Mauna Loa

Chair: Junxiu Zhou

Enhancing UAV Security Through Zero Trust Architecture: An Advanced Deep Learning and Explainable AI Analysis

Ekramul Haque, Kamrul Hasan, Imtiaz Ahmed, Md Sahabul Alam and Tariqul Islam
pp. 463-467

Towards Cycle-accurate Simulation of xBGAS

Jie Li, John D Leidel, Brian Page and Yong Chen
pp. 468-472

GRASP and ILS Based Meta-Heuristic Approximation Algorithms for Optimal Virtual Network Synthesis (VNS) in Multi-AS Environment

Yong Xue, Alexander Brodsky and Daniel Menascé
pp. 473-479

WGAN-based Oversampling for QoS-Aware M2M Network Power Allocation

Junxiu Zhou and Yangyang Tao
pp. 480-484

Sentiment Analysis With Lipschitz Recurrent Neural Networks Based Generative Adversarial Networks

Mahmudul Hasan and Sachin Shetty
pp. 485-489

Deep Explainable Content-Aware Per-Scene Video Encoding

Andy Neparidze, Ahmed Amine Mchayaa, Julian David Schäfer, Daniel Silhavy, Robert Seeliger, Stephan Steglich and Stefan Arbanowski
pp. 490-494

Tuesday, February 20

Tuesday, February 20 8:30 - 9:30

Keynote II:

Integrated Sensing and Communications: Tradeoffs and Designs

Prof. Vincent Poor

Room: Keauhou II

Chair: Jian Ren

Tuesday, February 20 9:30 - 10:00

Coffee Break

Tuesday, February 20 10:00 - 12:00

IT-1: Invited Talks I

Xinwen Fu

Ender Ayanoglu

Eiji Oki

Sergei Gorlatch

Room: Keauhou II

Chair: Duong Thuy Anh Nguyen

Unified View of IoT and CPS Security and Privacy

Lan Luo, Christopher Morales-Gonzalez, Shan Wang, Zhen Ling and Xinwen Fu
pp. 495-499

AMCN-1: AMCN I

Room: Keauhou III

Chair: Hongwei Li

AnDet: ML-Based Anomaly Detection of UEs in a Multi-cell B5G Mobile Network for Improved QoS

Amar Sinha, Anmol Agrawal, Sandip Roy, Venkanna Udutalapally, Debanjan Das, Rajarshi Mahapatra and Sachin Shetty
pp. 500-505

Targeted Transfer Learning: Leveraging Optimal Transport for Enhanced Knowledge Transfer

Sayyed Farid Ahamed, Kazi Aminul Islam and Sachin Shetty
pp. 506-510

Beamforming with Free Energy Principle under Hierarchical Codebook

Tatsuya Ootoshi and Masayuki Murata
pp. 511-517

Trend Encoder with Attentive Neural Process: Node Performance Extrapolation for Non-Time-Series Datasets

Kyota Hattori, Tomohiro Korikawa and Chikako Takasaki
pp. 518-522

Heterogeneous GNN with Express Edges for Intrusion Detection in Cyber-Physical Systems

Hongwei Li and Danai Chasaki
pp. 523-529

CIS-1: CIS I

Room: Keauhou IV

Chair: Christian Esposito

Black-Box Attacks against Signed Graph Analysis via Balance Poisoning

Jialong Zhou, Yuni Lai, Jian Ren and Kai Zhou
pp. 530-535

On Building Automation Systems and Attacks

Christopher Morales-Gonzalez, Matthew Harper, Michael Cash, Qun Zhou Sun and Xinwen Fu
pp. 536-542

On the Importance of Trust in Next-Generation Networked Cyber-Physical Systems

Nariman Torkzaban, Anousheh Gholami and John S. Baras
pp. 543-548

Privacy-Preserving Characterization and Data Publishing

Jian Ren and Tongtong Li
pp. 549-553

OBSERVE: Blockchain-based Zero Trust Security Protocol for Connected and Autonomous Vehicles (CAVs) Data Using Simple Machine Learning

Bo Sullivan and Junaid Ahmed Khan
pp. 554-559

ECB-1: ECB I

Room: Mauna Kea

Chair: Yangyang Tao

Fed2Com: Towards Efficient Compression in Federated Learning

Zhang Yu, Wei Lin, Sisi Chen, Qingyu Song, Jiaxun Lu, Yunfeng Shao, Bei Yu and Hong Xu
pp. 560-566

Straggler Mitigation in Edge Computing with Coded Compressed Sensing

Yangyang Tao and Junxiu Zhou
pp. 567-572

Cooperative Load Balancing of Neighboring Edge Clouds with LISP

Toru Furusawa and Akihiro Nakao
pp. 573-578

A Surrogate Tiny Machine Learning Model of Variational Autoencoder For Real-Time Baseline Correction of Magnetometer Data

Talha Siddique and Md Shaad Mahmud
pp. 579-583

Comparison of FHE Schemes and Libraries for Efficient Cryptographic Processing

Arisa Tsuji and Masato Oguchi
pp. 584-590

MCC: MCC

Room: Mauna Loa

Chair: Tianyuan Yu

Characteristics Aware Video Packet Dropping and Packet Wash

Lijun Dong and Richard Li
pp. 591-597

Quality of Experience Modelling and Analysis for Live Holographic Teleportation

Carl Udora, Peng Qian, Sweta Anmulwar, Anil Fernando and Ning Wang
pp. 598-604

Implicit Neural Representation-based Hybrid Digital-Analog Image Delivery

Akihiro Kuwabara, Yutaro Osako, Sorachi Kato, Takuya Fujihashi, Toshiaki Koike-Akino and Takashi Watanabe
pp. 605-610

Context-Aware Edge-Cloud Collaborative Scene Text Recognition

Puning Zhang, ChangFeng Liu, Honggang Wang, Dapeng Wu, Ruyan Wang and Hong Zou
pp. 611-617

A Secure and Robust ECG Signal Transmission System for Cardiac Arrhythmia Identification

Kun Hua, Hansong Xu and Tigang Jiang
pp. 618-623

Tuesday, February 20 12:00 - 13:30

Lunch

Tuesday, February 20 13:30 - 15:30

Plenary Talks I:

Heterogeneous Integration and Packaging of RF electronics and components for 5G+ Wireless Communication Systems Using Additive Manufacturing Techniques;
Towards Ubiquitous Computing-Power as A Utility

Prof. John Papapolymerou

Prof. Victor Leung

Room: Keauhou II

Chair: Falko Dressler

Tuesday, February 20 15:30 - 16:00

Coffee Break

Tuesday, February 20 16:00 - 18:00

IT-2: Invited Talks II

Marwan Krunz

Jie Wang

Shucheng Yu

Zhipeng Cai

Room: Keauhou II

Chair: Sergei Gorlatch

AMCN-2: AMCN II

Room: Keauhou III

Chair: Nadieh Moghadam

Stereo-Aided Blockage Prediction for mmWave V2X Communications

Shinsuke Bannai and Katsuya Suto

pp. 624-628

CyPA: A Cyclic Prefix Assisted DNN for Protocol Classification in Shared Spectrum

Wenhan Zhang, Marwan Krunz and Md Rabiul Hossain

pp. 629-634

MIA-BAD: An Approach for Enhancing Membership Inference Attack and its Mitigation with Federated Learning

Soumya Banerjee, Sandip Roy, Sayyed Farid Ahamed, Devin Quinn, Marc Vucovich, Dhruv Nandakumar, Kevin Choi, Abdul Rahman, Edward Bowen and Sachin Shetty

pp. 635-640

Accelerating Autonomous Cyber Operations: A Symbolic Logic Planner Guided Reinforcement Learning Approach

Ryan Kerr, Steven Ding, Li Li and Adrian A Taylor

pp. 641-647

Design of Smoothed LO UnfoldingNet Architecture for OFDM Channel Estimation

Zhu Lin Tao and Jia Hou

pp. 648-652

CIS-2: CIS II

Room: Keauhou IV

Chair: Tan-Jan Ho

RMF-GPT --- OpenAI GPT-3.5 LLM, Blockchain, NFT, Model Cards and OpenScap Enabled Intelligent RMF Automation System

Eranga Bandara, Peter Foytik, Sachin Shetty, Abdul Rahman, Xueping Liang and Ravi Mukkamala

pp. 653-658

Trustful Blockchain-Enabled Identity Management for VANET with Short-Latency Authentication

Jiayue Zhou, Jianan Hong, Chengchen Zhu, Futai Zou and Cunqing Hua

pp. 659-663

When ChatGPT Meets Vulnerability Management: the Good, the Bad, and the Ugly

Kylie L McClanahan, Sky Elder, Marie Louise Uwibambe, Yaling Liu, Rithyka Heng and Qinghua Li

pp. 664-670

Could Min-Max Optimization Be A General Defense Against Adversarial Attacks?

Rana Abou Khamis and Ashraf Matrawy

pp. 671-676

An SDN-enabled Elliptic-curve Diffie-Hellman Key Exchange towards Secure P2P Networking

Wenjun Fan, Siyuan Wu and Hao Chen
pp. 677-683

ECB-2: ECB II

Room: Mauna Kea

Chair: Yusaku Hayamizu

Decentralized Authentication for Web of Things: a Self-Sovereign Identity (SSI)-based solution

Biagio Boi and Christian Esposito
pp. 684-688

Synthetic Power Consumption Data Generation For Appliance Operation Modes

Abdelkareem Jaradat, Hanan Lutfiyya and Anwar Haque
pp. 689-694

Mitigating Pessimism for Guaranteeing Safety Despite Physical Errors in CPS's

Jihwan Kim, Dongmin Shin and Chang-Gun Lee
pp. 695-699

Optimal Workload Allocation for Distributed Edge Clouds With Renewable Energy and Battery Storage

Duong Thuy Anh Nguyen, Jiaming Cheng, Ni Trieu and Duong Tung Nguyen
pp. 700-705

Accelerator-Aware Computation Offloading under Timing Constraints

Vincent Latzko, Christian Leonard Vielhaus, Mahshid Mehrabi and Frank H.P. Fitzek
pp. 706-710

CIS-3: CIS III

Room: Mauna Loa

Chair: Christian Esposito

A Multi-Chaotic Key Expansion for Advanced Encryption Standard (AES) Algorithm

Kwame Assa-Agyei, Kayode Owa, Funminiyi Olajide and Tawfik Al-Hadhrami
pp. 711-717

Security-Enhanced WireGuard Protocol Design using Quantum Key Distribution

Lutong Chen, Kaiping Xue, Jian Li, Zhonghui Li and Nenghai Yu
pp. 718-723

Correlation-Aware and Personalized Privacy-Preserving Data Collection

Dongxiao Yu, Kaiyi Zhang, Youming Tao, Wenlu Xu, Yifei Zou and Xiuzhen Cheng
pp. 724-729

SEMPI: Secure and Privacy-Preserving Invitation for Unified Communication Meetings

Thomas Reisinger, Eerke A Boiten and Isabel Wagner
pp. 730-736

DRL-based Latency-Aware Network Slicing in O-RAN with Time-Varying SLAs

Raoul Raftopoulos, Salvatore D'Oro, Tommaso Melodia and Giovanni Schembra
pp. 737-743

Tuesday, February 20 19:00 - 21:00

Welcome Reception

Wednesday, February 21

Wednesday, February 21 8:30 - 9:30

Keynote III:
Entanglement Management over Quantum Internet

Prof. Yuanyuan Yang

Room: Keauhou II

Chair: Jian Ren

Wednesday, February 21 9:30 - 10:00

Coffee Break

Wednesday, February 21 10:00 - 12:00

IT-3: Invited Talks III

Rose Hu

Manos Tentzeris

Jelena Mistic

Naoaki Yamanaka

Room: Keauhou II

Chair: Yuto Lim

WiSegRT: Dataset for Site-Specific Indoor Radio Propagation Modeling with 3D Segmentation and Differentiable Ray-Tracing

Lihao Zhang, Haijian Sun, Jin Sun and Rose Qingyang Hu
pp. 744-748

AMCN-3: AMCN III

Room: Keauhou III

Chairs: Lutong Chen, Xinyue Zhang

QoE-aware Airborne Communication Infrastructure for Surveillance in Wildfires

Praveen Fernando and Jin Wei-Kocsis
pp. 749-753

DL-SIC: Deep Learning Aided Successive Interference Cancellation in Shared Spectrum

Zhiwu Guo, Wenhan Zhang, Ming Li, Marwan Krunz and Mohammad Hossein Manshaei
pp. 754-760

An Attention-based AI Model for 3D Beam Prediction in THz Unmanned Aerial Vehicle Communication

Muhammad Enayetur Rahman, Md. Shirajum Munir and Sachin Shetty
pp. 761-766

Design and Implementation of a Smart Agricultural Robot bulldOG (SARDOG)

Hovannes K. Kulhandjian, Yue Yang and Nicholas Amely
pp. 767-771

Multi-agent DQN with sample-efficient updates for large inter-slice orchestration problems

Pavlos Doanis and Thrasyvoulos Spyropoulos
pp. 772-777

CIS-4: CIS IV

Room: Keauhou IV

Chair: Jingyi Wang

Malware Detection for Portable Executables Using a Multi-input Transformer-based Approach

Ting-Li Huoh, Onur Barut, Timothy Miskell, Peilong Li, Yan Luo and Tong Zhang
pp. 778-782

QE-DBA: Query-Efficient Decision-Based Adversarial Attacks via Bayesian Optimization

Zhuosheng Zhang, Noor Ahmed and Shucheng Yu
pp. 783-788

Graph Isomorphism — Characterization and Efficient Algorithms

Jian Ren and Tongtong Li
pp. 789-793

Resource-efficient Parallel Split Learning in Heterogeneous Edge Computing

Mingjin Zhang, Jiannong Cao, Yuvraj Sahni, Xiangchun Chen and Shan Jiang
pp. 794-798

Reinforcement Learning With Large Language Models (LLMs) Interaction For Network Services

Hongyang Du, Ruichen Zhang, Dusit Niyato, Jiawen Kang, Zehui Xiong and Dong In Kim
pp. 799-803

NGNI-1: NGNI I

Room: Mauna Kea

Chair: Tianyuan Yu

Hyperclique: A Novel P2P Network Structure for Blockchain Systems

Xiaonan You, Shengli Zhang, Taotao Wang and Soung Chang Liew
pp. 804-809

Hydra: A Scalable Decentralized P2P Storage Federation for Large Scientific Datasets

Justin Presley, Xi Wang, Xusheng Ai, Tianyuan Yu, Tymothy Brandel, Proyash Podder, Varun Patil, Alexander Afanasyev, Frank Feltus, Lixia Zhang and Susmit Shannigrahi
pp. 810-816

Tamperproof Data Transmission to Offline IoT Devices in a Zero-Trust Environment

Richard Roland Vogel, Robert Manthey, Matthias Baumgart, Christian Roschke, Marc Ritter and Matthias Vodel
pp. 817-822

A Reconstruction Forest-Based Interest Flooding Attack Detection Method in Named Data Networking

Guanglin Xing, Xiaoqi Li and Rui Hou
pp. 823-829

Multicast Service Deployment using Information Centric Cloud-Native Network Functions

Yusaku Hayamizu and Hitoshi Asaeda
pp. 830-835

MWN-1: MWN I

Room: Mauna Loa

Chair: Ines Carole Kombou Sihomnou

Distributed Beamforming by Multi-Agent Active Inference

Tatsuya Ootoshi and Masayuki Murata
pp. 836-842

Battery Life: Performance Analysis and Comparison between Wi-Fi, CBRS and Macro Deployment System

Vanlin Sathya, Aasawaree Deshmukh, Manan Shah and Mehmet Yavuz
pp. 843-849

A Routing Method with Link Information-based Rule Selection in Non-Terrestrial Networks

Tomohiro Korikawa, Chikako Takasaki, Kyota Hattori and Hidenari Oowada
pp. 850-855

Reliability-Aware Offloading in UAV-Aided Mobile Edge Network by Lyapunov Optimization

Jingjing Yao, Semih Cal and Xiang Sun
pp. 856-861

Performance Evaluation of DSRC and C-V2X Coexistence in the 5.895-5.925 GHz Spectrum

Mohammad Hossein Manshaei, Marwan Krunz and Amal Youssef
pp. 862-867

Wednesday, February 21 12:00 - 13:30

Lunch

Wednesday, February 21 13:30 - 15:30

Plenary Talks II:

Computing In-X for Supporting Big Data Applications;
ACA Bayes with Wi-PHY Apps - Asymptotically Correct Approximate
Bayes with Wireless PHY Applications

Prof. David Du

Prof. Dirk Slock

Room: Keauhou II

Chair: Sergei Gorlatch

Wednesday, February 21 15:30 - 16:00

Coffee Break

Wednesday, February 21 16:00 - 18:00

IT-4: Invited Talks IV

Yu Cheng Chin-Tser Huang David Matolak Wei Wang

Room: Keauhou II

Chair: Chin-Tser Huang

AMCN-4: AMCN IV

Room: Keauhou III

Chair: Hao Xu

Distributed LSTM-based Slice Resource Allocation for Beyond 5G Networks

Ali Ehsanian and Thrasyvoulos Spyropoulos

pp. 868-874

Federated Learning-Based Solution for DDoS Detection in SDN

Jovita Nyanyukweni Mateus, Guy-Alain Lusilao-Zodi and Antoine Bagula

pp. 875-880

Optimal Dynamic Resource Allocation for Multi-RIS Assisted Wireless Network: A Causal Reinforcement Learning Approach

Yuzhu Zhang and Hao Xu

pp. 881-885

Self-Supervised Learning for User Localization

Ankan Dash, Jingyi Gu, Guiling Wang and Nirwan Ansari

pp. 886-890

An Actor-Critic Approach for Resource Allocation in Energy Harvesting-Powered Wireless Body Area Network

Khaled Sabahein, Feng Wang and Zhonghui Wang
pp. 891-897

SCDM: SCDM

Room: Keauhou IV

Chair: Ines Carole Kombou Sihomnou

Participation Selection in Mobile Crowd Sensing with Diversity Ensures

Jiahui Jin and Ting Li
pp. 898-902

An Authorizable Threshold Signature Scheme for Secure Sharing and Mining of Power IoT Data

Wei Chen, Xiaotian Xu, Cong Hou, RanXin Gao, Guanlin Si and Yue Zhang
pp. 903-909

Cross-tier Coordination in Spectrum Sharing: A Blockchain Approach

Shuo Wang, Chen Sun, Haojin Li and Tao Cui
pp. 910-914

Blockchain-Assisted Cross-Domain Data Governance for Social Computing

Shulei Zeng, Yao Sun and Mugen Peng
pp. 915-920

mmWave Beam Selection in Dynamic Multi-Path Environments: A POMDP Approach

Ece Bingol and Eylem Ekici
pp. 921-926

NGNI-2: NGNI II

Room: Mauna Kea

Chair: Xinyu Ma

PythonRepo: Persistent In-Network Storage for Named Data Networking

Tianyuan Yu, Z. Jonny Kong, Xinyu Ma, Lan Wang and Lixia Zhang
pp. 927-931

Mass Configuration of Heterogeneous IIoT Nodes: A Proposal and Experimental Evaluation

Darius Saif and Ashraf Matrawy
pp. 932-937

Implementation of Proxy to Make Content Shared on BitTorrent Retrievable from CCN

Kohei Okazaki and Junichi Funasaka
pp. 938-943

Roaming Performance Analysis and Comparison between Wi-Fi and Private Cellular Network

Vanlin Sathya, Aasawaree Deshmukh, Mohit Goyal and Mehmet Yavuz
pp. 944-950

A Hybrid Fiber-Femtocell Indoor Network to Support Low-Latency and High-Bandwidth Indoor Communication Applications

Lihua Ruan and Hongyi Zhu
pp. 951-956

MWN-2: MWN II

Room: Mauna Loa

Chair: Tan-Jan Ho

Radio Propagation Environment Prediction Method for UAV-assisted Cellular Networks with Millimeter-wave Beamforming

Shunsuke Fujio and Kazuyuki Ozaki
pp. 957-961

A Mobile App-based Indoor Mobility Detection Approach using Bluetooth Signal Strength

Muztaba Fuad, Anthony Smith and Debzani Deb
pp. 962-968

A Min-Max Approximation-Based SDP Approach to Robust Vehicle Location Estimation in VANETS

Tan-Jan Ho and Hua-Yu Luo
pp. 969-973

Detecting and Counteracting Adversaries in Wireless Multicast over Fading Channels

Nadieh Moghadam
pp. 974-977

Data-Driven Joint Demodulation and Decoding in THz Communication Systems

Abigail Oyekola, Imtiaz Ahmed, Danda B. Rawat, Ramesh Annavajjala and Sachin Shetty
pp. 978-983

Wednesday, February 21 19:00 - 21:00

Banquet & Award Ceremony

Thursday, February 22

Thursday, February 22 8:30 - 9:30

Keynote IV:
Learning to Communicate

Prof. Robert Calderbank

Chair: Shiwen Mao

Thursday, February 22 9:30 - 10:00

Coffee Break

Thursday, February 22 10:00 - 12:00

IT-5: Invited Talks V

Song Ci

Yingfei Dong

Shervin Shirmohammadi

Michele Zorzi

Room: Keauhou II

Chair: Yingfei Dong

AMCN-5: AMCN V

Room: Keauhou III

Chair: Junaid Ahmed Khan

AI-powered Emergency Keyword Detection for Autonomous Vehicles

Hovannes K. Kulhandjian, Brandon Poorman, Javier Gutierrez and Michel Kulhandjian
pp. 984-988

Client Selection in Federated Learning: A Dynamic Matching-Based Incentive Mechanism

Sai Sharanya Yellampalli, Mikulas Chalupa, Jingyi Wang, Hyo Jung Song, Xinyue Zhang, Hao Yue and Miao Pan
pp. 989-993

A Cluster-based Privacy-Enhanced Hierarchical Federated Learning Framework with Secure Aggregation

Chia-Yu Lin, Chih-Hung Han, Wei-Chih Yin and Ted T. Kuo
pp. 994-999

Constrained Bayesian Optimization of VANET Safety Messaging Using Deep Learning Neural Networks

Aidan Samuel Wright, Sandeep John Philip and Xiaomin Ma
pp. 1000-1005

Enhancing Federated Learning with Self-Determining Mechanism in MEC

Ruixin Li, Chun Wang, Zibin Zheng and Huawei Huang
pp. 1006-1010

WC-1: WC I

Room: Keauhou IV

Chair: Hyuck Kwon

5G-and-Beyond Positioning against Amplify-and-Forward Relay Jamming

Hyuck Kwon, Jyothi Sri Sai Manne and Khanh D. Pham
pp. 1011-1015

Comparisons of TDM and FDM Pilot Signals for Phase Noise Estimation with High-Order QAM for DFT-Spread OFDM

Ryota Kuribayashi and Mamoru Sawahashi
pp. 1016-1021

Intermittent Markov Frequency-Hopping Entropy Rate

Hyuck Kwon
pp. 1022-1026

Analysis and Empirical Validation of Visible Light Path Loss Model for Vehicular Sensing and Communication

Hisham Abuella, Md Zobaer Islam, Russ Messenger, John O'Hara and Sabit Ekin
pp. 1027-1031

Beamforming Design for MIMO DFRC Systems with Transmit Covariance Constraints

Chenhao Yang, Xin Wang, Wei Ni and Yi Jiang
pp. 1032-1036

NAPE: NAPE

Room: Mauna Kea

Chair: Hideki Tode

Joint Task Offloading and Service Migration in RIS assisted Vehicular Edge Computing Network Based on Deep Reinforcement Learning

Xiangrui Ning, Ming Zeng and Zesong Fei
pp. 1037-1042

Extended Physarum Solver for Capacity-Constraint Routing

Kohsuke Sonoda, Hiroshi Katada, Shigeru Shimamoto, Taku Yamazaki and Takumi Miyoshi
pp. 1043-1047

User Grouping with Fairness Consideration in Massive MIMO System with Varying Channel Quality

Shengping Zhou, Ming Zeng and Fei Zesong
pp. 1048-1053

MEGATRON: Machine Learning in 5G with Analysis of Traffic in Open Radio Access Networks

Mauro Belgiovine, Jerry Z Gu, Joshua B Groen, Miquel Sirera, Utku Demir and Kaushik Chowdhury
pp. 1054-1058

Time Gating Control Approaches for Time Critical Applications from Perspective of Wireless LANs and All Optical Networks

Hideki Tode, Yosuke Tanigawa, Ratha Yeu and Akio Hasegawa
pp. 1059-1064

SPC: SPC

Room: Mauna Loa

Chair: Nie Xiaowei

A Dual Transfer Framework for Cooperative Spectrum Sensing in Cognitive Radio

Lusi Li, Rui Ning, Ziyu Wang and Shuai Hao
pp. 1065-1070

Fast Frequency-Direction Mapping Design for Data Communication With True-Time-Delay Array Architecture

Ding Zhao, Ibrahim Pehlivan, Aditya Wadaskar and Danijela Cabric
pp. 1071-1076

DTL-Based CSI Feedback Combined With Continual Learning in FDD Massive MIMO Systems

Mayuko Inoue, Tomoaki Ohtsuki and Mondher Bouazizi
pp. 1077-1081

A Deep Reinforcement Learning-based Contention Window Avoidance Scheme for Distinguishing Network Service Priorities

Nie Xiaowei, Wang Demin, Zhang Yuqing, Pan Xiaoduo and Zuo Zhibin
pp. 1082-1086

Performance Assessment of Intent Sharing in Infrastructure-assisted Cooperative Perception Services

Ahmed Hamdi Sakr, Sergei Avedisov, Shishir Manjunatha and Onur Altintas
pp. 1087-1091

Thursday, February 22 12:00 - 13:30

Lunch

Thursday, February 22 13:30 - 15:30

Plenary Talks III:

AIGC for RF Sensing;

Leveraging ML for Traffic Engineering in Large-scale Networks

Prof. Shiwen Mao

Prof. Yusheng Ji

Room: Keauhou II

Chair: Jian Ren

AIGC for RF Sensing: The Case of RFID-based Human Activity Recognition

Ziqi Wang and Shiwen Mao
pp. 1092-1097

Thursday, February 22 15:30 - 16:00

Coffee Break

Thursday, February 22 16:00 - 18:00

IT-6: Invited Talks VI

Panos Nasiopoulos

Yu Wang
Cedric Westphal

Room: Keauhou II
Chair: Yu Wang

WASN: WASN

Room: Keauhou III
Chair: Hao Xu

A Secure Hierarchical Federated Learning Using Dirichlet-based Trust Management

Grace Colette Tessa Masse, Abderrahim Benslimane, Vianney Kengne Tchendji and Ahmed H. Anwar Hemida
pp. 1098-1103

Energy-Efficient Multi-hop LoRaWAN with Transmission and Synchronization Control

Hiroto Shida, Aoto Kaburaki and Koichi Adachi
pp. 1104-1108

LBT-based Resource Allocation Methods Utilizing Periodicity of Traffic in LPWAN

Aoto Kaburaki, Koichi Adachi, Osamu Takyu, Mai Ohta and Takeo Fujii
pp. 1109-1113

Game-Theoretic Defense Strategies for Mitigating Gray Hole Attacks on Energy-Limited Sensors in Wireless Sensor Networks

Ines Carole Kombou Sihomnou, Abderrahim Benslimane, Ahmed H. Anwar Hemida, Gabriel Deugoue and Charles A Kamhoua
pp. 1114-1120

Decentralized Learning based Optimal Design for RIS-assisted Multi-user Ad-Hoc Network: A Multi-Player Multi-Armed Bandits Approach

Yuzhu Zhang and Hao Xu
pp. 1121-1125

WC-2: WC II

Room: Keauhou IV
Chair: Md Sahabul Alam

Computation Rate Maximization in STAR-RIS aided Wireless Powered Mobile Edge Computing Networks with NOMA

Mohammad Hossein Alishahi, Paul Fortier, Ming Zeng and Fang Fang
pp. 1126-1131

5GPS: 5G Femtocell Placement Strategies for Ultra-Precise Indoor Localization in the Metaverse

Alireza Famili, Tolga O Atalay and Angelos Stavrou
pp. 1132-1138

Performance Analysis of LDPC coded Outdoor Long-Distance Imaging MIMO System

Daiki Ishikawa, Chedlia Ben Naila, Hiraku Okada and Masaaki Katayama
pp. 1139-1143

Cuckoos United: Extending Cuckoo Filters for Message Dissemination in Vehicular Networks

Touhid Hossain Pritom, Simon Welzel and Florian Klingler
pp. 1144-1148

OGN: OGN

Room: Mauna Kea

Chair: Yuto Lim

Quantum Error Corrected Fidelity Routing Design for Long-distance Quantum Networks

Yuto Lim, Lishuai Yuan and Zhaowei Zhong
pp. 1149-1153

Contention-Based Operation in TDM-Type Passive Optical Networks

Denis A Khotimsky, Eugene B DeFrancisci, Gregory K Sherrill and Rajesh Yadav
pp. 1154-1157

Area4U: Predicting Interaction Hotspots for Large Public Displays

Xinyuan Zhang, Xiaoyang Mao, Wan Young Chung, Zhigang Gao, Jianwen Feng and Kentaro Go
pp. 1158-1163

A Measurement Investigation of ERC-4337 Smart Contracts on Ethereum Blockchain

Zibin Lin, Taotao Wang, Chonghe Zhao, Shengli Zhang, Qing Yang and Long Shi
pp. 1164-1170

Cooperative Mobility Control for Maintaining Required Throughput in Multiple Ad Hoc Networks with Autonomous Mobile Robots

Kota Makino, Takeshi Hirai and Tutomu Murase
pp. 1171-1176