IEEE VTS
Connecting the Mobile World

IEEE

Final Program

VTC2023-Spring
FLORENCE
Connecting the Mobile World

2023 IEEE 97th Vehicular Technology Conference

20 – 23 June 2023

Florence, Italy

Welcome from the General Co-chair

On behalf of the organizing committee, it is my honor to welcome you to VTC2023-Spring, the Vehicular Technology Society flagship conference. The VTC has sustained its standing as an attractive publication venue, and we have received a notable amount of high-quality submissions providing a basis for an excellent technical program.

As is known, the Vehicular Technology Conference follows closely the recent progress in both academic and industry research domains, the most visible topics in this spring being 6G and related key technologies.

We are confident that VTC2023-Spring provides the research community a stimulating opportunity for gaining understanding on the recent progress in the field.

It will be surely inspiring to meet many of you in Florence, “the birthplace of the Renaissance”.

I feel the need to thank the valuable team who allowed this edition to be organized: the General Co-Chair Lorenzo Ciani, the Technical Program Co-Chairs: Gabriele Maria Lozito, Fabio Corti, Rui Dinis, Alicia Trivino, Luca Pugi, and Salvatore Musumeci.

I also give my appreciation to the large number of TPC members and reviewers who dedicate their time to ensure a high-quality review process and to other members of the organizing committee.

Finally, none of what we could do would have been possible without the professional support from Vehicular Technology Society and I really feel the need to thank the conference administrators Rodney C. Keele and Cerry Leffler, Publication Chair James Irvine, and Financial Chair J. R. Cruz.

Welcome to Florence and VTC, the flagship conference of the Vehicular Technology Society.

Alberto Reatti
General Co-chair, IEEE VTC2023-Spring

Welcome from the TPC Co-chairs

On behalf of the Technical Program Committee, we would like to welcome you to the 97th IEEE Vehicular Technology Conference (VTC2023-Spring) that will be hosted in Florence, Italy, 20-23 June 2023. This edition of VTC has been able to attract an exciting technical program ranging across the latest areas of research in wireless systems and networks, connected and autonomous vehicles, both manned and unmanned, emerging trends in applications of machine learning and artificial intelligence in wireless communications, as well as many other emerging topics. We received over 850 paper submissions, out of which 540 outstanding papers will be presented in 12 technical tracks and the recent results track that comprise the IEEE VTC2023-Spring technical program. In addition to the regular and recent results sessions, the conference will feature 12 topical workshops, 8 tutorials delivered by the leading experts in the field, a balanced mix from industry and academia of 6 extraordinary keynote speakers discussing 6G, autonomous driving, wireless sensing, and spectrum scarcity, and 2 exceptional industry panels delving into wireless futures and also 6G.

We would like to use this opportunity to thank all co-chairs of the 12 technical tracks for their excellent work. They all managed to obtain at least 3 reviews for each paper within a short time frame, and the decision process was completed smoothly. We also sincerely thank the workshop organizers for putting together the set of very timely workshops and organizing the review process in a professional manner. We would like to thank the members of the IEEE VTC2023-Spring organizing committee for their great responsiveness and support during the entire period of technical program preparation and development. We would also like to thank the technical program committee (TPC) members for their diligent work. We also sincerely thank the keynote speakers and panelists for contributing to the VTC2023-Spring program.

Finally, we would like to thank the authors, constituting the scientific backbone of this forum, for all the precious knowledge they will share with their peers. We hope to see you all in Florence.

Gabriele Maria Lozito, Rui Dinis, Fabio Corti, Alicia Trivino Cabrera, Luca Pugi and Salvatore Musumeci,
TPC Co-chairs, IEEE VTC2023-Spring

Welcome from the VTS President

On behalf of the IEEE Vehicular Technology Society (VTS), it is my great honor and pleasure to welcome you to the 97th IEEE Vehicular Technology Conference, VTC 2023-Spring, in Florence, Italy!

This semi-annual IEEE VTS flagship conference brings together individuals from academia, industry, and government agencies to discuss and exchange ideas in the fields of wireless, mobile, and vehicular technology. It provides you a unique platform to network with leading researchers and colleagues in the global technical community, to share your innovative ideas and thoughts for wireless communications and vehicular technology, and to benefit from the conference premier technical program that features cutting-edge R&D achievements of the international technical community. Your active participation in this conference will help to define and shape the future of wireless communication, connected vehicles, and autonomous driving technology in beyond 5G era and in 6G era!

Organizing this world-class conference requires a strong team of volunteers who have devoted both their time and their technical expertise. I want to take this opportunity to thank and congratulate the whole conference organization committee led by the VTS Vice President for Conferences, J.R. Cruz, the Conference General Co-Chairs Alberto Reatti and Lorenzo Ciani, and the Technical Program Committee Co-Chairs Gabriele Maria Lozito, Fabio Corti, Rui Dinis, Alicia Trivino, Luca Pugi, and Salvatore Musumeci. The conference organization committee has been working diligently in planning and running this conference with the excellent technical program, tutorials, and workshops. We highly appreciate their great efforts. The success of this conference is also due to the generous support of all the sponsors.

IEEE VTS has been successful in engaging the global technical community and in contributing to advances in vehicular technology in the areas of mobile radio, motor vehicles, and land transportation. In recent years, it has been promoting R&D activities in the 5G and beyond communication systems, in autonomous, connected, and electric vehicles, and in intelligent ground transport infrastructures. Building on the momentum, the VTS strives to listen to our members for their needs, be creative and work hard on various existing programs and new initiatives towards a stronger Society. If you are not a VTS member or student member yet, it is a good idea to consider joining VTS today to benefit from all the services and resources that VTS provides and to contribute to the community!

Finally, I would like to extend my sincere thanks to everyone for attending this conference and I wish all of you a great time at this VTC.

Weihua Zhuang, *President*
IEEE Vehicular Technology Society

VTC2023-Spring Technical Program

Wednesday 21 June 2023

Wednesday, 21 June 2023 11:00 - 12:30 Affari 2.1

B1: 5G and Beyond I

1 Domain Knowledge-Based Neural Network Architecture for End-to-End Multiuser Precoding in Massive MIMO System
Minseok Jo, Sangrim Lee, Bonghoe Kim, Kyungho Lee, Ikjoo Jung, LG Electronics

2 Failure Prediction in Cloud Native 5G Core With eBPF-based Observability
Junichi Kawasaki, KDDI Corporation

3 Intelligent Subcarrier Allocation in Hybrid Beamforming Multi-User mMIMO-OFDM Systems
Farhan Bishe, Asil Koc, Tho Le-Ngoc, McGill University

4 Safe and Fast Reinforcement Learning for Network Slicing Resource Allocation
Antonio Massaro, Nokia Bell Labs France; Dan Wellington, Nokia Bell Labs, USA; Armen Aghasaryan, Nokia Bell Labs, Paris, France; Robert Seidl, Muhammad Naseer-Ul-Islam, Oemer Bulakci, Nokia Bell Labs, Munich, Germany

5 URLLC Physical Layer Authentication based on non-linear Supervised Learning
Andreas Weinand, RPTU Kaiserslautern Landau; Christoph Lipps, German Research Center for Artificial Intelligence; Michael Karrenbauer, Hans Schotten, University of Kaiserslautern

Wednesday, 21 June 2023 11:00 - 12:30 Affari 2.2

C1: IoV Networking I

1 Decentralized position detection for moving vehicles
Pedro Rosa, INESC-ID, Instituto Superior Técnico, Universidade de Lisboa; Francesco Pollicino, Università di Modena e Reggio Emilia; Miguel L. Pardal, INESC-ID, Instituto Superior Técnico, Universidade de Lisboa; Mirco Marchetti, Università di Modena e Reggio Emilia; Samih Eisa, INESC-ID, Instituto Superior Técnico, Universidade de Lisboa

2 Environment-Dependent Throughput Distribution Estimation Based on Bayesian Approach for mmWave Vehicular Communications
Yuhi Kurebayashi, Aoyama Gakuin University; Akihito Taya, The University of Tokyo; Yoshito Tobe, Aoyama Gakuin University

3 Exploring Anomaly Detection Techniques for Enhancing VANET Availability
Julia Silva Weber, Tiago Ferreto, Pontifical Catholic University of Rio Grande do Sul; Nur Zincir-Heywood, Dalhousie University

4 On Batching Acknowledgements in C-V2X Services
Mahdi Zaman, Univ. of Central Florida; MD Saifuddin, Mahdi Razzaghpour, Yaser P. Fallah, University of Central Florida; Jayanthi Rao, Ford Motor Company

5 Optimized Strategies for Big Data Offloading in Vehicular Ad-Hoc Networks
Talha Akyildiz, University of Michigan; Tengchan Zeng, Yun Ho Lee, Basavaraj Tonshal, Ford Motor Company; Hessam, Mahdavifar

6 Spherical Codec for V2X Cooperative Awareness Trajectory Compression: A Preliminary Study
Thinh Hoang, University of Toulouse; Vincent Martinez, NXP, France; Daniel Delahaye, École Nationale de l'Aviation Civile (ENAC)

Wednesday, 21 June 2023 11:00 - 12:30 Affari Adua Hall 2

D1: Channel Modeling

1 Attention-based Learning for Sleep Apnea and Limb Movement Detection using WiFi CSI Signals
Chi-Che Chang, An-Hung Hsiao, National Yang Ming Chiao Tung University; Li-Hsiang Shen, University of California, Berkeley; Kai-Ten Feng, Chia-Yu Chen, National Yang Ming Chiao Tung University

2 Channel Capacity Prediction Using Point of Interest for Design and Operation Support of Network
Natsuki Morita, Fujitsu limited; Hayato Dan, Yoshihiro Okawa, Masatoshi Ogawa, Fujitsu Limited

3 Classification with Synthetic Radio Data for Real-life Environment Sensing
Soumeya Kaada, University of Rennes 1 and Nokia Paris Saclay; Sid Ali Hamideche, Chloe Daems, Marie Line Alberi Morel, Nokia Paris Saclay

4 Location-free Indoor Radio Map Estimation using Transfer learning
Rahul Jaiswal, Mohamed Elnourani, University of Agder; Siddharth Deshmukh, NIT Rourkela; Baltasar Beferull-Lozano, University of Agder

5 Mobile traffic classification through burst traffic statistical features
Cesar Vargas Anamuro, Xavier Lagrange, IMT Atlantique, IRISA

6 Robust Machine Learning for Channel Estimation with Varying Delay and Doppler Shift Conditions
Shuyan Ji, John Thompson, University of Edinburgh

Wednesday, 21 June 2023 11:00 - 12:30 Congressi - Room 4

E1: Recent Results in Physical Layer I

1 A CSI-Based Construction Scheme for GN-Coset Codes over Frequency Selective Fading Channels
Huiying Song, Yuyuan Chang, Kazuhiko Fukawa, Tokyo Institute of Technology

2 A Simple Algorithm for Jamming Detection in OFDM Systems
Krzysztof Weso?owski, Poznan University of Technology

3 A Time-alignment Algorithm of Multiple Power Delay Profiles Measured by Antenna Rotations Towards Flexible mmWave Channel Measurements
Hiroaki Endo, Yusuke Koda, Hiroshi Harada, Kyoto University

4 AoI-oriented status updating in Large-scale Heterogeneous Multi-Channel Systems
Huijia Chi, Fan Zhang, Chao Xu, Northwest A&F University; Xijun Wang, Sun Yat-sen University

5 Attribution Macro Cell Switching for CoMP in Distributed Antenna Transmission
Takahito Tsukamoto, Go Otsuru, Yukitoshi Sanada, Keio University

Wednesday, 21 June 2023 11:00 - 12:30 Congressi - Room 5

F1: Recent Results in Machine Learning for Communications

1 Deep Learning-based Estimation for Multitarget Radar Detection
Mamady Delamou, Mohammed VI Polytechnic University; Ahmad Bazzi, New York University; Marwa Chafii, NYU Abu Dhabi; El Mehdi Amhoud, Mohammed VI Polytechnic University

2 FedATM: Adaptive Trimmed Mean based Federated Learning against Model Poisoning Attacks
Kenji Nishimoto, Yi-Han Chiang, Hai Lin, Osaka Metropolitan University; Yusheng Ji, National Institute of Informatics

3 Machine Learning Based SINR Prediction in Private Campus Networks
sachinkumar, RPTU Kaiserslautern-Landau; Sai Charan Kusumapani, University of Kaiserslautern; Dr. Nandish P. Kuruvatti, Univ of Kaiserslautern; Bhalachandra G. Bhat, Hans Schotten, University of Kaiserslautern

4 Multichannel Relay assisted NOMA-ALOHA with Reinforcement Learning based Random Access
Haeyoung Lee, University of Hertfordshire; Sunyoung Lee, Entrust Microgrid Ltd.; Youngwook Ko, University of York

5 Spreading Factor assisted LoRa Localization with Deep Reinforcement Learning
Yaya Etiabi, Mohammed Jouhari, Mohammed VI Polytechnic University; Andreas Burg, EPFL; El Mehdi Amhoud, Mohammed VI Polytechnic University

Wednesday, 21 June 2023 11:00 - 12:30 Congressi - Room 101

G1: Batteries, Fuel Cells, and Charging

1 A detailed Electro-thermal model of an NMC lithium-ion prismatic battery cell
Said Madaoui, University of Bordeaux; Franck Guillemard, Stellantis; Jocelyn Sabatier, Jean-Michel Vinassa, University of Bordeaux

2 Collaborative Routing and Charging/Discharging Scheduling of Electric Autonomous Vehicles in Coupled Power-Traffic Networks
Kai-Fung Chu, The Hong Kong Polytechnic University; Tianlun Chen, Albert Y.S. Lam, Yue Song, The University of Hong Kong

3 Predicting Electric Vehicle Charging Stations Occupancy: A Federated Deep Learning Framework
Douaidi Lydia, University of Burgundy; Sidi-Mohammed Senouci, University of Bourgogne, ISAT Nevers; El Korbi Ines, University of burgundy; Harrou Fouzi, King Abdullah University of Science and Technology

4 QEVSEC: Quick Electric Vehicle SEcure Charging via Dynamic Wireless Power Transfer
Tommaso Bianchi, University of Padua; Surudhi Asokraj, University of Washington; Alessandro Brighente, Università degli studi di Padova; Mauro Conti, University of Padua; Radha Poovendran, University of Washington

Wednesday, 21 June 2023 11:00 - 12:30 Oince

H1: Deep Learning Applications

1 Meta-Critic Reinforcement Learning for IOS-Assisted Multi-User Communications in Dynamic Environments
Qinpei Luo, Boya Di, Peking University; Zhu Han, University of Houston

2 One-shot Learning for Channel Estimation in Massive MIMO Systems
Kai Kang, Qiyu Hu, Yunlong Cai, Zhejiang University; Yonina Eldar, Weizmann Institute of Science

3 Parameter-less Asynchronous Federated Learning under Computation and Communication Constraints
Mengfan Wu, Mate Boban, Huawei Technologies Duesseldorf GmbH; Falko Dressler, TU Berlin

4 Resilient Sparse Array Radar with the Aid of Deep Learning
Aya Mostafa Ahmed, Ruhr University Bochum, Germany.; Udaya S.K.P. Miriya Thanthrige, University of Moratuwa; Aydin Sezgin, Ruhr-University Bochum; Fulvio Gini, University of Pisa, Pisa, Italy

Wednesday, 21 June 2023 11:00 - 12:30 Auditorium Foyer - 2nd Floor

P1: Emerging Technologies and Machine Learning

1 Advanced LiDAR Translation for Huge Domain Gap to Handle Adverse Weather Change
Jinho Lee, Geonkyu Bang, Tokyo University; Toshiaki Nishimori, Mitsubishi Heavy Industries Machinery Systems Ltd.; Kenta Nakao, Mitsubishi Heavy Industries Ltd.; Shunsuke Kamijo, University of Tokyo

2 Deep Unfolding for Fast Linear Massive MIMO Precoders under a PA Consumption Model
Thomas Feys, KU Leuven; Xavier Mestre, Telecommunications Technological Center of Catalonia; Emanuele Peschiera, François Rottenberg, KU Leuven

3 Design and Implementation of Holistic Service-Based End-to-end Network Slicing for 6G
Chang Qin, Xidian University; Tao Sun, China Mobile Research Institute; Mengtian Liu, Bingjie Zhu, Yunfeng Wang, Haiyan Tu, Manhua Zhu, Liqiang Zhao, Xidian University

4 Joint Beamforming and Metasurface Reflection: A Lightweight Design for Energy Efficiency via Deep Reinforcement Learning
Mina Yonan, American Unviersity in Cairo; Mohammad Galal Khafagy, Vodafone Egypt; Karim Banawan, Faculty of Engineering, Alexandria University; Karim Seddik, American University in Cairo

5 Machine Learning-Aided Dual CSI Feedback in Next Generation WLANs
Eunsung Jeon, Wookbong Lee, Minki Ahn, Jung Woon Lee, Sungsoo Kim, Inhyoung Kim, Joonsuk Kim, Samsung Electronics

6 Propagation Measurements and Coverage Analysis for mmWave and Sub-THz Frequency Bands with Transparent Reflectors.
Ashwini Pondeycherry Ganesh, Wahab Khawaja, NC State University; Ozgur Ozdemir, Ismail Guvenc, North Carolina State University

7 Secrecy Energy Efficiency Maximization in Multi-RIS-Aided SWIPT Wireless Network
Chukwuemeka T. Nwufo, Yichuang Sun, Oluyomi Simpson, Pan Cao, University of Hertfordshire

Wednesday, 21 June 2023 14:00 - 15:30 Affari 2.1

B2: 5G and Beyond II

1 Congestion Control by Mobile Core and RAN Coordination in 5G Mobile Network
Takuya Kato, KDDI Research, Inc.

2 Deep Q-Networks Assisted Pre-connect Handover Management for 5G Networks
Yao Wei, Chung-Horng Lung, Samuel Ajila, Carleton University; Ricardo Paredes Cabrera, Ericsson

3 Performance of Joint XR and Best Effort eMBB Traffic in 5G-Advanced Networks
Pouria Paymard, Aalborg University; Abolfazl Amiri, Nokia, Aalborg, Denmark; Troels E. Kolding, Nokia Bell Labs; Klaus Pedersen, Nokia

4 Optimal Antenna Selection and Time Sharing in RF-Powered Cognitive Networks With Ambient Backscatter Communication
Wenjing Liu, Shanpu Shen, Chi Zhang, Danny H.K. Tsang, Ross Murch, The Hong Kong University of Science and Technology

Wednesday, 21 June 2023 14:00 - 15:30 Affari 2.2

C2: IoV Networking II

1 Adverse Event Prevention on The Road System with Collaborative MEC
Ru Jun Wang, Han-Rong Lai, Shih-Jui Wang, Yu-Hsun Kuo, National Tsing Hua University; Chih-Hang Wang, Institute of Information Science, Academia Sinica; Wen-Tsuen Chen, National Tsing Hua University; De-Nian Yang, Academia Sinica

2 An Energy Efficiency Analysis of Computation Offloading in MEC-Enabled IoV Networks
Ernest Tan, Agency for Science, Technology and Research; A.S. Madhukumar, Nanyang Technological University

3 Edge-V: Enabling Vehicular Edge Intelligence in Unlicensed Spectrum Bands
Francesco Raviglione, Claudio Casetti, Politecnico di Torino; Francesco Restuccia, Northeastern University

4 Federated Learning for Anomaly Detection in Vehicular Networks
Chen-Khong Tham, National University of Singapore

5 Federated Learning-based Architecture for Detecting Position Spoofing in Basic Safety Messages
Kenniston Arraes Bonfim, Fernando da Silva Dutra, Carlos Eduardo Travagini Siqueira, Aeronautics Institute of Technology; Rodolfo I.

Meneguette, University of Sao Paulo; Aldri Luiz dos Santos, Federal University of Minas Gerais; Lourenço Alves Pereira Júnior, Aeronautics Institute of Technology

6 Refining Packet Collision Check in Resource Allocation for NR Sidelink Mode 2
Sumin Lee, Hyungjoon Shin, Hyogon Kim, Korea University

Wednesday, 21 June 2023 14:00 - 15:30 Affari Adua Hall 2

D2: Channel Modeling and Measurements I

1 Channel Measurement and Analysis for Human Exhalation and Inhalation in Living Room Scenario
Ran Pan, Danping He, Ke Guan, Beijing Jiaotong University; Xiaodong Sun, Dajie Jiang, Fei Qin, VIVO Mobile Communication Co.Ltd.

2 Delay Spread by Antenna Beamwidth Effect for Mobile Kiosk Data Downloading Environment in the 285GHz bands
Jinhyung Oh, Electronics and Telecommunications Research Institute; Jong Ho Kim, ETRI

3 Indoor Deterministic-Based Channel Modeling at D-Band for 6G Wireless Networks
Nektarios Moraitis, National Technical University of Athens; Demosthenes Vouyioukas, University of the Aegean

4 Outdoor Transmission Trials in the W-Band for 6G Mobile Access Scenarios
Mehrnoosh Mazhar Sarmadi, Ramez Askar, Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute; Mathis Schmieder, Fraunhofer HHI; Michael Peter, Heinrich-Hertz-Institut; Wilhelm Keusgen, Technische Universität Berlin; Dirk Schwantuschke, Fraunhofer IAF

5 Statistical Evaluation of Delay and Doppler Spreads in sub-6 GHz and mmWave Vehicular Channels
Faruk Pasic, TU Wien; Markus Hofer, AIT Austrian Institute of Technology; Mariam Mussbah, Herbert Groll, TU Wien; Thomas Zemen, AIT Austrian Institute of Technology; Stefan Schwarz, Christoph Mecklenbräuker, TU Wien

Wednesday, 21 June 2023 14:00 - 15:30 Congressi - Room 4

E2: Recent Results in Physical Layer II

1 Covariance Difference of Arrival based Fingerprinting Localization
Xinze Li, Hanan Al-Tous, Aalto University; Salah Eddine Hajri, Huawei Technologies CO. LTD.; Olav Tirkkonen, Aalto University

2 First Demonstration of Predictive Equalization for UWOCC in Seawater
Asako Shigenawa, Tokyo university of agriculture and technology; Yuika Yasui, Yu Nakayama, Tokyo University of Agriculture and Technology

3 Hybrid Beamforming for Dual-Functional Radar-Communication Systems
Wei-Chih Yang, Hsin-Yuan Chang, National Tsing Hua University; Ronald Y. Chang, Academia Sinica; Wei-Ho Chung, National Tsing Hua University

4 Revisiting energy-efficient hybrid and digital beamforming architectures above 100 GHz
Yigit Ertugrul, KU Leuven; Claude Desset, imec; Sofie Pollin, KU Leuven

5 Wireless Multi-Target Vital Sign Detection Using SIMO-FMCW Radar in Multipath Propagation Environments
Po-Yen Lin, Hsin-Yuan Chang, National Tsing Hua University; Ronald Y. Chang, Academia Sinica; Wei-Ho Chung, National Tsing Hua University

Wednesday, 21 June 2023 14:00 - 15:30 Congressi - Room 5

F2: Radio Access Technology, Services and Security

1 Context-Aware Service Placement at the Edge in Vehicular Networks
Wanlu Zhang, Chenhui Tao, Harbin Institute of Technology, Shenzhen; Jingjing Luo, Fu-Chun Zheng, Harbin Institute of Technology (Shenzhen); Lin Gao, Harbin Institute of Technology

2 Physical Layer Authentication With Simultaneous Reflecting and Sensing RIS
Mahmoud Selim, Stefano Tomasin, University of Padova

3 Post-Quantum Impacts on V2X Certificates â€“ Already at The End of The Road
Takahito Yoshizawa, Bart Preneel, KU Leuven ? imec ? COSIC

4 Security and Reliability Performance of a Cooperative Network with Self-Sustaining Nodes
Amit Patel, Shankar Prakriya, Indian Institute of Technology, Delhi

Wednesday, 21 June 2023 14:00 - 15:30 Congressi - Room 101

G2: Non Terrestrial Platforms

1 Basic Experimental Evaluation of Feeder Link Transceiver in HAPS System
Kazuki Matsuura, SoftBank Corp.; Yoshichika Ohta, Softbank Corp.

2 HAPS Cell Design Method for Coexistence on Terrestrial Mobile Networks
Yohei Shibata, Wataru Takabatake, Kenji Hoshino, Atsushi Nagate, SoftBank Corp.; Tomoaki Ohtsuki, Keio University

3 Interference Reduction between HAPSs using Subarray Grouping and Nullforming Techniques for Cylindrical Massive MIMO Systems
Koji Tashiro, SoftBank Corp.

4 Low Earth Orbit Satellite Supported Multi-Hop Dissemination of Messages in V2X Networks
Mario Franke, TU Dresden; Roland Stroop, Paderborn University; Florian Klingler, TU Ilmenau; Christoph Sommer, TU Dresden

5 Transmission experiments using delay generator actualizing fixed communication system for HAPS
Yuki Hokazono, Hinata Kohara, NTT DOCOMO INC.; Yuto Muroki, NTT DOCOMO, INC.; Kenji Fukasawa, NTT DOCOMO INC.; Yoshihisa Kishiyama, NTT DOCOMO, INC.; Jun Suzuki, Hiromu Kitanozono, SKY Perfect JSAT Corporation

Wednesday, 21 June 2023 14:00 - 15:30 Oince

H2: Machine Learning for Sensing

1 Enhancing Image-based Positioning With a Novel Foot Position Extraction Algorithm and Machine Learning
Han-Hsuan Cheng, Jin-Xian Liu, Jenq-Shiou Leu, National Taiwan University of Science and Technology

2 Finding Needles in Haystack: Formal Generative Models for Efficient Massive Parallel Simulations
Osama Maqbool, RWTH University Aachen

3 Hybrid Cascaded and Feature-Level Fusion Scheme for Multi-Modal Indoor Localization
Siyu Tang, Shanghai University; kaixuan huang, shanghai university; Shunqing Zhang, Shanghai University

4 SwipeBot: DNN-based Autonomous Robot Navigation among Movable Obstacles in Cluttered Environments
Dzmitry Tsetserukou, Skolkovo Institute of Science and Technology

5 Training Data Generation Utilizing LOS Identification for Estimating Spatial Loss Fields
Yoshiaki Nishikawa, NEC; Takahiro Matsuda, Tokyo Metropolitan University; Eiji Takahashi, Takeo Onishi, NEC; Toshiki Takeuchi, NEC Corporation

Wednesday, 21 June 2023 14:00 - 15:30 Auditorium Foyer - 2nd Floor

P2: RF, E-Mobility, Radio Access, and Spectrum Management

1 6G Wireless Channel Scenario Extensions and Characteristics Analysis for Urban Environment
Zhongyu Qian, Zheao Li, WenQi Zhou, Southeast University; Chen Huang, Purple Mountain Laboratory; Cheng-Xiang Wang, Southeast University

2 Measuring the Impact of Intrain Repeater Deployments in Real-Time
Martin Lerch, Philipp Svoboda, TU Wien; Josef Resch, OBB Technische Services GmbH; Markus Rupp, TU Wien

3 **Time Variant Directional Multi-Link Channel Sounding and Estimation for V2X**
Daniel Stanko, Michael Döbereiner, Fraunhofer Institute for Integrated Circuits IIS; Gerd Sommerkorn, Daniel Czaniera, Technische Universität Ilmenau; Carsten Andrich, Alexander Ihlow, Institute for Information Technology, Technische Universität Ilmenau; Markus Landmann, Fraunhofer Institute for Integrated Circuits IIS

4 **Decentralized Training of 3D Lane Detection with Automatic Labeling Using HD Maps**
Yadong Mao, Zhuqi Xiao, Zenseact AB; Che-Tsung Lin, Chalmers University of Technology; Pedro Porto Buarque de Gusmao, Nicholas Lane, University of Cambridge; Christopher Zach, Chalmers University of Technology; Mina Alibeigi, Zenseact AB, University of Cambridge

5 **Design and Implementation of a Service-based Radio Access Network**
Haoyang Ding, Yunfeng Wang, Xingyun Zheng, Liqiang Zhao, Xidian University

6 **Eco-driving over multi-signal road segments considering traffic flow constraints**
Zhensen Yang, Chuang Wang, Huazhong University of Science and Technology; Yuling Fan, Huazhong Agricultural University; Lijun Zhang, Huazhong University of Science and Technology

7 **MsSDEdit: Deep Learning Image Enhancement for Automated Bounding Box Annotations in Automotive Monocular Camera Applications**
Nico Hessenthaler, Andreas F. Schneider, Nicolaj C. Stache, Heilbronn University of Applied Sciences

Wednesday, 21 June 2023 16:00 - 17:30 Affari 2.1

B3: Emerging Technologies

1 **Light Source Tracking System for A-QL based Display-Camera Communication**
Yuki Sasaki, Kazuki Maruta, Tokyo University of Science; Shun Kojima, The University of Tokyo; Daisuke Hisano, Osaka University; Yu Nakayama, Tokyo University of Agriculture and Technology

2 **Minimizing Energy Consumption for Decentralized Federated Learning Using D2D Communications**
Mohammed S. Al-Abiad, The University of Toronto; Md. Jahangir Hossain, University of British Columbia

3 **MMSE Threshold-based Power Control for Wireless Federated Learning**
Yeh-Shu Hsu, Rung-Hung Gau, National Yang Ming Chiao Tung University

4 **Opportunistic Resilient Time Service from LEO Mega Constellations**
Panos Fines, Ekaterini Christofylaki, Wireless Intellignet Systems Ltd; Paul Febvre, Satellite Applications Catapult

5 **QRADCOM: Quantum Assisted Framework for Joint Detection and Estimation in Radar Communications**
Mostafizur Rahaman Laskar, Soumita Naskar, Amit Kumar Dutta, Indian Institute of Technology Kharagpur

6 **Towards Improving Realism of Perception in Artery**
Alexander Willecke, Cengiz Yazici, Keno Garlichs, Lars Wolf, Technische Universität Braunschweig

Wednesday, 21 June 2023 16:00 - 17:30 Affari 2.2

C3: Estimation & Detection

1 **A Least Squares Approach for Estimating Non-linearity Parameters for OFDM Signals with Bussgang Receivers**
Zahra Mokhtari, Instituto de Telecomunicações (IT); Rui Dinis, Universidade Nova de Lisboa; João Madeira, Universidade Nova de Lisboa - Faculdade de Ciências e Tecnologias; João Guerreiro, FCT-Universidade Nova de Lisboa, Instituto de Telecomunicações

2 **Active User Detection and Channel Estimation for Grant-Free Random Access with Gaussian Correlated Activity**
Lelio Chetot, CITI - INSA Lyon, Maracas - INRIA Lyon; Malcolm Egan, CITI Lab, France; Jean-Marie Gorce, INSA Lyon

3 **On the Feasibility of 5G Carrier Synchronization for Super-QAM Constellations**
Zahra Mokhtari, Instituto de Telecomunicações (IT); Rui Dinis, Universidade Nova de Lisboa; Sha Hu, Huawei Lund Research Center; Hao Wang, Huawei Technologies

4 **Wiener Interpolation Filter for Phase Noise Estimation in sub-THz Transmission**
Yaya Bello, Jean-Baptiste Doré, David Demmer, CEA-Leti

Wednesday, 21 June 2023 16:00 - 17:30 Affari Adua Hall 2

D3: Channel Modeling and Measurements II

1 **A Hybrid Antenna Switching Scheme for Dynamic Channel Sounding**
Jaeyoung Park, Ali Al-Ameri, Juan Sanchez, Xuesong Cai, Fredrik Tufvesson, Lund University

2 **A Novel Beam Domain Channel Model for Orbital Angular Momentum Communication Systems with Massive Uniform Circular Array**
Wenxie Ji, Cheng-Xiang Wang, Jie Huang, Yue Yang, Southeast University

3 **Evaluation of High-Performance Radio Propagation Simulation Method in Path Loss Estimation**
Takahiro Tomie, Satoshi Suyama, NTT DOCOMO, INC.; Koshiro Kitao, NTT DOCOMO; Mitsuki Nakamura, NTT DOCOMO, INC.

4 **Reduction of Noise Power by Iterative Short-Time Power Delay Profile Estimation**
Fumiya Ojika, Takaya Yamazato, Nagoya University; Masato Saito, University of the Ryukyus; Hideki Omote, Softbank corp.; Akihiro Sato, Softbank.corp.; Sho Kimura, Shoma Tanaka, Softbank corp.; Ho-Yu Lin, SoftBank Corp.

5 **RNN-Based Path Loss Modeling with Variable-Size Map Data in Urban Environments**
Tatsuya Nagao, Takahiro Hayashi, KDDI Research, Inc.

Wednesday, 21 June 2023 16:00 - 17:30 Congressi - Room 4

E3: Recent Results in RIS I

1 **A comprehensive dataset of RIS-based channel measurements in the 5GHz band**
Simon Tewes, Ruhr-University Bochum; Markus Heinrichs, TH Cologne - University of Applied Sciences, Cologne, Germany; Kevin Weinberger, Ruhr-University Bochum; Rainer Kronberger, TH Cologne - University of Applied Sciences, Cologne, Germany; Aydin Sezgin, Ruhr-University Bochum

2 **A Simulation Framework For RIS Communications**
Jonathan W. Browning, Nidhi Simmons, Queen's University Belfast; Paschalis Sofotasios, Khalifa University; Simon L. Cotton, Queen's University Belfast; David Morales-Jimenez, University of Granada; Michalis Matthaiou, Muhammad Ali Babar Abbasi, Queen's University Belfast

3 **A Low-Complexity Solution to Sum Rate Maximization for IRS-assisted SWIPT-MIMO Broadcasting**
Vaibhav Kumar, University College Dublin; Anastasios Papazafeiropoulos, University of Hertfordshire; Muhammad Fainan Hanif, University of the Punjab, Lahore, Pakistan; Le-Nam Tran, Mark Flanagan, University College Dublin

4 **CNN-enabled Joint Active and Passive Beamforming for RIS-assisted MU-MIMO Systems**
Zhizhou He, Fabien Heliot, Yi Ma, University of Surrey

5 **Firefly Algorithm for Beamforming Design in RIS-aided Communications Systems**
Tuan Le, Middlesex University London; Xin-She Yang, Middlesex University

Wednesday, 21 June 2023 16:00 - 17:30 Congressi - Room 5

F3: Recent Results in Resource Management I

1 **A New Time Series Forecasting Approach Using Classification: Application to Field of View Prediction in 360° videos**
Ahmed Saadallah, El Korbi Ines, University of Burgundy; Sidi-Mohammed Senouci, University of Bourgogne, ISAT Nevers; Philippe Brunet, University of Burgundy

2 Communication and Control Interfacing for Co-design of Wireless Control Systems
Jianxiu Li, University of Southern California; Saeed R. Khosravirad, Jinfeng Du, Nokia Bell Labs; Wanchun Liu, University of Sydney; Urbashi Mitra, University of Southern California

3 Companding Transform Assisted Constant Envelope OFDM
Chongda Huang, Lilin Dan, Yue Xiao, University of Electronic Science and Technology of China

4 Coverage Hole Elimination System in Industrial Environment
Mervat Zarour, Shreya Tayade, Sergiy Melnyk, German Research Center for Artificial Intelligence; Hans D.Schotten, Technical University of Kaiserslautern; Hans Schotten, University of Kaiserslautern

5 Integrated Space Domain Awareness and Communication System
Selen Gecgel Cetin, Istanbul Technical University; Berna Ozbek, Izmir Institute of Technology; Gunes Karabulut Kurt, Polytechnique de Montreal, Canada

Wednesday, 21 June 2023 16:00 - 17:30 Congressi - Room 101

G3: Performance Analysis and Evaluation

1 Analysis of the outage probability of ground-based relaying for satellite systems
Hadi Hashemi, Beatriz Soret, University of Malaga; Mari Carmen Aguayo-Torres, Universidad de Malaga

2 Exploiting Reflection Direction Variation for Phase Control in Multiple Simultaneous IRS Links
Ei Tanaka, Yuichi Kawamoto, Nei Kato, Tohoku University; Masashi Iwabuchi, NTT; Riku Ohmiya, NTT Access Network Service Systems Laboratories; Tomoki Murakami, NTT Corporation

3 Implementation of Low-cost Multi-antenna AmBC Receivers
Xiyu Wang, Huseyin Yigitler, Aalto University; Bing-Qing Zhao, Xi'an Jiaotong University; Jingyi Liao, Norshahida Saba, Nicolas Malm, Aalto University; Riku Jäntti, Department of Communications and Networking, Aalto University

4 Performance Analysis of Intelligent Reflecting Surface Assisted-FSO System over Turbulent Channels with Pointing Errors
Takumi Ishida, Chedlia Ben Naila, Hiraku Okada, Masaaki Katayama, Nagoya University

5 Performance Analysis of QKD-based Terrestrial FSO System using QPSK under Atmospheric Turbulence
Ragini Verma, Anshul Jaiswal, IIT Roorkee

Wednesday, 21 June 2023 16:00 - 17:30 Oince

H3: Large Intelligent Surfaces

1 Capacity Analysis of RIS-Aided Backscatter Communication Systems
Yasin Khan, Aaqib Afzal, Ankit Dubey, Indian Institute of Technology Jammu

2 Design of IRS-Assisted Non-Binary Channel-Coded Physical Layer Network Coding
Mahmoud AlaaEldin, University of Manchester; Emad Al-Susa, Manchester University; Karim Seddik, American University in Cairo

3 Efficient Power Allocation in Coded MIMO Systems
Haochen Wu, Ke Ma, Yang Ming, Tsinghua University; Ziyuan Sha, Zeku Technology Corp., Ltd.; Zhaocheng Wang, Tsinghua University

4 On the Jamming Rejection Features of Near-field Beamforming
João Ferreira, Universidade Nova de Lisboa; João Guerreiro, FCT-Universidade Nova de Lisboa, Instituto de Telecomunicações; Rui Dinis, Universidade Nova de Lisboa; Mario Marques da Silva, Institute for Telecommunications

5 RIS-aided Media Based Modulation
Shankul Saini, Vighnesh S Bhat, Indian Institute of Science, Bangalore; A Chockalingam, Indian Institute of Science

Wednesday, 21 June 2023 16:00 - 17:30 Auditorium Foyer - 2nd Floor

P3: Transmission & Reception and Vehicle Communications

1 Adaptive Time Synchronization between Transmitters in Digital Self-interference Cancellation Systems
Daeyoung Kim, Hyunseok Yu, Joohyun Do, Jungwon Lee, Samsung Electronics

2 Amplitude- and phase-modulated PSSS for wide bandwidth mixed analog-digital baseband processors in THz communication
Lukasz Lopacinski, IHP; Nebojsa Maletic, IHP - Leibniz-Institut für innovative Mikroelektronik; Rolf Kraemer, IHP; Alireza Hasani, IHP - Leibniz-Institut fur innovative Mikroelektronik; Jesus Gutiérrez, IHP; Milos Krstic, IHP - Leibniz-Institut für innovative Mikroelektronik; Eckhard Grass, IHP, Germany and HU, Berlin

3 Max-Min Fairness Precoder Design using A Generalized Power Iteration Approach in Rate-Splitting Multiple Access
Doseon Kim, Jeonghun Park, Yonsei University; Dongku Kim, Yonsei university

4 NOMA-aided double RIS under Nakagami-m fading: Channel and System Modelling
Wilson de Souza Junior, UEL; Taufik Abrão, State University of Londrina

5 Deep Reinforcement Learning-Based Resource Allocation for Cellular V2X Communications
Yi-Ching Chung, Hsin-Yuan Chang, National Tsing Hua University; Ronald Y. Chang, Academia Sinica; Wei-Ho Chung, National Tsing Hua University

6 Flying Intelligent Surfaces: Joint adjustment of position and configuration for UAV-mounted RIS
Kevin Weinberger, Simon Tewes, Raphael Dyrska, Jens Müller, Martin Mönnigmann, Aydin Sezgin, Ruhr-University Bochum

7 Matrix Factorization and Deep Autoencoder based Clustering Scheme for Large-scale UAV Networks
Jiaolan Fang, Chan Wang, Rongpeng Li, Zhejiang University

Thursday 22 June 2023

Thursday, 22 June 2023 11:00 - 12:30 Affari 2.1

B4: UAV Communications I

1 Characterizing Interference in UAV-mounted Radar Networks with Guard Zones
Jaehyun Park, Pukyong National University; Ismail Guvenc, North Carolina State University

2 Collision Avoidance Strategies for Cooperative Unmanned Aircraft Systems using Vehicle-to-Vehicle Communications
Jaya Sravani Mandapaka, Batool Dalloul, Skyler Hawkins, Kamesh Namuduri, University of North Texas; Shane Nicole, Keven Gambold, Unmanned Experts

3 Measurement-based Channel Characterization for A2A and A2G Wireless Drone Communication System
Ubeydullah Erdemir, Batuhan Kaplan, Tübitak Bilgem; İbrahim Hökelek, Tübitak; Ali Gorcin, Yildiz Technical University; Hakan Ali Çırpan, İstanbul Technical University

4 **MEC-assisted Low Latency Communication for Autonomous Flight Control of 5G-Connected UAV**
Sourabh Solanki, Université du Luxembourg; Asad Mahmood, Vibhum Singh, SnT, University of Luxembourg; Sumit Gautam, Indian Institute of Technology - Indore; Jorge Querol, Symeon Chatzinotas, SnT, University of Luxembourg

5 **Spherical-Array-Based Joint Beamforming and UAV Positioning in Massive MIMO Systems**
Mobeen Mahmood, Asil Koc, Tho Le-Ngoc, McGill University

6 **Trajectory Design for Sum-Rate Enhancement in UAV-SCMA System**
Saumya Chaturvedi, Indraprastha Institute of Information Technology Delhi; Vivek Bohara, IIIT-Delhi; Zilong liu, University of Essex; Anand Srivastava, IIIT DELHI

Thursday, 22 June 2023 11:00 - 12:30 Affari 2.2

C4: IoT Networks I

1 **Aggregation of Contiguous Packets in an Actual LoRaWAN Passive Packet Sniffer**
Ahmed Abdelghany, university of Rennes; Bernard Uguen, IETR / CNRS / Université Rennes-I; Christophe Moy, Univ Rennes, CNRS, IETR - UMR 6164; Jérôme Le Masson, IETR / CNRS / Université Rennes-I

2 **DoIP: A Parallel Protocol Conversion Gateway for DMR over Internet Protocol**
Wenkai Wang, Xidian University, China; Lina Zhu, Tom H. Luan, Changle Li, Xidian University

3 **FLCC: Efficient Distributed Federated Learning on IoMT over CSMA/CA**
Abdelaziz Salama, University of Leeds

4 **Measurement-Based Latency Evaluation and the Theoretical Analysis for Massive IoT Applications Using Bluetooth Low Energy**
Daisuke Uchida, Toshiba Corporation; Yuki Yonezawa, Koji Akita, Toshiba Corp.

5 **Periodic Data Scheduling Scheme for Power Internet of Things Based on Age of Information**
Qianni Zhou, Chong Tan, Hui Li, Jichen Bian, Hong Liu, Min Zheng, Shanghai Institute of Microsystem and Information Technology CAS

Thursday, 22 June 2023 11:00 - 12:30 Affari Adua Hall 2

D4: RIS-assisted Communications

1 **Ergodic Capacity Analysis of Reconfigurable Intelligent Surface Assisted MIMO Systems with the source to destination link**
Marjan Abbasi Mosleh, Fabien Heliot, Rahim Tafazolli, University of Surrey

2 **Measurement-based Characterization of Physical Layer Security for RIS-assisted Wireless Systems**
Samed Keşir, Sefa Kayraklık, Tübitak Bilgem; İbrahim Hökelek, Tübitak; Ali Emre Pusane, Bogazici University; Ertugrul Basar, Koc University; Ali Gorcin, Yildiz Technical University

3 **On the Optimal Assignment of Mirror Element in UAV and OIRS-Assisted OWC based Architecture**
Priyanka Singh, Vivek Bohara, Anand Srivastava, IIIT-Delhi

4 **User Selection for Simple Passive Beamforming in Multi-RIS-Aided Multi-User Communications**
Wei Jiang, German Research Center for Artificial Intelligence; Hans Schotten, University of Kaiserslautern

Thursday, 22 June 2023 11:00 - 12:30 Congressi - Room 4

E4: Recent Results in Radio Access

1 **EFD-M2MMAC: An Enhanced Full-Duplex Many-to-Many MAC Protocol for Single-Hop Wireless Ad Hoc Networks**
Wilton Pereira Santos Santana, Renato Mariz de Moraes, Universidade Federal de Pernambuco (UFPE)

2 **Evaluation of 5GNR-based Cooperative Collision Avoidance (CoCA)**
Valérian Mannoni, CEA; Benoît Denis, CEA-Leti Minatec

3 **Performance Evaluation of Random Access for Small Data Transmissions in Highly Dense Public and Private NB-IoT Networks**
Pascal Jörke, David Ronschka, Technische Universität Dortmund; Christian Wietfeld, TU Dortmund University

4 **Performance of a New Dynamic Time-Switching Protocol with a Battery-Assisted FD Relay**
Kamal Agrawal, IIT Delhi; Shankar Prakriya, Indian Institute of Technology, Delhi; Keshav Singh, National Sun Yat-sen University

5 **Time-Triggered Reservation for Cooperative Random Access in Wireless LANs**
Yaodan Xu, Sheng Zhou, Tsinghua University; Qian Cao, Bowen Zheng, Zhangliang Xiong, Yuanqiang Ni, Huawei Device Co., Ltd

Thursday, 22 June 2023 11:00 - 12:30 Congressi - Room 5

F4: Recent Results in Resource Management II

1 **Network Economic Model for Resource Utilization in Fog-based RAN**
Bharat Dwivedi, Sandip Chakraborty, Debarati Sen, Indian Institute of Technology Kharagpur

2 **On the Detection and Solution of Coverage Holes in 5G Networks through Relay User Equipment: a combined DBSCAN and Deep:Q Network Approach**
Juan Jesús Hernandez, Jordi Pérez-Romero, Irene Vilà Muñoz, Oriol Sallent, Universitat Politècnica de Catalunya

3 **On the Feasibility of Position-Flooding in Urban UAV Networks**
Konrad Fuger, Andreas Timm-Giel, Hamburg University of Technology

4 **Revealing Spectrum Allocation Scheme and Temporal Transmission Behavior of IoT Devices using Passive Packet Sniffing**
Ahmed Abdelghany, University of Rennes; Bernard Uguen, IETR / CNRS / Université Rennes-I; Christophe Moy, Univ Rennes, CNRS, IETR - UMR 6164; Jérôme Le Masson, IETR / CNRS / Université Rennes-I

5 **Path Planning for Unmanned Aerial Vehicles: Peak Power Minimization**
Bahareh Jafari, University of Massachusetts Amherst; Hamid Saeedi, University of Doha for Sci. and Tech.; Saeede Enayati, Hossein Pishro-Nik, University of Massachusetts Amherst

Thursday, 22 June 2023 11:00 - 12:30 Congressi - Room 101

G4: Autonomous Vehicle Security

1 **A Machine Learning Approach for Detecting GPS Location Spoofing Attacks in Autonomous Vehicles**
Stylianos Filippou, Andreas Achilleos, Syeda Zillay Nain Zukhraf, Christos Laoudias, Kleanthis Malialis, KIOS Center of Excellence, University of Cyprus; Maria K. Michael, George Ellinas, University of Cyprus

2 **PREVENT: A Mechanism for Preventing Message Tampering Attacks in Electric Vehicle Networks**
Rohini Poolat Parameswarath, National University of Singapore; Nalam Venkata Abhishek, Singapore Institute of Technology; Biplab Sikdar, National University of Singapore

3 **MMFiducial: Millimeter Wave Fiducial Tags for Radar Sensing of Traffic Infrastructure**
Manideep Dunna, Kshitiz Bansal, University of California San Diego; Sanjeev Anthia Ganesh, Eamon Patamasing, Dinesh Bharadia, University of California, San Diego

4 **Rate Adaptation Algorithm With LSTM in IEEE 802.11ac**
Jichen Bian, Chong Tan, Hong Liu, Hui Li, Min Zheng, Shanghai Institute of Microsystem and Information Technology CAS

5 **Secure Vehicle Software Updates: Requirements for a Reference Architecture**
Kim Strandberg, Ulf Arnljung, Volvo Cars; Tomas Olovsson, Chalmers University of Technology; Dennis Kengo Oka, Synopsys

6 **Simutack - An Attack Simulation Framework for Connected and Autonomous Vehicles**
Andreas Finkenzeller, Anshu Mathur, Jan Lauinger, Mohammad Hamad, Sebastian Steinhorst, Technical University of Munich

Thursday, 22 June 2023 11:00 - 12:30 Oince

H4: DL for Communications

1 **Deep Learning-based Demodulator for Magnitude Modulated Signals**
Diogo Henriques, Marco Gomes, Instituto de Telecomunicações - University of Coimbra; Vitor Silva, University of Coimbra; Fernando Perdigão, Instituto de Telecomunicações - University of Coimbra

2 **Pragmatic Distributed Algorithm for Multi-Carrier Cooperative NOMA**
Harry Horler, Baharak Rastegari, Soon Xin Ng, University of Southampton

3 **SplitAMC: Split Learning for Robust Automatic Modulation Classification**
Jihoon Park, Seungeun Oh, Seong-Lyun Kim, Yonsei University

Thursday, 22 June 2023 14:00 - 15:30 Affari 2.1

B5: UAV Communications II

1 **GAANet: Ghost Auto Anchor Network for Detecting Varying Size Drones in Dark**
Misha Urooj Khan, Maham Misbah, Zeeshan Kaleem, COMSATS University Islamabad, Wah Campus; Yansha Deng, King's College London; Abbas Jamalipour, The University of Sydney

2 **Graphic Neural Network based GPS Spoofing Detection for Cellular-Connected UAV swarm**
Yongchao Dang, Alp Karakoc, Riku Jäntti, Aalto University

3 **Using UAVs for the fast detection and characterization of polluted areas**
Javier Paul, Jamie Wubben, Universidad Politécnica de Valencia; Willian Zamora, Universidad Laica Eloy Alfaro de Manabí Manta; Enrique Hernández Orallo, Carlos T. Calafate, Polytechnic University of Valencia; Jorge L. Valenzuela, Kansas State University

Thursday, 22 June 2023 14:00 - 15:30 Affari 2.2

C5: IoT Networks II

1 **Deduplication of Textual Data by NLP Approaches**
Kiana Ghassabi, Peyman Pahlevani, Institute for Advanced Studies in Basic Sciences (IASBS); Peyman Pahlevani, Aalborg University; Daniel Enrique Lucani Rotter, Aarhus University

2 **Fair Network Division of Nano-satellite Swarms**
Evelyne Akopyan, TéSA; Riadh Dhaou, Toulouse University; Emmanuel Lochin, ENAC; Bernard Pontet, CNES; Jacques Sombrin, TéSA

3 **Fast converging Federated Learning with Non-IID Data**
Si Ahmed Naas, Stephan Sigg, Aalto University

4 **Inter-Twin Connectivity for Digital Twin Networks in Secure Contactless Delivery Service Scenarios**
Woojin Park, Chungbuk National University; Daeun Lee, Ulsan National Institute of Science and Technology; Soochang Park, Chungbuk National University; Taehun Yang, Andong National University; Sang-Ha Kim, ChungNam National University

5 **Prospect-theoretic DRL Approach for Container Provisioning in Energy-constrained Edge Platforms**
Mduduzi Comfort Hlophe, Sunil Maharaj, University of Pretoria

Thursday, 22 June 2023 14:00 - 15:30 Affari Adua Hall 2

D5: Satellite Comunications

1 **A New GNSS-based Channel Estimation Strategy for LEO Satellite Communication Systems**
Hyunwoo Lee, Jehyun Heo, Daesik Hong, Yonsei University

2 **Capacity of Satellite Communication Systems Under Different Adaptive Transmission Schemes**
Kshitija Dolas, Manav R Bhatnagar, IIT Delhi

3 **Energy Efficiency of Rate-Splitting Multiple Access for Multibeam Satellite Communications**
Jinyuan Liu, Guan Yong Liang, Yao Ge, Nanyang Technological University; Longfei Yin, Imperial College London; Bruno Clerckx, Imperial

Thursday, 22 June 2023 14:00 - 15:30 Congressi - Room 4

E5: Recent Results in Vehicular Communications

1 **On the Feasibility of Using 5G Enabled Smartphones to Improve Safety of Vulnerable Road Users**
Joel Puga, CCG; Filipe Meneses, Adriano Moreira, University of Minho

2 **Predictive Network Configuration with Hierarchical Spectral Clustering for Software Defined Vehicles**
Pierre Laclau, Stellantis and Heudiasyc (CNRS, UTC), France; Stéphane Bonnet, Heudiasyc, UMR CNRS, Université de Technologie de Compiègne, France; Bertrand Ducourthial, Université de Technologie de Compiègne; Xiaoting Li, Trista Lin, Stellantis, Vélizy-Villacoublay, France

3 **Real-time route planning based on network coverage for connected vehicles**
Romain Stevens, University of Technology of Troyes; Mario Bou Abboud, Maroua Drissi, Sylvain Allio, Orange Labs

4 **Reinforcement Learning-Based Cognitive Radio Transmission Scheduling in Vehicular Systems**
Yun Li, Yuyuan Chang, Kazuhiko Fukawa, Tokyo Institute of Technology; Naoki Kodama, Meiji University

Thursday, 22 June 2023 14:00 - 15:30 Congressi - Room 5

F5: Radio Access for Cellular Networks

1 **A QoS harmonization strategy for Wi-Fi and Cellular Networks Convergence**
Akshay Jain, Nokia Bell Labs; Daniel Garcia, Seyed Mahdi Darroudi, Neutroon Technologies SL; Elena Lopez-Aguilera, Universitat Politecnica de Catalunya

2 **DRL-based RAT Selection in a Hybrid Vehicular Communication Network**
Badreddine Yacine Yacheur, Toufik Ahmed, CNRS-LaBRI UMR 5800, University Bordeaux, Bordeaux-INP; Mohamed Mosbah, LaBRI, Bordeaux INP, Universiy of Bordeaux, CNRS, France

3 **Improving Delay Estimation in Underwater Acoustic Applications by the Additional Use of Cross-Cross-Correlation**
Gaetano Giunta, University of Roma Tre; Luca Pallotta, University of Basilicata

4 **Novel Out-of-Band mmWave Layer 2 Protocol for 5G Network-Based Downlink IAB SDR Platform**
Randy Verdecia, Universidad Politécnica de Madrid; Rodolfo Oliveira, Universidade Nova de Lisboa/Instituto de Telecomunicações; José I. Alonso, Universidad Politécnica de Madrid

5 **Optimal placement of virtualized DUs in O-RAN architecture**
Amath Ndao, Xavier Lagrange, Nicolas Huin, Geraldine Texier, Loutfi Nuaymi, IMT Atlantique

Thursday, 22 June 2023 14:00 - 15:30 Congressi - Room 101

G5: Green Tech and Energy Management

1 **An Innovative Convoying and Power Management System for Public Transportation**
Adriano Alessandrini, University of Florence; Fernando Ortenzi, ENEA; Lorenzo Berzi, Michelangelo Santo Gulino, University of Florence; Fabio Cignini, ENEA; Luca Pugi, University of Florence

2 **Digital twin based simulation platform for heavy duty hybrid electric vehicles**
Eneko Otaola, Tecnalia Research & Innovation

3 **Energy Consumption of Electric Vehicles: Effect of Lateral Dynamics**
Simran Kumari, Susenjit Ghosh, Ashish Hota, Siddhartha Mukhopadhyay, Indian Institute of Technology, Kharagpur

4 **Modeling and Controller Design for Real-time Energy Management in Battery/SC Electric Vehicles**
Morteza Rezaei Larijani, Shahin Hedayati Kia, University of Picardie Jules Verne; M. R. Zolghadri, Sharif University of Technology; Ahmed El Hajjaji, University of Picardie Jules Verne; Amir Taghavipour, K. N. Toosi University of Technology

5 **Multi-layer Approach for Energy Consumption Optimization in Electric Buses**
Tobias Rösch, Sunilkumar Raghuraman, EvoBus GmbH; Martin Sommer, Carolin Junk, Daniel Baumann, Eric Sax, Karlsruhe Institute of Technology

6 **Performance Evaluation of an Electromechanical Linear Actuator with Optimal Trajectories**
Mohammad Bahari, Alvaro Paz, Andrew Habib, Jouni Mattila, Tampere University

Thursday, 22 June 2023 14:00 - 15:30 Oince

H5: Assisted Mobility

1 **Experimental Identification of the Lateral Dynamics of a Steering-assisted Two-wheeled Vehicle**
Stefano Lovato, Matteo Massaro, Basilio Lenzo, Mauro Andriollo, Roberto Lor, Matteo Bova, University of Padova

2 **Improving Emergency Vehicles Flow in Urban Environments Through SDN-based V2X Communications**
Mickaël Riviere, University of Reunion Island, France; José D. Padrón, Universitat Politècnica de València; Carlos T. Calafate, Juan-Carlos Cano, Polytechnic University of Valencia; Tahiry Razafindralambo, Univ. La Réunion

3 **Inferring Human Driver Intent in Partial Deployment of Connected Autonomous Vehicles: the Lane Change Case**
Jonghwan Na, Hojeong Lee, Hyogon Kim, Korea University

4 **Optimized Intelligent Driver Model for a Fluid Traffic Flow and Accidents Avoidance**
Mayssa Dardour, Mohamed Mosbah, University of Bordeaux; Toufik Ahmed, CNRS-LaBRI UMR 5800, University Bordeaux, Bordeaux-INP

5 **Stochastic Graph Neural Network-based Value Decomposition for Multi-Agent Reinforcement Learning in Urban Traffic Control**
Xiao Baidi, Rongpeng Li, Zhejiang University; Fei Wang, Chenghui Peng, Jianjun Wu, Huawei Technologies; Zhifeng Zhao, Zhejiang Lab; Honggang Zhang, Zhejiang Lab and Zhejiang University

6 **Design & Modelling of an All Wheel Drive System for an Heavy Quadricycle Truck (L7e category)**
Luca Pugi, Lorenzo Berzi, Samule Sarti, University of Florence; Claudia Bonaccorso, Enrico Bianconi, Advanced Techno Solutions S.r.l.

Thursday, 22 June 2023 16:00 - 17:30 Affari 2.1

B6: Vehicular Applications

1 **Fine-grained Passenger-Vehicle Coupling Management for Secure Ride-Sharing Services**
Daeun Lee, Ulsan National Institute of Science and Technology; Woojin Park, Soochang Park, Chungbuk National University; Taehun Yang, Andong National University; Sang-Ha Kim, ChungNam National University

2 **On the Accuracy of Automotive Radar Tracking**
Lennert Jacobs, Ghent University; Peter Veelaert, Ghent University - imec; Heidi Steendam, Ghent University; Wilfried Philips, Ghent University - imec

3 **RF Signal Source Search and Localization Using an Autonomous UAV with Predefined Waypoints**
Hyeokjun Kwon, Ismail Guvenc, North Carolina State University

4 **Sensing Resources Reduction for Vehicle Detection with Integrated Sensing and Communications**
Carlos Ravelo, 5G Communicatons for Future Industry Verticals; David Martin-Sacristan, 5G Communications for Future Industry Verticals; Syed Najaf Haider Shah, Technische Universität Ilmenau, Germany; Carsten Smeenk, Fraunhofer Institute for Integrated Circuits; Giovanni Del Galdo, TU Ilmenau; Jose F. Monserrat, Polytechnic University of Valencia

5 **Vehicle Detection and Tracking using Radar for Lane Keep Assist Systems**
Shantanu Yadav, Sanju Kumar NT, IIT Hyderabad; P. Rajalakshmi, NMICPS TiHAN, Indian Institute of Technology Hyderabad

6 **Vehicle Positioning With Dynamic Recurrent Vehicular Pattern Learning**
Alberto, Dario Tagliaferri, Umberto Spagnolini, Politecnico di Milano

Thursday, 22 June 2023 16:00 - 17:30 Affari 2.2

C6: Energy Efficiency

1 **A New Information Harvesting Mechanism for Far-Field Wireless Power Transfer**
Mehmet Ilter, Risto Wichman, Jyri Hamalainen, Aalto University; Salama Ikki, Lakehead University

2 **Adaptive K-Repetition Transmission Employing Site Diversity Reception for 5G NR Uplink Grant-Free URLLC**
Arif Dataesatu, Kosuke Sanada, Hiroyuki Hatano, Kazuo Mori, Mie University; Pisit Boonsrimuang, King Mongkut's Institute of Technology Ladkrabang

3 **Energy and Bandwidth Efficiency of Event-Based Communication**
Christopher Willuweit, Carsten Bockelmann, Armin Dekorsy, University of Bremen

4 **Energy and SNR-Aware Robotic Swarm Coordination for Aquatic Cleaning Operations**
Maria C. Mannone, Valeria Seidita, Antonio Chella, University of Palermo; Achille Giacometti, Peppino Fazio, Ca' Foscari University of Venice

5 **Energy Consumption Minimized Task Allocation with Correlated Data for Symbiotic Robotic Swarm**
Yuhao Zhang, Na Yi, Siqi Zhang, Yi Ma, University of Surrey

Thursday, 22 June 2023 16:00 - 17:30 Affari Adua Hall 2

D6: Space-Aerial

1 **A Convex Optimization Assisted DDQL Algorithm for Computing Resource Allocation in Space-Aerial Integrated Network**
Meng-Hsuan Lin, Yiwei Li, National Tsing Hua University; Shuai Wang, Singapore University of Technology and Design; Ruihong Jiang, Beijing University of Posts and Telecommunications; Chong-Yung Chi, National Tsing Hua University

2 **Autoencoder based Physical Layer Authentication for UAV Communications**
Linda Senigagliesi, Gianluca Ciattaglia, Ennio Gambi, Marche Polytechnic University

3 **Prediction of YouTube QoE over SATCOM**
Matthieu Petrou, ISAE-SUPAERO; David Pradas, Viveris Technologies; Mickael Royer, Ecole Nationale de l?Aviation Civile (France); Emmanuel Lochin, ENAC

4 **Hierarchical Multi-Agent Multi-Armed Bandit for Resource Allocation in Multi-LEO Satellite Constellation Networks**
Li-Hsiang Shen, University of California, Berkeley; Yun Ho, Kai-Ten Feng, National Yang Ming Chiao Tung University; Prof. Lie-

Liang Yang, University of Southampton; Sau-Hsuan Wu, National Chiao Tung University; Jen-Ming Wu, Hon Hai Research Institute

5 Preprocessing via Deep Learning for Enhancing Real-Time Performance of Object Detection
Yu Liu, SUNY Binghamton; Kyoung-Don Kang, Binghamton University

6 Split Learning Assisted Multi-UAV System for Image Classification Task
Sun Tingkai, Xiaoyan Wang, Ibaraki University; Masahiro Umehira, Nanzan University; Yusheng Ji, National Institute of Informatics

Thursday, 22 June 2023 16:00 - 17:30 Congressi - Room 4

E6: Recent Results in RIS II

1 Intelligent Reflecting Surfaces Assisted Millimeter MIMO Full Duplex Systems
Chandan Kumar Sheemar, University of Luxembourg; Stefano Tomasin, University of Padova; Dirk T.M. Slock, EURECOM; Symeon Chatzinotas, SnT, University of Luxembourg

2 Outage Analysis of an IRS-Assisted 5G and Beyond Wireless Communications System
Neha Choudhary, Birla institute of technology and science, Pilani; Sandeep Joshi, Birla Institute of Technology and Science Pilani; V. K. Chaubey, BITS Pilani

3 Performance Analysis for IRS-Assisted SWIPT with Optimal Phase Shift under Spatially Correlated Fading Channels
Masaaki Miura, Katsuya Suto, Koya Sato, The University of Electro-Communications; Onel Luis Alcaraz López, University of Oulu

4 Performance of SSK-based Receive Diversity RIS-assisted System with Nakagami-m Fading Channels
Aritra Basu, Soumya Prakash Dash, Indian Institute of Technology Bhubaneswar; Sandeep Joshi, Birla Institute of Technology and Science Pilani; Debasish Ghose, Kristiania University College Norway

5 Security Aware Joint Optimization Over Aerial-IRS Assisted Wireless Communications
Ya Gao, Yang Zhang, He Geng, Luoyang Normal University; Xingwang Li, Henan Polytechnic University (HPU); Daniel Benevides da Costa, Technology Innovation Institute

Thursday, 22 June 2023 16:00 - 17:30 Congressi - Room 5

F6: Security

1 An Energy-constrained Cooperative Jamming Scheme for Wireless Security Communication in Power IoT
Jiabei Yan, Jiahui Mao, Chong Tan, Hong Liu, Hui Li, Min Zheng, Shanghai Institute of Microsystem and Information Technology CAS

2 An Intrusion Detection System Against Rogue Master Attacks on gPTP
Alessio Buscemi, Manasvi Ponaka, Mahdi Fotouhi, University of Luxembourg; Florian Jomrich, Christian Koebel, Honda R&D Europe (Germany) GmbH; Thomas Engel, University of Luxembourg

3 Electric Vehicle Security and Privacy: A Comparative Analysis of Charging Methods
Marco De Vincenzi, IIT CNR; Gianpiero Costantino, Ilaria Matteucci, Fabio Martinelli, IIT-CNR

4 Intrusion Resilience Systems for Modern Vehicles
Ali Shoker, RC3, KAUST; Vincent Rahli, University of Birmingham; Jérémie Decouchant, DELFT Univ.; Paulo Esteves-Verissimo, RC3, KAUST

5 Structured Specification Framework for the Attacks, Weaknesses, and Vulnerabilities of Vehicle E&E systems
Toru Sakon, Yukikazu Nakamoto, University of Hyogo

6 VECAEP: A Hands-on Exploration Platform for Vehicular Communication Attacks
Darshith Madvinkodi Prakash, Bhagawat Baanav Yedla Ravi, Srivalli Boddupalli, Sandip Ray, University of Florida

Thursday, 22 June 2023 16:00 - 17:30 Oince

H6: Cooperation and Coexistence

1 Full-duplex Cooperative Uplink Communication with Non-full-diversity Space-time Codes
Qing Qu, Bin Zhou, Shanghai Institute of Microsystem and Information Technology, CAS; Liu Guangyu, Shanghai Institute of Microsystem and Information Technology; Cheng Ju, Shanghai Institute of Microsystem and Information Technology, CAS

2 Latency Optimization for Heterogeneous Task Offloading in Cooperative MEC Network
Zhiwei Jiang, Yijin Pan, Chenhao Qi, Southeast University

3 Message Generation Algorithm for Maneuver Coordination Based on Value of Information
Edmir Xhoxhi, Shule Li, Leibniz University Hannover; Florian Alexander Schiegg, Robert Bosch GmbH

4 Multi-RAT IoT â€“ Whatâ€™s to Gain? An Energy-Monitoring Platform
Guus Leenders, Gilles Callebaut, Liesbet Van der Perre, Lieven De Strycker, KU Leuven

5 On the Benefits of Opportunistic WiFi in Cooperative Downloading
Michael Niebisch, University of Erlangen-Nürnberg; Daniel Pfaller, AUDI AG; Reinhard German, Anatoli Djanatliev, University of Erlangen-Nürnberg

6 Performance Assessment of DECT-2020 NR and Classic DECT Coexistence Mechanisms
Andrey Samuylov, Dmitri Moltchanov, Tampere University; Juho Pirskanen, Jussi Numminen, Wirepas Oy; Yevgeni Koucheryavy, Mikko Valkama, Tampere University

Friday 23 June 2023

Friday, 23 June 2023 11:00 - 12:30 Affari 2.1

B7: Vehicular Networks I

1 AirComp-aided Safety-aware CAM Broadcast Rate Control in C-V2X Sidelink
Da-Yung Hsieh, National Tsing Hua University; Jian-Jhih Kuo, National Chung Cheng University; Wen-Tsuen Chen, Jang-Ping Sheu, National Tsing Hua University

2 AutowareV2X: Reliable V2X Communication and Collective Perception for Autonomous Driving
Yu Asabe, Ehsan Javanmardi, Jin Nakazato, The University of Tokyo; Manabu Tsukada, the University of Tokyo; Hiroshi Esaki, The University of Tokyo

3 Joint use of Self and Successive Interference Cancellation in V2X Sidelink with Autonomous Resource Allocation
Vittorio Todisco, University of Bologna; Claudia Campolo, Università Mediterranea di Reggio Calabria; Antonella Molinaro, University "Mediterranea" of Reggio Calabria; Antoine O Berthet, CentraleSupélec, Université Paris-Saclay; Richard A. Stirling-Gallacher, Huawei Technologies Duesseldorf GmbH; Alessandro Bazzi, University of Bologna

4 On the Application of Q-learning for Mobility Load Balancing in Realistic Vehicular Scenarios
Martin Trullenque, i2CAT Foundation; Oriol Sallent, Universitat Politecnica de Catalunya (UPC); Daniel Camps-Mur, Jad Nasreddine, Josep Escrig, i2CAT Foundation; Jordi Pérez-Romero, Universitat Politècnica de Catalunya

5 Packet Delivery Impact of Predictive Resource Allocation for Quasi-Periodic Cellular V2X Communication
Hyeonji Seon, Hojeong Lee, Hyogon Kim, Korea University

Friday, 23 June 2023 11:00 - 12:30 Affari 2.2

C7: Localization and Direction Finding

1 **Bring Your Own Positioning System: An Infrastructure-free and Omnidirectional UWB-based Localization Approach**
Florian Schmickmann, Marcus Haferkamp, Janis Tiemann, Christian Wietfeld, TU Dortmund University

2 **Direction-of-arrival estimation using virtual dual-antenna receivers : algorithms and controlled experiments.**
Youssef Agram, Université Libre de Bruxelles; Jianqiao Cheng, Free University of Brussels; François Quitin, Université Libre de Bruxelles

3 **Hierarchical visual localization based on Sparse Feature Pyramid for adaptive reduction of keypoint map size**
Andrei Potapov, Mikhail Kurenkov, Pavel Karpyshev, Evgeny Yudin, Alena Savinykh, Evgeny Kruzhkov, Dzmitry Tsetserukou, Skolkovo Institute of Science and Technology

4 **Positioning with Starlink LEO Satellites: A Blind Doppler Spectral Approach**
Zak (Zaher) Kassas, Sharbel Kozhaya, The Ohio State University

5 **Uplink Sensing with Unknown Transmitter Position in Clutter Environment via Tensor Decomposition**
Yirui Luo, Guan Yong Liang, Erry Gunawan, Nanyang Technological University

Friday, 23 June 2023 11:00 - 12:30 Affari Adua Hall 2

D7: MIMO

1 **Decentralized Bidirectional-Chain Equalizer for Massive MIMO**
Shuai Cui, Southeast University; Jianjun Zhang, Nanjing University of Aeronautics and Astronautics; Jiaheng Wang, Xiqi Gao, Southeast University

2 **Energy Efficiency Comparison of Digital and Hybrid Precoding in 1-Bit mmWave Massive MIMO**
Ferhad Askerbeyli, Huawei Munich Research Center / Technical University of Munich; Wen Xu, Huawei Technologies Duesseldorf GmbH; Josef A. Nossek, Technical University of Munich

3 **Hybrid SOMP-MUSIC-Based Channel Estimation Scheme for Terahertz Massive MIMO-OFDM Systems**
Olutayo O. Oyerinde, University of the Witwatersrand

4 **Low Cost Dynamic Load Balancing for User-Centric Wireless Systems**
Mirza Golam Kibria, Xiong Jie, Huawei Technologies Sweden AB

5 **Optimization for Multiple Vertical-Beams Tilting in Full-Dimension MIMO System**
Icheon Kim, Kwonyeol Park, Minwoo Park, Seongho Hur, Sanghyun Lee, Min-Ho Shin, Samsung Electronics

Friday, 23 June 2023 11:00 - 12:30 Congressi - Room 4

E7: Recent Results in Security I

1 **Cybersecurity Engineering: Bridging the Security Gaps in Advanced Automotive Systems and ISO/SAE 21434**
Sakir Sezer, Fahad Siddiqui, Queen's University Belfast

2 **Open RAN for detection of a jamming attack in a 5G network**
Pawel Kryszkiewicz, Marcin Hoffmann, Poznan University of Technology, Rimedo Labs

3 **Physical Layer Authentication in Private Campus Networks based on Machine Learning**
Dr. Nandish P. Kuruvatti, Univ of Kaiserslautern; sachinkumar, RPTU Kaiserslautern-Landau; Sai Charan Kusumapani, Hubert Djuitcheu, Hans Schotten, University of Kaiserslautern

Friday, 23 June 2023 11:00 - 12:30 Congressi - Room 5

F7: Recent Results in Aerial and Satellite

1 **A Satellite Selection Method based on Multi-Constellation GNSS Geometry**
Taek Geun Lee, Yu Dam Lee, Hyung Keun Lee, Korea Aerospace University

2 **Connecting Rural Areas: an Empirical Assessment of 5G Terrestrial-LEO Satellite Multi-Connectivity**
Melisa López Lechuga, Sebastian Bro Damsgaard, Aalborg University; Ignacio Rodriguez, University of Oviedo; Preben Mogensen, Aalborg University

3 **Joint Trajectory Design and Sub-channel Allocation in the UAV Relaying OFDMA Network**
Young Ik Park, Yonsei University; Do-Yup Kim, Kyungnam University; Jang-Won Lee, Yonsei University

4 **Optimal Deployment of an Aerial Base Station in Heterogeneous Cellular Networks for Heterogeneous User Traffic Demands**
Takeshi Hirai, Kouki Doi, Naoki Wakamiya, Osaka University

Friday, 23 June 2023 11:00 - 12:30 Congressi - Room 101

G7: Spectrum Management and Sensing

1 **A Basic Study on Cancelling Same Frequency Interference from 5G Systems to Other Systems by a Cooperative Control Network**
Takafumi Fujii, Teruya Fujii, Softbank Corp.

2 **A New Resource Management Technique in 3D Wireless Networks**
Jeeyeon Kim, Hakkeon Lee, Daesik Hong, Yonsei University

3 **Adjacent Channel WiFi 5 Interference on DSRC Communication at 5.9GHz**
Jacob Bills, University of Utah

4 **On Spectrum Sensing for mmWave and THz Beam-based Communications**
Junwei Zang, Qiao Liu, Jia He, Wang Guangjian, Huawei Technologies Co., Ltd

5 **Orientation Based Band Sharing for Radar Interference Mitigation**
Roudiere Sylvain, ANITI: University of Toulouse-Midi-Pyrénées; Vincent Martinez, NXP, France; Daniel Delahaye, ENAC - Ecole Nationale de l'Aviation Civile

6 **Spectrum Monitoring and Analysis in Urban and Rural Environments at Different Altitudes**
Amir Hossein Fahim Raouf, Sung Joon Maeng, Ismail Guvenc, Ozgur Ozdemir, Mihail L. Sichitiu, North Carolina State University

Friday, 23 June 2023 11:00 - 12:30 Oince

H7: DL for Networks

1 **Deep Reinforcement Learning Based Subchannel Selection and Power Allocation in Wireless Networks with Imperfect CSI**
Ningzhe Shi, University of Chinese Academy of Sciences; Yu Zhang, State Key Lab of Processors, Institute of Computing Technology, CAS; Yiqing Zhou, Institute of Computing Technology, Chinese Academy of Sciences

2 **How to Improve Learning Efficiency of GNN for Precoding?**
Jia Guo, Beihang University; Chenyang Yang, Beihang University, Beijing

3 **Learning Cellular Coverage from Real Network Configurations using GNNs**
Yifei Jin, KTH; Marios Daoutis, Ericsson Research; Sarunas Girdzijauskas, Aristides Gionis, KTH

4 **Learning-Aided Demand-Driven Elastic Architecture for 6G & Beyond**
Shahrukh Khan Kasi, University of Oklahoma; Umair Sajid Hashmi, National University of Sciences and Technology; Sabit Ekin, Texas A&M University; Ali Imran, The University of Oklahoma

Friday, 23 June 2023 14:00 - 15:30 Affari 2.1

B8: Vehicular Networks II

1 **Dynamic Service-Orientation for Software-Defined In-Vehicle Networks**
Timo Häckel, Philipp Meyer, Mehmet Mueller, Jan Schmitt-Solbrig, Franz Korf, Thomas Schmidt, Hamburg University of Applied Sciences

2 **Enhancing C-V2X Network Connectivity with Distributed Mobility Control**
Jingxuan Men, University of Surrey; Yun Hou, Hang Seng University of Hong Kong; Zhengguo Sheng, University of Sussex; Tse-Tin Chan, The Education University of Hong Kong

3 **Experimental Trials on Sidelink Multi-hop Communications**
Manabu Sakai, Kazuma Obigane, Hiroshi Nishimoto, Akihiro Okazaki, Masaki Noda, Mitsubishi Electric Corporation

4 **Fake Beacon: A Pseudonym Changing Scheme for Low Vehicle Density in VANETs**
Junchao Wang, Yan Sun, Chris Phillips, Queen Mary University of London

5 **Multiple Cars Remote Monitoring System using AI-based Video Streaming and Alert**
Koichi Nihei, Hayato Itsumi, Yusuke Shinohara, NEC Corporation; Tomonao Araki, University of Tokyo; Takanori Iwai, NEC Corporation

6 **Quantitative Assessment of Penetration Rates of CCAM Applications on GHG Emissions in EU27**
Anjie Qiu, RPTU Kaiserslautern-Landau; Donglin Wang, Technical University of Kaiserslautern; Sanket Partani, Hans Schotten, University of Kaiserslautern

Friday, 23 June 2023 14:00 - 15:30 Affari 2.2

C8: Sensing in Cellular Systems

1 **Characterization of 5G mmWave High-Accuracy Positioning Services for Urban Road Traffic**
Simon Haeger, Niklas Gratza, Christian Wietfeld, TU Dortmund University

2 **Downlink Sensing in 5G-Advanced and 6G: SIB1-assisted SSB Approach**
Moeinreza Golzadeh, Tampere University; Esa Tiirola, Nokia; Lauri Anttila, Jukka Talvitie, Tampere University; Kari Hooli, Oskari Tervo, Ismael Peruga, Sami Hakola, Nokia; Mikko Valkama, Tampere University

3 **Extended FastSLAM Using Cellular Multipath Component Delays and Angular Information**
Junshi Chen, Russ Whiton, Fredrik Tufvesson, Lund University

4 **Position-Time Pattern Based Method for Analyzing Usersâ€™ Mobility**
Hayyan Ali, Czech Technical University; Robert Bestak, Czech Technical University in Prague

5 **Preconfigured Assistance Data for Reduction in Latency and Power Consumption**
Birendra Ghimire, Fraunhofer IIS, Fraunhofer Institute for Integrated Circuits; Ritesh Shreevastav, Ericsson Research, Stockholm, Sweden; Xiaolin Jiang, Ericsson Research

Friday, 23 June 2023 14:00 - 15:30 Affari Adua Hall 2

D8: mmWave

1 **Block Sparse Channel Estimation based on Residual Difference and Deep Learning for Wideband MmWave Massive MIMO**
Rongshun Tang, Chenhao Qi, Pengju Zhang, Southeast University

2 **Machine Learning-based Millimeter Wave Beam Management for Dynamic Terminal Orientation**
Filipa Fernandes, Aalborg University; Sajad Rezaie, Nokia; Christian, Rom; Johannes Harrebek, Nokia; Carles Navarro Manchon, Aalborg University

3 **RIDNet Assisted cGAN Based Channel Estimation for One-Bit ADC mmWave MIMO Systems**
Erhan Karakoca, Hasan Nayir, Istanbul Technical University; Ali Gorcin, Yildiz Technical University; Khalid Qaraqe, Texas A&M University at Qatar

4 **SVDNet: Deep Power Control for Multiuser MIMO**
Ritabrata Maiti, Nanyang Technological University (NTU); A.S. Madhukumar, Nanyang Technological University; Ernest Tan, Agency for Science, Technology and Research

Friday, 23 June 2023 14:00 - 15:30 Congressi - Room 4

E8: Recent Results in Security II

1 **Practical In-Vehicle Security Architecture based on Trust Anchors**
Jiyong Han, Hyundai Motor Company

2 **Privacy-Preserving V2V Charge Sharing Coordination using the Hungarian Algorithm**
Ahmed Bakr, Mahmoud Srewa, The University of Alabama; Eyuphan Bulut, Virginia Commonwealth University; Kemal Akkaya, Florida International University; Mizanur Rahman, Clemson University; Ahmad Alsharif, University of Alabama

3 **Q-learning-based Joint Design of Adaptive Modulation and Precoding for Physical Layer Security in Visible Light Communications**
Duc M. T. Hoang, Hanoi University of Science and Technology; Thanh V. Pham, Shizuoka Univeristy; Anh T. Pham, University of Aizu; Chuyen T. Nguyen, Hanoi University of Science and Technology

4 **A Gradient Boosted ML Approach to Feature Selection for Wireless Intrusion Detection**
Birupaxha Mondal, Fahim Faisal, Zeba Tusnia Towshi, Md Fahad Monir, Tarem Ahmed, Independent University, Bangladesh

5 **Measurements Based Physical Layer Security in Device to Device mm-Wave Communications**
Seong Ki Yoo, Coventry University; Paschalis Sofotasios, Khalifa University; Simon L. Cotton, Lei Zhang, Queen's University Belfast; JaeSeung Song, Sejong University, South Korea; Imran Shafique Ansari, University of Glasgow; Young Jin Chun, CityU - Hong Kong

Friday, 23 June 2023 14:00 - 15:30 Congressi - Room 5

F8: Resource Allocation for Wireless Networks

1 **Adaptive Bit Allocation for SVD based Hybrid Processing of Uplink Cell-Free Massive MIMO under Limited Fronthaul Capacity**
Issei Kanno, Masaaki Ito, Yoshiaki Amano, Yoji Kishi, KDDI Research, Inc.; Thomas Choi, Wei Yu Chen, Andreas F. Molisch, University of Southern California

2 **Co-Phase Over-the-Air Aggregation for Multi-Server Federated Learning with Randomized Transmissions**
Jinho Choi, Deakin University

3 **Joint Channel and Power Allocation in WLAN based on Sequential Deep Reinforcement Learning**
Jun Yong Eom, Wha Sook Jeon, Seoul National University

4 **Multi-AP Coordinated Radio Resource Allocation using Requirements for Video Transmission in Wireless LAN system**
Ryota Yamada, Hiromichi Tomeba, Osamu Nakamura, Takuhiro Sato, Yasuhiro Hamaguchi, Sharp Corporation

5 **Uplink Interference Canceller and Processing Amount Reduction Method of Macrocell in Three-Dimensional Spatial HetNet Construction**
Takuya Kaneda, Takafumi Fujii, Softbank Corp.; Teruya Fujii, Tokyo Institute of Technology

Friday, 23 June 2023 14:00 - 15:30 Congressi - Room 101

G8: System Security

1 **Hash Function and Lightweight Encryption Aided Authentication Design for Radio Frequency Watermarking Systems**
Lin Zhang, Ziyong Zhang, Chen Wu, Jieheng Zheng, Sun Yat-sen University; Zhiqiang Wu, Wright State University

2 Joint jammer selection and jamming power allocation scheme in covert communications assisted by multiple friendly jammers
Zhijun Han, University of Chinese Academy of Sciences; Yu Zhang, State Key Lab of Processors, Institute of Computing Technology, CAS; Yiqing Zhou, Yanli Qi, Institute of Computing Technology, Chinese Academy of Sciences

3 Location-based Physical Layer Authentication in Underwater Acoustic Communication Networks
Waqas Aman, Saif Al-Kuwari, Hamad Bin Khalifa University, Doha, Qatar; Marwa Qaraqe, Hamad Bin Khalifa University

Friday, 23 June 2023 14:00 - 15:30 Oince

H8: Multihop/D2D Networking

1 A Hybrid Relay Strategy for Low-latency Communication in Multi-Hop Wireless Networks
Qianqian Liu, Shanghai Institute of Microsystem and Information Technology; Bin Zhou, Shanghai Institute of Microsystem and Information Technology, CAS; Zhiyong Bu, Shanghai Institute of Microsystem and Information Technology CAS

2 Cluster-based Wake-up Control for Top-k Query in Wireless Sensor Networks
Takuya Murakami, Junya Shiraishi, Hiroyuki Yomo, Kansai University

3 Dynamic Route Control for Repeater-based Integrated Access Backhaul System
Takahiko Kato, KDDI Research, Inc.

4 LTE Sidelink Indoor-to-Outdoor Device-to-Device Channel Measurements and Simulations for Public Safety Applications
Hussein Hammoud, Pawan K. Venkatesh, Jorge Gomez, Seun Sangodoyin, University of Southern California; Jason Kahn, National Institute of Standards and Technology; Andreas F. Molisch, University of Southern California

5 Multi-hop Computational Offloading with Reinforcement Learning for Industrial IoT Networks
Swagato Barman Roy, ARTC; Ernest Tan, Agency for Science, Technology and Research; A.S. Madhukumar, Nanyang Technological University

6 SDR-based Demonstration System and Applicability of SNR Aggregation for Multistage Distributed Cooperative Communication in MANETs
Mus'ab Yüksel, University of Applied Sciences Darmstadt; Raphael T. L. Rolny, Armasuisse Science and Technology; Marc Kuhn, ZHAW; Michael Kuhn, University of Applied Sciences Darmstadt

Friday, 23 June 2023 16:00 - 17:30 Affari 2.1

B9: Vehicular Communications

1 A Robust DCB Approach to IRS-Assisted Vehicular Communications with ICSI
Dariel Pereira-Ruisanchez, Óscar Fresnedo, Darian Pérez-Adán, Luis Castedo, University of A Coruña

2 Berlin V2X: A Machine Learning Dataset from Multiple Vehicles and Radio Access Technologies
Rodrigo Hernangómez, Fraunhofer Heinrich Hertz Institute; Philipp Geuer, Ericsson Research; Alexandros Palaios, Ericsson; Daniel Schäufele, Fraunhofer Heinrich Hertz Institute; Cara Watermann, Ericsson Research; Khawla Taleb-Bouhemadi, Fraunhofer Heinrich Hertz Institute; Mohammad Parvini, Anton Krause, Technische Universität Dresden; Sanket Partani, University of Kaiserslautern; Christian Vielhaus, Technische Universität Dresden; Martin Kasparick, Fraunhofer Heinrich Hertz Institute; Daniel Fabian Külzer, BMW Group; Friedrich Burmeister, Technische Universität Dresden; Slawomir Stanczak, Fraunhofer Heinrich Hertz Institute; Gerhard Fettweis, Technische Universität Dresden; Hans Schotten, University of Kaiserslautern; Frank H.P. Fitzek, Technische Universität Dresden

3 Data-Driven Digital Mobile Network Twin Enabling Mission-Critical Vehicular Applications
Hendrik Schippers, Stefan Boecker, Christian Wietfeld, TU Dortmund University

4 Predicut - A Machine Learning Model For Online Prediction of Cut-In Manoeuvre For Autonomous Vehicles
Pandeeswari Sankaranarayanan, Arvind Ramanujam, Sruthi Sathy, Rajesh Jayaprakash, Tata Consultancy Services

5 Towards AI-Native Vehicular Communications
Gianluca Rizzo, HES SO / UNIFG; Eirini Liotou, Institute of Communication and Computer Systems, Athens; Yann Maret, University of Applied Sciences of Western Switzerland; jean-frederic wagen, HEFR; tommaso zugno, huawei; Mengfan Wu, Huawei Technologies Duesseldorf GmbH; Adrian Kliks, Poznan University of Technology

Friday, 23 June 2023 16:00 - 17:30 Affari 2.2

C9: User and Transmission Scheduling

1 Mitigating User Identification Errors in Resource Optimization for Grant-Free Random Access
Alix Jeannerot, Univ Lyon, INSA Lyon, Inria, CITI, EA3720; Malcolm Egan, Univ Lyon, Inria, INSA Lyon, CITI, EA3720; Lelio Chetot, CITI - INSA Lyon, Maracas - INRIA Lyon; Jean-Marie Gorce, INSA Lyon

2 Multi-connectivity Enabled User-centric Association in Ultra-Dense mmWave Communication Networks
Qing Xue, Wei Renlong, Chongqing University of Posts and Telecommunications; Professor Shaodan Ma, University of Macau; Yongjun Xu, Chongqing University of Posts and Telecommunications (CQUPT); Li Yan, Xuming Fang, Southwest Jiaotong University

3 Overlapping Channel Bonding Allocation for Dense WLANs under Imbalanced Traffic Demands
Hong-Nhat Hoang, Pusan National University; Kien Nguyen, Hiroo Sekiya, Chiba University; Chang-Hong Lee, Dong-Hyun Kim, Jong-Deok Kim, Pusan National University

4 User Scheduling and Passive Beamforming for FDMA/OFDMA in Intelligent Reflection Surface
Wei Jiang, German Research Center for Artificial Intelligence; Hans Schotten, University of Kaiserslautern

Friday, 23 June 2023 16:00 - 17:30 Affari Adua Hall 2

D9: Modulation & Coding

1 A Proposed Quantum Classification Algorithm for Symbol Detection with Noisy Observation
Srinath Koya, Mostafizur Rahaman Laskar, Amit Kumar Dutta, Indian Institute of Technology Kharagpur

2 An Orthogonal Time Frequency Space Modulation based Different Chaos Shift Keying Transceiver for Reliable communications
Jieheng Zheng, Lin Zhang, Yan Li, Sun Yat-sen University; Yuehui Ouyang, Honor Device Com. Ltd.; Hongcheng Zhuang, Sun Yat-sen University

3 Expectation Propagation Detection for Polarization Modulation
Min Liu, Shuaixin Yang, Yue Xiao, Wenhui Xiong, University of Electronic Science and Technology of China

4 Grover Adaptive Search for Joint Maximum-Likelihood Detection of Power-Domain Non-Orthogonal Multiple Access
Masaya Norimoto, Naoki Ishikawa, Yokohama National University

5 Index Coded PSK Modulation for Prioritized Receivers over Rayleigh Fading Channels
Arindam Paul, IISC Bangalore; B. Sundar Rajan, Indian Institute of Science, Bangalore

6 Performance Analysis of Space-Time Line Code with Imperfect Channel Estimation
Yue Xiao, University of Electronic Science and Technology of China

Friday, 23 June 2023 16:00 - 17:30 Congressi - Room 4

E9: Recent Results in MIMO

1 **Cell-Free Massive MIMO System With Dedicated Interference Cancellation Access Points**
Sung-Min Park, Yonsei University; Do-Yup Kim, Kyungnam University; Kyeong-Won Kim, Jang-Won Lee, Yonsei University

2 **Low Complexity Beam-Oriented Linearization Approaches for Massive MIMO Transmitters**
Abdelwahab Fawzy Mohamed Soliman Afifi, National University of Singapore; Sumei Sun, Institute for Infocomm Research; Teng Joon Lim, University of Sydney; Yongxin Guo, National University of Singapore

3 **Non-coherent detection with differential modulation for distributed massive MIMO Systems**
Supuni Gunasekara, University of Melbourne; Peter Smith, Victoria University of Wellington; Margreta Kuijper, Rajitha Senanayake, University of Melbourne

4 **On the Design of Superimposed Pilots in MIMO-OFDM with Index Modulation**
Lijun Yang, Lilin Dan, Chu Zhao, University of Electronic Science and Technology of China

5 **Precoding and Gain Adjustment Scheme for Block Low-Resolution DACs in Massive MIMO Downlink**
Taichi Yamakado, Yukitoshi Sanada, Keio University

Friday, 23 June 2023 16:00 - 17:30 Congressi - Room 5

F9: Wireless and Security

1 **Admission Control and Scheduling of Isochronous and Asynchronous Traffic in IEEE 802.11ad MAC**
Anirudha Sahoo, Pu Tian, Tanguy Ropitault, NIST; Steve Blandino, NIST and Prometheus Computing LLC; Nada Golmie, NIST

2 **In-Network Dynamic Compute Orchestration Over Mobile Edge Systems**
Roman Kovalchukov, Roman Glazkov, Tampere University; Srikathyayani Srikanteswara, Yi Zhang, Intel Labs, USA; Dmitri Moltchanov, Tampere University; Gabriel E. Arrobo, University of South Florida; Feng, Hao, Marcin Spoczynski, Intel; Nageen Himayat, Intel Labs

3 **Introducing benchmarks for evaluating user-privacy vulnerability in WiFi**
Abhishek Kumar Mishra, Nadjib Achir, Aline Carneiro Viana, Inria

4 **Wi-Sniffer: Wifi-based intruder detection system using deep learning and decision tree**
Jun Yong Eom, Seok Un Jang, Wha Sook Jeon, Seoul National University

Friday, 23 June 2023 16:00 - 17:30 Oince

H9: Radar/LiDAR

1 **BEV Approach Based Efficient Object Detection using YoloV4 for LiDAR Point Cloud**
Bhaskar Anand, Indian Institute of Technology,Hyderabad; P. Rajalakshmi, NMICPS TiHAN, Indian Institute of Technology Hyderabad

2 **Deep Learning Based Steering Angle Prediction with LiDAR for Autonomous Vehicle**
Parvez Alam, Indian Institute of Technology Hyderabad; P. Rajalakshmi, NMICPS TiHAN, Indian Institute of Technology Hyderabad

3 **Machine Learning based In-Cabin Radar System for Passenger Monitoring System**
Eugin Hyun, Jieun Bae, YoungSeok Jin, Park Chi-Ho, DGIST

4 **Signal Identification and Entrainment for Practical FMCW Radar Spoofing Attacks**
Andrew Graff, Todd E. Humphreys, The University of Texas at Austin

Virtual Sessions

Wednesday 21 June 2023

Wednesday, 21 June 2023 11:00 - 12:30 Virtual

V1: Antennas, Propagation, and RF

1 **A Novel Geometry-Based Semi-Deterministic Wideband Channel Model for Hyperloop Communications**
Kai Wang, LiuLiu, Jiachi Zhang, Meilu Liu, Beijing Jiaotong University

2 **Energy-Efficient Beam Training For RIS Assisted UAV Communications in Emergency Rescue Scenarios**
Sihui Shang, Xi 'an Jiaotong University; Dongyang Xu, Pinyi Ren, Xi'an Jiaotong University; Keping Yu, Hosei University; Mohsen Guizani, Qatar University

3 **Extended frequency coverage of clutter loss model for high base station environments**
Hideki Omote, Softbank corp.; Akihiro Sato, Softbank.corp.; Sho Kimura, Shoma Tanaka, Hoyu Lin, Softbank corp.; Takaya Yamazato, Nagoya University

4 **Low-Cost Path Loss Estimation Using Correlation Graph CNN with Novel Feature Parameters**
Keita Imaizumi, Koichi Ichige, Yokohama National University; Tatsuya Nagao, KDDI Research, Inc.; Takahiro Hayashi, KDDI Research Inc.

5 **Performance Investigation of Streetlight-to-Vehicle Visible Light Communication**
Hossien B. Eldeeb, Mohammed Elamassie, Ozyegin University; Sami Muhaidat, University of Surrey; Murat Uysal, Ozyegin University; Tu Dac Ho, UiT-The Arctic University of Norway

6 **Probe Configuration in Dual Anechoic Chamber Multiprobe OTA Testing**
Nan Luo, Yong Li, Beijing University of Posts and Telecommunications

Wednesday, 21 June 2023 11:00 - 12:30 Virtual

V1: UAVs, Vehicular Networks, and Telematics

1 **Context-Aware Timely Status Updates for Trajectory Control With Limited Communication Resources**
Haojie Bai, Huafu Li, Wenhao Dou, Harbin Institute of Technology; Yang Wang, Shenzhen Graduate School of Harbin Institute of Technology

2 **Exploring Graph Neural Networks for Joint Cruise Control and Task Offloading in UAV-enabled Mobile Edge Computing**
Kai Li, Real-Time and Embedded Computing Systems Research Centre; Wei Ni, Xin Yuan, CSIRO; Alam Noor, University of Porto; Abbas Jamalipour, The University of Sydney

3 **Verification of Standardized Rel-15 Requirements for Drone's Command-and-Control Link Reliability**
samira Homayouni, R&D-3; Taulant Berisha, Dimetor GmbH; Mario Paier, Hutchison Drei Austria.; Sebastian Woblistin, Dimetor GmbH; Johannes Rehak, Hutchison Drei Austria; Thomas Neubauer, Dimetor GmbH

4 **Impact of Channel Aging on User-Centric Cell-Free Vehicular Networks With Non-Isotropic Scattering**
Huafu Li, Harbin Institute of Technology; Yang Wang, Shenzhen Graduate School of Harbin Institute of Technology; Chenyang Sun, ZhenYong Wang, Harbin Institute of Technology

5 Energy Consumption Optimization for UAV-Assisted Communication by Trajectory Design
Huang Xiaoge, Yuyang Luo, Yang Xuan, Chongqing University of Posts and Telecommunications; Qianbin Chen, University of Posts and Telecommunications

6 Energy Constrained Data Collection in Multi-UAV-Assisted IoT
Yulei Wu, Simeng Feng, Chao Dong, Nanjing University of Aeronautics and Astronautics

Wednesday, 21 June 2023 14:00 - 15:30 Virtual

V2: E-Mobility and E-Vehicles

1 A multi-UAV fast search path planning algorithm research
Xiang Yu, Binbin Wang, Ziyi Wang, Fugui Deng, Chongqing University of Posts and Telecommunications

2 Model Based Integration and Performance Analysis of Direct Water Injection Humidification Method for Proton Exchange Membrane Fuel Cell
Kemal Kaya, Oytun Karaduman, Burhan Özece, Onur Dömez, Sonat Arslan, Merve Tekin, Eren Özdemir, AVL Research & Engineering

3 On the Effects of PLMN Interconnection, Data Roaming Schemes and Cloud vs Edge Operation for 5G Enabled Cross-Border CAM Use Case
Konstantinos Trichias, National Technical University of Athens; Thodoris Soultanopoulos, WINGS ICT Solutions; Panagiotis Demestichas, University of Piraeus; Symeon Papavassiliou, Nikolaos Mitrou, National Technical University of Athens

4 Research on Electromagnetic Effect Generated by DC Converter on Human Body in Electric Vehicle
Jianjun Xiao, Beijing Jiaotong University; Changsheng Gao, China Faw Group CO., LTD; Zhichun Li, Beijing Jiaotong University; Kai Zhang, Jia Jia, China Faw Group Corporation; Dan Zhang, Beijing Jiaotong University

5 Securing Cooperative Intersection Management through Subjective Trust Networks
Frank Kargl, Ulm University; Nata?a Trkulja, Universität Ulm; Artur Hermann, Ulm University; Florian Sommer, Karlsruhe University of Applied Sciences; Anderson Ramon Ferraz de Lucena, Alexander Kiening, DENSO AUTOMOTIVE Deutschland GmbH; Sergej Japs, Fraunhofer IEM

6 Ubiquitous Transportation Mode Estimation using Limited Cell Tower Information
Sherif Mostafa, American University in Cairo; Khaled A. Harras, Carnegie Mellon University; Moustafa Youssef, American University in Cairo

Wednesday, 21 June 2023 14:00 - 15:30 Virtual

V2: Wireless Networks

1 Compromising Random Linear Network Coding as A Cipher
Sravya Bethu, Ye Zhu, Cleveland State University

2 Detection Performance of Malicious UAV using Massive IoT Networks
Suhail I. Al-Dharrab, King Fahd University of Petroleum and Minerals

3 Distributed Trust-Aware Virtual Network Embedding for Industrial IoT Systems
Parinaz Rezaeimoghaddam, Irfan Al-Anbagi, University of Regina

4 Extremely Low Latency Interactive Streaming over an 802.11 Wireless Link
Seohyang Kim, Junho Lee, Chi-Hyun Cho, Samsung Electronics

5 Physical Layer Security for THz Communication
Shubha Sharma, Nanyang Technological University, Singapore; A.S. Madhukumar, Nanyang Technological University

6 Privacy-Preserving Data Aggregation in IoTs: A Randomize-then-Shuffle Paradigm
Zuyan Wang, Jun Tao, Dika Zou, Southeast University

7 QoE-Analysis of 5G Network Resource Allocation Schemes for Competitive Multi-User Video Streaming Applications
Kristina Wheatman, The Pennsylvania State University; Fidan Mehmeti, Technical University of Munich; Mark Mahon, Thomas La Porta, The Pennsylvania State University

8 Using IRS to Improve the Secrecy Rate of Millimeter Wave Communication System
KunPeng Song, Fangshu Ma, Zexian Chen, Sen Liu, Yong Shang, Yuxin Cheng, Peking University

Wednesday, 21 June 2023 16:00 - 17:30 Virtual

V3: Emerging Technologies in Communiations

1 A Collision Probability Based Multi-User Grant-Free Scheduling Method for Ultra-Reliable and Low Latency Communications
Xi Song, Zhining Yin, Yan Li, Xiaoyu Li, Samsung Research China-Beijing(SRC-B), Beijing, China; Meifang Jing, Samsung Research China-Beijing; Jiajia Wang, Samsung Research China-Beijing(SRC-B)

2 Inter-Slice Traffic Steering Technologies for Beyond 5G Networks
Dongeun Suh, Naman Gupta, Ashok Kumar Nayak, Sangsoo Jeong, Samsung Electronics

3 Performance Analysis of E-band 12-Kilometer Long Transmission Links Based on Experimental Data
Bofan Wu, Haifeng Mou, Hang Yang, Zhenyang Guo, Xianbing Zou, Xiang Gao, University of Electronic Science and Technology of China

4 UE cooperative communications for future cellular networks
Aleksandar Damnjanovic, Xiaoxia Zhang, Tao Luo, Rajat Prakash, Mostafa Khoshnevisan, Arumugam Kannan, Qualcomm Technologies Inc; Fang Yuan, Shaozhen Guo, Luanxia Yang, Qualcomm Wireless

5 Cell-free Massive MIMO with Protective Partial Zero-Forcing and Active Eavesdropping
Yasseen Sadoon Atiya, Centre for Wireless Innovation (CWI), Queen's University Belfast; Zahra Mobini, Hien Quoc Ngo, Michalis Matthaiou, Queen's University Belfast

Thursday 22 June 2023

Thursday, 22 June 2023 11:00 - 12:30 Virtual

V4: IoV, IoT, M2M and Sensor Networks

1 **Asynchronous Task Offloading in Mobile Edge Computing with Uncertain Computation Burden over Multiple Channels**
Bizheng Liang, Rongfei Fan, Xiangyuan Bu, Beijing Institute of Technology

2 **Data-Driven Sensor Selection using Gumbel-max Sampling for Large-Scale IoT**
Yuxuan Chen, Yuan Chen, Guobing Li, Xi'an Jiaotong University

3 **Donâ€™t Push But Pull: Improving Awareness and Channel Utilization by Demand-Driven V2X Communication**
Soyeon Kim, Hyogon Kim, Korea University

4 **Dynamic resources allocation in non-3GPP IoT networks involving UAVs**
Rogério Sousa e Silva, UFG; William Pires Junior, Federal University of Goiás; Antonio Oliveira-Jr, Federal University of Goiás & Fraunhofer Portugal AICOS; Kleber Vieira Cardoso, Universidade Federal de Goiás; Sand Luz Correa, Federal University of Goiás

5 **Graph-Based Distributed Control in Vehicular Communications Networks**
Jikui Zhao, Oklohoma State University

6 **Hierarchical Blockchain-enabled Federated Learning with Reputation Management for Mobile Internet of Vehicles**
Lingling Zhou, Yuchuan Fu, Pincan Zhao, Sha Liu, Xidian University; TianyuChang, xidian university; Changle Li, Xidian University

7 **Interactive and Intelligent Root Cause Analysis in Manufacturing with Causal Bayesian Networks and Knowledge Graphs**
Christoph Wehner, University of Bamberg; Maximilian Kertel, Judith Wewerka, BMW Group

8 **MAC-Based Stream-Aware Mechanism for IEEE 802.1Qbv Networks**
Ke Cui, Zhu Yuan, Binqi Li, Lu Ke, Qin Liu, Tongji University

9 **Optimization and Performance Evaluation of Hybrid Deep Learning Models for Traffic Flow Prediction**
Usha Goparaju, IIITH; Rahul Biju, Pravalika M, Bhavana MC, Deepak Gangadharan, International Institute of Information Technology, Hyderabad; Bappaditya Mandal, Keele University, United Kingdom; Pradeep C, Saintgits College of Engineering, Kerala, India

10 **Prescriptive Maintenance of Freight Vehicles using Deep Reinforcement Learning**
Chen-Khong Tham, Weihao Liu, Rajarshi Chattopadhyay, National University of Singapore

11 **Covariation and Constant Modulus Decomposition Based Interference Resistant Access System in Smart Grid**
Yuan Zhang, Dongyang Xu, Pinyi Ren, Xi'an Jiaotong University; James A. Ritcey, University of Washington; Keping Yu, Hosei University; Joel Rodrigues, National Institute of Telecommunications (Inatel)

12 **Estimation of PN Sequence for Spread Spectrum Pilot Signals in Grant-Free Access System**
Yuan Zhang, Dongyang Xu, Pinyi Ren, Xi'an Jiaotong University; James A. Ritcey, University of Washington; Keping Yu, Hosei University; Joel Rodrigues, National Institute of Telecommunications (Inatel)

Thursday, 22 June 2023 11:00 - 12:30 Virtual

V4: Recent Results I

1 **A Channel Engineering Method for Future Wireless Communication**
Tianchen Sun, Jiabin Jia, University of Edinburgh; Dushyantha A. Basnayaka, Dublin City University

2 **A General Simulation Framework for Radiative Wireless Power Transfer Systems Based On Phased-Array Transmitters**
Andrey Kletsov, Samsung Research; Artem Vilenskiy, Chalmers University of Technology; Alexander Chernokalov, Chongmin Lee, Sungku Yeo, Samsung Research

3 **Adaptive Group Based Symbol Flipping Decoding Algorithm**
Waheed Ullah, University of the Witwatersrand; Dushantha Nalin K. Jayakody, Lusófona University; Fengfan yang, Nanjing University of Aeronautics and Astronautics, Nanjing, China; Marko Beko, Lusófona University

4 **Adversarial Reprogramming as Natural Multitask and Compression Enabler**
Syahidah Izza Rufaida, Jenq-Shiou Leu, National Taiwan University of Science and Technology

5 **Channel Estimation for Non-Stationary Extremely Large-Scale MIMO**
Yuhao Chen, Zijian Zhang, Tsinghua University; Mingyao Cui, Tsinghua university; Linglong Dai, Tsinghua University

6 **Deep Reinforcement Learning Aided Online Trajectory Optimization of Cellular-Connected UAVs with Offline Map Reconstruction**
Qing Hao, Haitao Zhao, Hao Huang, Guan Gui, Nanjing University of Posts and Telecommunications; Tomoaki Ohtsuki, Keio University; Fumiyuki Adachi, Tohoku Univeristy

7 **Design of 3GPP-based Millimeter-Wave Band Wireless Virtual Community Network**
Hiroshi Harada, Shota Mori, Norichika Ohmi, Yusuke Koda, Keiichi Mizutani, Kyoto University

8 **Device-Edge Digital Semantic Communication with Trained Non-Linear Quantization**
Lei Guo, Beijing Jiaotong University,; Wei Chen, Beijing Jiaotong University; Yuxuan Sun, Beijing Jiaotong University,; Bo Ai, Beijing Jiaotong University

9 **DPC Inspired Beamformer Design Approach for Integrated Sensing and Communications**
Zhongmin Ma, Xi'an Jiaotong University, China; Qinghe Du, Xi'an Jiaotong University; Shijiao Zhang, Xi'an Jiaotong University, China

10 **Efficient Radar Detection for RIS-Aided Dual-Functional Radar-Communication System**
Xiao Jun, South China university of technology; Jianhua Tang, Jiao Chen, South China University of Technology

11 **Error Performance of RIS-Assisted NOMA Networks with Imperfect Channel State Information**
Guomei Cao, Meiling Li, Taiyuan University of Science and Technology; Hu Yuan, Kingston University; Wei Chen, Tsinghua University; Lijun Li, Taiyuan University of Science and Technology; Abdul Nasser Raouf, Dean of Faculty of Technology at UISTAM

12 **Incentive-Driven Fog-Edge Computation Offloading and Resource Allocation for 5G-NR V2X-Based Vehicular Networks**
Pradeep Chennakesavula, Jen-Ming Wu, Hon Hai Research Institute; ArulMurugan Ambikapathi, Lam Research

13 **Intelligent Recognition for Fast Access to Machine to Machine**
Yifan Zhang, Jie Zhang, YiMing Wang, Mian Wang, Jinlong Sun, Nanjing University of Posts and Telecommunications

Thursday, 22 June 2023 14:00 - 15:30 Virtual

V5: Machine Learning and AI

1 **A Novel Scatterer Density-Based Predictive Channel Model for 6G Communications**
Zheao Li, Cheng-Xiang Wang, Southeast University; chen huang, purple mountain labrotary; Long Yu, Junling Li, Zhongyu Qian, Southeast University

2 **AFLChain: Blockchain-enabled Asynchronous Federated Learning in Edge Computing Network**
huangxiaoge, Deng Xuesong, Chongqing University of Posts and Telecommunications; Qianbin Chen, University of Posts and Telecommunications; Jie Zhang, University of Sheffield

3 **An online deep learning based channel estimation method for mmWave massive MIMO system**
XuDong Bai, Qi Peng, Xidian University

4 **Automatic modulation classification for multi-criteria generic channel equalization**
Chouaib Farhati, Souhaila Fki, Supcom; Abdeldjalil Aissa El Bey, IMT Atlantique; Fatma Abdelkefi, Sup'Com

5 **DRL based Beam Selection and Hybrid Beamforming for Intelligent Reflective Surface assisted Massive MIMO System**
Irfan Ahmed, Higher Colleges of Technology

6 **Dynamic threshold spectrum sensing method based on DQN combined with clustered cooperative sensing architecture**
Shen Tingting, Youyun Xu, Nanjing University of Posts and Telecommunications

7 **Joint Frequency Assignment and Power Allocation Based on Multi-Agent Deep Reinforcement Learning for Multi-Beam Satellite Systems**
Yuanjun Li, Dewei Yang, Haowen Yang, Jingming Kuang, Beijing Institute of Technology

8 **Joint Optimization of Reconfigurable Intelligent Surfaces and Base Station Beamforming in MISO System Based on Deep Reinforcement Learning**
LIQiang Ma, Shandong University

9 **Learning Beamforming for RIS-aided Systems with Permutation Equivariant Graph Neural Networks**
Baichuan Zhao, Beihang University; Chenyang Yang, Beihang University, Beijing

10 **Modulation Recognition with Enhanced Constellation Based on Convolutional Neural Network**
Shijie Song, Han Sun, Wenbo Xu, Beijing University of Posts and Telecommunications

11 **NASEI: Neural Architecture Search-Based Specific Emitter Identification Method**
Yuxuan Huang, Xixi zhang, Yu Wang, Donglai Jiao, Guan Gui, Nanjing University of Posts and Telecommunications; Tomoaki Ohtsuki, Keio University

12 **Number of FLOPs of Training DNNs for Learning Precoding**
Pengyu Cong, Beihang University; Chenyang Yang, Beihang University, Beijing

13 **Performance Evaluation of Turbo Autoencoder with Different Interleavers**
Homayoon Hatami, Hamid Saber, Jung Hyun Bae, Samsung Semiconductors Inc.

14 **Proactive Hybrid Precoding for Time-varying mmWave Channel with Deep Learning**
Ruiming Wang, Jiajun Wu, Beihang University; Chenyang Yang, Beihang University, Beijing

15 **Residual Channel Attention Network-Based Channel Interpolation Using Noise2Noise for Massive MIMO-OFDM Systems**
Shuhui Ren, Zhenkun Qiu, Zhou Wuyang, University of Science and Technology of China

16 **RL-based Freshness-aware Frame Mode Selection for Real-time Wireless Video Transmission**
Jie Hou, Xiaohui Chen, Wenyi Zhang, University of Science and Technology of China

17 **Tracking the Best Beam for a Mobile User via Bayesian Optimization**
Lorenzo Maggi, Arndt Ryo Koblitz, Nokia Bell Labs; Qiping Zhu, intel; Matthew Andrews, Nokia Bell Labs

18 **WiFi Based Multi-Task Sensing via Selective Sharing Module**
Boyu Yang, Ting Jiang, Beijing University of Posts and Telecommunications

19 **Wireless Channel Scenario Identification Using Convolutional Neural Networks**
Govind Ravikumar Gopal, University of California San Diego; Jie Chen, William J. Hillery, Nokia of America; Jun Tan, Nokia Bell Labs; Serdar Ozen, Nokia; Qiping Zhu, intel

20 **Deep learning based context classification for cognitive network management**
Aymen Askri, Imed Hadj-Kacem, Sana Ben Jemaa, Kahina Mokrani, Orange Labs

21 **Deep Automatic Modulation Classification Using Deformation-Insensitive Color Constellation**
Chaoren Ding, Pinyi Ren, Dongyang Xu, Xi'an Jiaotong University

22 **Deep Learning-Based Automatic Modulation Recognition in OTFS and OFDM systems**
Jinggan Zhou, Xuewen Liao, Zhenzhen Gao, Xi'an Jiaotong University

Thursday, 22 June 2023 14:00 - 15:30 Virtual

V5: Recent Results II

1 **MmWave Vehicular Beam Alignment Leveraging Online Learning**
Qingyang Xian, Angela Doufexi, Simon Armour, University of Bristol

2 **Mobile Edge Computing and AI Enabled Web3 Metaverse over 6G Wireless Communications: A Deep Reinforcement Learning Approach**
Wenhan Yu, Terence Jie Chua, Jun Zhao, Nanyang Technological University

3 **Path Planning for Unmanned Aerial Vehicles: Peak Power Minimization**
Bahareh Jafari, University of Massachusetts Amherst; Hamid Saeedi, UDST and Tarbiat Modares University; Saeede Enayati, University of Massachusetts; Hossein Pishro-Nik, University of Massachusetts, Amherst

4 **Performance Analysis of Selection Combining over UAV-to-Ground Channels with Shadowing**
Remon Polus, Claude D'Amours, University of Ottawa

5 **Predictive Repacketization of Periodic Messages for Bandwidth Efficiency in Cellular V2X Environment**
Songmu Heo, Hyogon Kim, Korea University

6 **Semantics-Aware Multi-UAV Cooperation for Age-Optimal Data Collection : An Adaptive Communication based MARL Approach**
Yabin Wu, Fan Zhang, Chao Xu, Northwest A&F University; Xijun Wang, Sun Yat-sen University

7 **Sparse Scatter/Target Detection with Spatial Wideband Uniform Linear Arrays**
Chandrashekhar Rai, Debarati Sen, Indian Institute of Technology Kharagpur

8 **Trust Management and Bad Data Reduction in Internet of Vehicles Using Blockchain and AI**
Rashmi Erandika Ratnayake, Madhusanka Liyanage, Liam Murphy, University College Dublin

9 **Uplink Power Allocation for RSMA-aided User-centric Cell-free Massive MIMO Systems**
Manobendu Sarker, Abraham O. Fapojuwo, University of Calgary

10 **Utility-Oriented Wireless Communications for 6G Networks: Semantic Information Transfer for IRS aided Vehicular Metaverse**
Wang Zefan, Jun Zhao, Nanyang Technological University

11 **Utilizing Unsupervised Learning for Improving ML Channel State Feedback in Cellular Networks**
Bryse Flowers, University of California, San Diego; Adarsh Sawant, Runxin Wang, Dustin Zhang, Qualcomm Technologies, Inc.

12 **Vibration Detection Based on Multi-Sensor Information Fusion for Industrial Internet of Things**
Jie Zhang, Yifan Zhang, Bo Song, Yibin Zhang, Jinlong Sun, Nanjing University of Posts and Telecommunications

13 **Physical Layer Security Over UAV-to-Ground Channels with Shadowing**
Remon Polus, Claude D'Amours, Burak Kantarci, University of Ottawa

14 **Robust Secure Precoding for NOMA Multi-beam Satellite Systems**
Mengyan Huang, Guo Li, Nan Zhang, Fengkui Gong, Xidian University; Pengfei Xu, Xi'an Institute of Space Radio Technology

15 **Relayed Collective Perception Service With Redundancy Mitigation and Time Synchronization for V2X Communications Networks**
Yu-Kai Huang, Pradeep Chennakesavula, Jen-Ming Wu, Hon Hai Research Institute

Thursday, 22 June 2023 16:00 - 17:30 Virtual

V6: Positioning, Navigation, and Sensing

1 **CloudVision: DNN-based Visual Localization of Autonomous Robots using Prebuilt LiDAR Point Cloud**
Evgeny Yudin, Pavel Karpyshev, Mikhail Kurenkov, Alena Savinykh, Andrei Potapov, Evgeny Kruzhkov, Dzmitry Tsetserukou, Skolkovo Institute of Science and Technology

2 **Joint Estimation on the Reflector Velocity and Normal Direction Through NLOS Echo Signals**
Tianxiao Zhao, Fudan University; Jian Li, Shanghai Huawei Technologies Co., LTD.; Wenfei Yang, Yunhao Zhang, Huawei Technologies Co., Ltd.

3 **Near Field iToF LIDAR Depth Improvement from Limited Number of Shots**
Mena Nagiub, Valeo Schalter und Sensoren GmbH; Thorsten Beuth, Valeo Detection Systems GmbH; Ganesh Sistu, Valeo Vision Systems; Heinrich Gotzig, Valeo Schalter und Sensoren; Ciaran Eising, University of Limerick

4 **Recent Progress on 3GPP 5G Positioning**
Yi Wang, Su Huang, Yingjie Yu, Huawei Technologies Co., Ltd.; Cheng Li, Huawei; Peter A. Hoeher, Kiel University; Anthony C. K. Soong, Futurewei Technologies

5 **Temporal-frequency Features based Indoor Localization System under 5G Networks**
Minmin Liu, Xi'an Jiaotong University; Xuewen Liao, Xi'an JiaoTong University; Zhenzhen Gao, Ang Li, Xi'an Jiaotong University; Chunlei Zheng, Shanghai Institute of Microsystem and Information Technology

6 **Wi-Five: Optimal Placement of Wi-Fi Routers in 5G Networks for Indoor Drone Navigation**
Alireza Famili, Tolga Atalay, Angelos Stavrou, Haining Wang, Virginia Tech

Friday 23 June 2023

Friday, 23 June 2023 11:00 - 12:30 Virtual

V7: Radio Access and Heterogeneous Networks

1 **Full-Link AoI Analysis of Uplink Transmission in Next-Generation FTTR WLANs**
Jing Zhang, Jing Liu, Huazhong University of Science and Technology; Lin Xiang, Technische Universit at Darmstadt; XiaohuGe, Huazhong university of science and technology

2 **High Reliability Transmission Scheme for Anchored Indoor New Radio Unlicensed Systems**
Jiankang Wang, Samsung Research China ? Beijing (SRC-B); Peng Xue, Samsung Electronics; Hongliang Bian, Samsung Research China ? Beijing; Yue Yuan, Samsung Research China ? Beijing (SRC-B); Ying Wang, Samsung Research China-Beijing(SRC-B), Beijing, China; Nan Cao, Samsung Research China ? Beijing (SRC-B)

3 **Improving Random Access with NOMA in mMTC XL-MIMO**
Thiago Bruza, UEL - Brazil; Taufik Abrão, State University of Londrina

4 **Joint Allocation on 3C Resources for Three-Tier Cooperation Mobile Computing Networks**
Long Long, Zixu Zhao, Zaiwang Lu, Lei Li, University of Chinese Academy of Sciences; Zichen Liu, Institute of Computing Technology; Yucheng Yhang, University of Chinese Academy of Sciences

5 **Joint Cache Placement and NOMA-Based Task Offloading for Multi-User Mobile Edge Computing**
Hanzhe Dai, Haifeng Wen, Hong Xing, The Hong Kong University of Science and Technology (Guangzhou); Zhiguo Ding, UMIST

6 **Joint Scheduling and Power Allocation with Per-User Rate Constraints for Uplink MU-MIMO OFDMA Systems**
Lin Zhang, Shengqian Han, Beihang University; Chenyang Yang, Beihang University, Beijing

7 **Load Balancing in Small-Cell Access Point Placement**
Govind Ravikumar Gopal, Bhaskar D. Rao, University of California San Diego; Gabriel Villardi, NICT

8 **On Throughput and Reliability Enhancement via Relay-assisted Retransmission**
Guanyu Lin, Chia-Hao Yu, Nathan Tenny, Alex C.-C. Hsu, MediaTek Inc.

9 **System-level Simulation and Performance Evaluation for 6G Ultra Massive MIMO**
Jing Guo, Lei Gao, Nanxi Li, Shan Yang, Jianchi Zhu, Xiaoming She, Jianxiu Wang, Peng Chen, China Telecom Research Institute

Friday, 23 June 2023 14:00 - 15:30 Virtual

V8: Spectrum Management, Access, Services and Security

1 **An Efficient Blockchain-based Privacy-Preserving Authentication Scheme in VANET**
Shiyuan Xu, The University of Hong Kong; Xue Chen, The Hong Kong Polytechnic University; Weimin Kong, Tianjin Normal University; Yibo Cao, Yunhua He, Ke Xiao, North China University of Technology

2 **Approximation of SINR and rate distributions in the presence of path-loss, shadowing and fast-fading**
Imed Hadj-Kacem, Orange; Sana Ben Jemaa, Orange Labs

3 **Satellite Resource Allocation via Dynamic Auctions and LSH-based Predictions**
Lin Cheng, Bernardo Huberman, CableLabs

4 **Multimodal LSTM forcasting for LEO Satellite Communication Terminal access**
Honguang Li, University of Chinese Academy of Sciences; Yaoqi Liu, Institute of Computing Technology, Chinese Academy of Sciences; Jinglin Shi, :Institute of Computing Technology,Chinese

Academy; Yiqing Zhou, Ruilian Zhuo, Institute of Computing Technology, Chinese Academy of Sciences; Shaoyang Li, China Academy of Space Technology

5 **Propagation Dynamics Based Resource Deployment Strategy for Edge Networks**
Shaoshuai Fan, Hanlin Gao, Tian Hui, Shiyu Yang, Beijing University of Posts and Telecommunications

6 **TDANet: An Efficient Solution For Short-Term Mobile Traffic Forecasting**
Shuyang Li, Enrico Magli, Politecnico di Torino; Gianluca Francini, Telecom Italia

7 **Packet Encoding Based on Encrypted Raptor Code for Secure Internet of Vehicles Communication**
Junzhe Cheng, Dongyang Xu, Xi'an Jiaotong University; Gautam Srivastava, Brandon University; Keping Yu, Hosei University

Friday, 23 June 2023 16:00 - 17:30 Virtual

V9: Transmission and Reception

1 **A Lightweight Integrated Narrowband Interference Detection and Suppression Scheme for OTFS**
Yuchen Wu, Pan Zhenni, Shigeru Shimamoto, Waseda University

2 **A Novel Iterative Receiver for Clipping Distortion Recovery in OFDM Systems**
Weilin Song, Xi'an Jiao Tong University; Heng Du, Xi?an Jiaotong University; Jiang Xue, Xi'an Jiaotong University

3 **A Variable Step-Size l0-PRLS Algorithm and its Application in Sparse Channel Estimations**
Yu Wang, Jun Tao, Southeast University

4 **ABER Performance of Transmit Antenna Selection for Cooperative SM-MIMO System with DF Protocol**
Abeer Mohamed, Zhiquan Bai, Ke Pang, Bangwei He, Yuanyuan Ma, Shandong University; Kyung Sup Kwak, Inha University

5 **Capacity achieving quantizer design for multiple input-multiple output thresholding channels**
An Vuong, Oregon State University; Thuan Nguyen, Tufts University; Thinh Nguyen, Oregon State University

6 **Design and Analysis of LoS-MIMO System with a Uniform Cross Array Composed of Dual-polarized Antennas**
Motoshi Tawada, Yoshichika Ohta, Atsushi Nagate, SoftBank Corp.

7 **Duality between the Power Minimization and Max-Min SINR Balancing Symbol-Level Precoding**
Junwen Yang, Ang Li, Xi'an Jiaotong University; Xuewen Liao, Xi'an JiaoTong University; Christos Masouros, University College London

8 **Frequency-Dependent Beamforming for RIS-Assisted Wideband Terahertz Systems**
WU JIAO, Byonhyo Shim, Seoul National University

9 **Full-Duplex Mixed RF/FSO using Multiple Relays with Self-Interference**
Akhilesh Kumar Savita, Anshul Jaiswal, IIT Roorkee; Ankit Garg, Netaji Subhas University of Technology

10 **Hybrid Amplitude and Phase Coding for Intelligent Reflecting Surface Aided Channel Estimation**
Yiyang Liang, Shuping Dang, Angela Doufexi, University of Bristol

11 **Iterative Channel Estimation and Decoding For Monomial Codes**
Anna Fominykh, Kirill Shabunov, Vladimir Lyashev, Huawei Technologies

12 **Maximizing Optical Inter-DC Emergency Backup Reliability in Unpredictable Disasters**
Ying Wang, Jiang Liu, Mingwei Cui, Weihong Wu, Tao Huang, Yunjie Liu, Beijing University of Posts and Telecommunications

13 **Near-Field Beam Management with Ring-type Codebook**
Fan Wang, Xin Wang, DOCOMO Beijing Communications Laboratories Co., Ltd; Xiang Li, DOCOMO Beijing Communications Laboratories Co., Ltd.; Xiaolin Hou, DOCOMO Beijing Communications Laboratories Co., Ltd; chen lan, DOCOMO Beijing Communications Lab; Satoshi Suyama, Takahiro Asai, NTT DOCOMO, INC.

14 **Ordered Iterative Methods for Low-Complexity Massive MIMO Detection**
Beilei Gong, Ningxin Zhou, Zheng Wang, Southeast University

15 **Parallelizable First-Order Fast Algorithm for Symbol-Level Precoding in Lage-Scale Systems**
Junwen Yang, Ang Li, Xi'an Jiaotong University; Xuewen Liao, Xi'an JiaoTong University; Christos Masouros, University College London

16 **Projection Riemannian Manifold based Regular Sparse Array Beamforming for Millimeter Wave Communication**
Xiangli Lin, Samsung Research China-Beijing(SRC-B); Caixia Cui, qing123.zhu, Ying Wang, Lefei Wang, Samsung Research China-Beijing(SRC-B), Beijing, China; Guangcan Yan, Samsung Research Insitute China ? Beijing(SRC-B); Ranran Zhang, Samsung Research China-Beijing(SRC-B), Beijing, China; Meifang Jing, Samsung Research China-Beijing; Yi Zhao, Samsung Research Insitute China ? Beijing(SRC-B)

17 **RIS Assisted RF Communication Systems with H-ARQ Protocols and Imperfect CSI**
Gyandeep Verma, Aashish Mathur, Indian Institute of Technology Jodhpur

18 **SER Analysis and Joint Optimization in Nonlinear MIMO-OFDM Systems with Clipping**
Yuyang Du, The Chinese University of Hong Kong; Liang Hao, Yiming Lei, Peking University

19 **Fractional Delay-Doppler Channel Estimation in OTFS with Sparse Superimposed Pilots using RNNs**
Sandesh Rao Mattu, A. Chockalingam, Indian Institute of Science, Bangalore

20 **People Counting System Using mmWave MIMO Radar with 3D Convolutional Neural Network**
Cheng-Che Shih, Xinrui Zhou, Thinh Nguyen, Oregon State University; Khanh D. Pham, Air Force Research Lab

21 **An Iterative DoA Estimation Method for Uniform Circular Arrays with Weighted Baselines**
Xiaorui Ding, Wenbo Xu, Beijing University of Posts and Telecommunications; Hui Liu, National Key Laboratory of Blind Signal Processing

Workshops

Tuesday, 20 June 2023 Affari 2.1

W1: 1st International Workshop on Sensing Advances in Wireless Networks (SAWN)

1 **Channel Interference Sensing Transformer for Spread Spectrum Communications with Attention Mechanism**
Yi Wei, Zhejiang University; Shang-Rong Ou-Yang, Chao Li, Hengxiang He, Xiaoying Gu, Shanghai Aerospace Academy

2 **Diagonal Waveform and Algorithm to Estimate Range and Velocity in Multi-Object Scenarios**
Yi Geng, CICT mobile

3 **Drone-based Underwater Sensor Network with Optical Camera Communication**
Yuika Yasui, Asako Shigenawa, Yu Nakayama, Tokyo University of Agriculture and Technology

4 **Online Tensor Based Algorithm for Moving Object Detection with FMCW Radar**
Yunfei Lu, Zhaoyang Zhang, Xin Tong, Zhaohui Yang, Zhejiang University

5 **Radio-Based Sensing in Vehicular Environments: Robust Localization and Tracking of VRUs**
Fabian de Ponte Müller, Martin Schmidhammer, Stephan Sand, German Aerospace Center (DLR)

6 **Resource Optimization in Time-Varying Wireless Sensing and Localization Networks**
Ruihang Zhang, Jiayan Yang, Tingting Zhang, Harbin Institute of Technology (Shenzhen)

Tuesday, 20 June 2023 Affari 4th Floor

W2: 2nd Workshop on Mission Critical Communications

1 **Beamforming Design for Double-RIS Assisted UAV Communication with Limited Feedback in Disaster Scenarios**
Sihui Shang, Dongyang Xu, Xi'an Jiaotong University

2 **Deployment of a UAV-Based Fire Detection System**
Rushiv Arora, Mohammadjavad Khosravi, Saeede Enayati, Hossein Pishro-Nik, University of Massachusetts, Amherst

3 **Utilizing Cellular Networks Infrastructure in UAV-enabled Cooperative Surveillance Scenarios**
Radek Mozny, Pavel Masek, Martin Stusek, Brno University of Technology; Karol Molnar, Honeywel; Marketa Palenska, Honeywell; Dmitri Moltchanov, Tampere University; Jiri Hosek, Brno University of Technology

4* **Fuzzy Secret Key Generation based on Phase Extraction and Constellation Rotation**
Ning Shen, Qinghe Du, Lei Lu, Shijiao Zhang,Xi'an Jiaotong University

5 **MARL-based Random Access Scheme for Delay-constrained umMTC in 6G**
Jiseung Youn, Joohan Park, Soohyeong Kim, Seyoung Ahn, Abdul Rahim Ansari, Sunghyun Cho, Hanyang University

6 **MIMO-aided Irregular Repetition Schemes for Mission Critical Communications**
Linlin ZHAO, Jilin University; Professor Shaodan Ma, University of Macau; Guanghua Yang, JiNan University; Xuefen Chi, Wanting Yang, Jilin University

7 **Neural Network Based Node Prioritization for Efficient Localization**
Carlos Antonio Gomez Vega, University of Ferrara; Moe Z. Win, Massachusetts Institute of Technology; Andrea Conti, University of Ferrara

8 **Novel Preamble for Accurate Synchronization of Frequency Hopped OFDM Links**
Vignesh Ramachandran, K Giridhar, Indian Institute of Technology Madras

9 **Optimizing Tethered UAV Deployment for On-Demand Connectivity in Disaster Scenarios**
Balaji Kirubakaran, Jiri Hosek, Brno University of Technology

10 **Performance Comparison of Numerical Optimization Algorithms for RSS-TOA-Based Target Localization**
Halim Lee, Jiwon Seo, Yonsei University

11 **Rank and Condition Number Analysis for UAV MIMO Channels Using Ray Tracing**
Donggu Lee, Ismail Guvenc, North Carolina State University

**** Paper will be presented in virtual form only***

Tuesday, 20 June 2023 Affari 2.2

W3: 5G for Railways ? Challenges and Opportunities for Operational and Passenger Connectivity

1 **5GMED Seamless Connectivity for Digital Trains**
Jad Nasreddine, i2CAT Foundation; Juan Agustí, COMSA; Philippe Veyssiere, IRT Saint Exupery; Paul Caranton, SNCF Voyageurs; Nuria Trujillo, Hispasat; Pascal Deliège, Projets Groupe SNCF; Luca Petrucci, Axbryd; Nathan Sanchiz-Viel, Jean-Emmanuel Deschaud, MINES Paris, PSL Research University, CAOR; Judit Bastida, José López Luque, Cellnex Telecom S.A.; Francisco Vázquez-Gallego, i2CAT Foundation; Manuel Alfageme Alonso, COMSA

2 **A Sequence Spread Modulation Scheme Based on Orthogonal Time Frequency Space**
Yuge Cao, Beijing University of Posts and Telecommunications

3 **Adaptable Communications System for train remote driving**
Wael CHERIF, Christophe Vitry, Lorraine Durieux, Thales

4 **An MDP approach for radio resource allocation in urban Future Railway Mobile Communication System (FRMCS) scenarios**
Vincent Corlay, Jean-Christophe Sibel, Mitsubishi Electric R&D Centre Europe

5 **Experimental Trials for the Future Railway Mobile Communication System in 5GRail Project**
Sébastien Tardif, Kontron Transportation; Nazih Salhab, SNCF-Réseau; Vassiliki Nikolopoulou, UIC (International Union of Railways); Michael Kloecker, Nokia Solutions and Networks; Bernd Holfeld, Deutsche Bahn; Farid Bazizi, Kontron Transportation; Dan Mandoc, UIC (International Union of Railways); Marion BERBINEAU, Université Gustave Eiffel; Stefanos Gogos, UNIFE

6 **Field Evaluation of MCx Implementations for the Future Railway Mobile Communication System**
Friederike Maier, Deutsche Bahn; Shirish Kendre, DB Netz; Maksym Tyrskyy, Deutsche Bahn; Arne Weber, DB Netz; Ulrich Geier, Manfred Taferner, Peter Beicht, Kevin Wriston, Endri Stefani, Kontron Transportation; Jens Koecher, Funkwerk Systems GmbH

7 **Implementing Edge Computing architectures for railway applications: An example using the Emu5GNet platform**
Tidiane Sylla, université Gustave Eiffel; Léo Mendiboure, Marion BERBINEAU, Université Gustave Eiffel; Radheshyam Singh, DTU Electro; Jose Soler, DTU Fotonik; Lars Dittmann, DTU

8 **Reconfigurable Intelligent Surface Assisted Railway Communications: A survey**
Aline Habib, IMT Atlantique; Ammar El Falou, King Abdullah University of Science and Technology (KAUST); Charlotte Langlais, IMT Atlantique, Lab-STICC, UBL; Marion Berbineau, Université Gustave Eiffel

9 **Train Antennas Requirements, Design and Integration for 5GRail Project**
Nazih Salhab, Ahmad Haidar, Juan José Munoz Vargas, Clement Reboul, SNCF-Réseau

Tuesday, 20 June 2023 Virtual

W4: 6G-empowered Robotic Vehicles for Sustainable Development (VeSUS)

1 **EMS-SLAM: Edge-Assisted Multi-Agent System Simultaneous Localization and Mapping**
Kai Hu, Lei Zhan, Southern University of Science and Technology; Longhao Zou, Zuozhou Chen, Peng Cheng Laboratory, Department of Broadband Communication; Gabriel-Miro Muntean, Dublin City University

2 **Fuzzy Logic-based Adaptive Multimedia Streaming for Internet of Vehicles**
Abid Yaqoob, Gabriel-Miro Muntean, Dublin City University

3 **Joint Deployment and Task Scheduling in IRS-assisted Wireless Inland Ship MEC Network**
Yangzhe Liao, Yuanyan Song, Lin Liu, Yi Han, Wuhan University of Technology

4 **QoE-aware 360-degree Video Streaming for Autonomous Vehicles**
Yi Han, Wuhan University of Technology; Ammar A. Q. Aldaif, Huijun Yuan, Yi Zhong, Yi Zheng, School of Information Engineering, Wuhan University of Technology; Yangzhe Liao, Wuhan University of Technology; Qing Li, Peng Cheng Laboratory

5 **Trustworthy Routing in VANET: A Q-learning Approach to Protect Against Black Hole and Gray Hole Attacks**
Elham Mohammadzadeh Mianji, Gabriel-Miro Muntean, Irina Tal, Dublin City University

---

Tuesday, 20 June 2023 Oince

W5: 6th Workshop on Connected Intelligence for IoT and Industrial IoT Applications- C3IA

1 **Energy-aware Theft Detection based on IoT Energy Consumption Data**
Zunaira Nadeem, Queen Mary University, London; Zeeshan Aslam, Bahria University, Islamabad; Mona Jaber, Queen Mary University of London; Adnan Qayyum, Information Technology University, Lahore; Junaid Qadir, Qatar University, Doha

2 **Glaucoma Retinal image Classification Based on Multichannel Gabor filtering and Deep Transfer Learning**
Mohamed Chaabane, Hassania School of Public Works; Hasna Chaibi, Supmti; El Rharras Abdessamad, Hassania School of Public Works; Saadane Rachid, SIRC/LAGES-EHTP Hassania School of Public Works; Chehri Abdellah, Royal Military College of Canada

3 **Identification and Categorization of Unusual Internet of Vehicles Events in Noisy Audio**
Farkhund Iqbal, Zayed University; Ahmad Abbasi, Abdul Rehman Javed, Air University; Gautam Srivastava, Brandon University; Zunera Jalil, Air University; Thippa Reddy G, VIT University, India

4 **IRS-Assisted Millimeter-wave Massive MIMO with Transmit Antenna Selection for IoT Networks**
Taissir Elganimi, University of Tripoli; Khaled Rabie, Manchester Met University; Galymzhan Nauryzbayev, Nazarbayev University

5 **LoRa-PUF: A Two-Step Security Solution for LoRaWAN**
Mohammed Bello Aliyu, Maryam Hafeez, Anju Johnson, University of Huddersfield

6 **Model-based and Model-free Prescriptive Maintenance on Edge Computing Nodes**
Chen-Khong Tham, Naman Sharma, Jingrui Hu, National University of Singapore

7 **Reconfigurable Intelligent Surfaces and DF-relay Improved Spectral Efficiency in Cognitive Radio Networks**
Abderrahmane El Mettiti, Mohammed V University in Rabat, Morocco; Mohammed Saber, Hassania School of Public Works; hasna chaibi, Supmti; A. Badaoui, Laboratory LASTIMI,Mohammed V University, Rabat; Abdellah Chehri, RMC, Kingston University; Rachid Saadane, SIRC-LaGeS Hassania School of Public Works

---

Tuesday, 20 June 2023 Virtual

W6: IEEE VTC Spring 3rd Workshop on Sustainable and Intelligent Green Internet of Things for 6G and Beyond

1 **6G driven Vehicular Tracking in Smart Cities using Intelligent Reflecting Surfaces**
Atif Shakeel, Adeel Iqbal, COMSATS University Islamabad; Ali Nauman, Yeungnam University, Republic of Korea; Riaz Hussain, COMSATS University Islamabad; Xingwang Li, Henan Polytechnic University; Khaled Rabie, Manchester Met University

2 **A Novel Multi-User Space-Time Block Coding based Superposition Transmission for Future Generation Wireless Networks**
Muhammad Farhan Khan, University College Cork, Ireland; Dirk Pesch, University College Cork

3 **A Software-Defined Networking based Simulation Framework for Internet of Space Things**
Awais Aziz Shah, University of Glasgow

4 **Dedicated versus Shared Element-Allotment in IRS-aided Wireless Systems: When to Use What?**
Mahnoor Anjum, Muhammad Abdullah Khan, National University of Sciences & Technology (NUST); Sarah Basharat, NUST; Syed Ali Hassan, National University of Sciences and Technology; Haejoon Jung, Kyung Hee University

5 **Deep Q-Learning Based Resource Allocation in 6G Interference Systems With Outage Constraints**
Saniul Alam, Sadia Islam, Jahangirnagar University; Muhammad RA Khandaker, Heriot-Watt University; Risala Tasin Khan, Jahangirnagar University; Faisal Tariq, University Glasgow; Apriana Toding, Universitas Kristen Indonesia Paulus

6 **Energy-Efficient RIS-Enabled NOMA Communication for 6G LEO Satellite Networks**
Wali Ullah Khan, Eva Lagunas, Asad Mahmood, Symeon Chatzinotas, SnT, University of Luxembourg; Bjorn Ottersten, University of Luxembourg

7 **Joint Precoding and Combining for Quantized Full-Duplex MU-MIMO Systems**
Seunghyeong Yoo, Seokjun Park, Ulsan National Institute of Science and Technology; Jinseok Choi, Korea Advanced Institute of Science and Technology

8 **K-DUMBs IoRT: Knowledge Driven Unified Model Block sharing in the Internet of Robotic Things**
Muhammad Waqas Nawaz, University of Glasgow

9 **Multi-Objective Optimization for 3D Placement and Resource Allocation in OFDMA-based Multi-UAV Networks**
Asad Mahmood, Thang X. Vu, Shree Krishna Sharma, Symeon Chatzinotas, Bjorn Ottersten, University of Luxembourg

10 **VehA & PedA Mobility based Scheduling in Future Communication Networks**
Khuram Ashfaq, Ghazanfar Ali Safdar, University of Bedfordshire; Masood Ur-Rehman, University of Glasgow

---

Tuesday, 20 June 2023 Affari Adua Hall 2

W7: Next Generation Multiple Access (NGMA) for Future Wireless Communications

1 **Common Rate Allocation and Power Control Optimization for RSMA-Based Visible Light Communications**
Jianfei Hu, Chen Sun, Jiaheng Wang, Xiqi Gao, Southeast University; Chunming Zhao, National Mobile Communications Research Lab., Southeast University

2 **Contextual Multi-Armed Bandit based Beam Allocation in mmWave V2X Communication under Blockage**
Arturo Medina Cassillas, King's College London; Abdulkadir Kose, Abdullah Gul University; Haeyoung Lee, University of Hertfordshire; Chuan Heng Foh, University of Surrey; Bruce Leow, University Teknologi Malaysia

3 **Distance-Aware Subarray Selection for Terahertz Ultra-Massive MIMO Systems**
Yiying Liu, Wu Jiao, Seungnyun Kim, Byonhyo Shim, Seoul National University

4 **Federated Learning with Unsourced Random Access**
Yuqing Tian, Jingze Che, Zhaoyang Zhang, Zhaohui Yang, Zhejiang University

5 **Integrated-Navigation-and-Communication (INAC): A Reconfigurable Intelligent Surface (RIS)-aided Approach**
ZhaoQichao, Wenfei Gong, Tianwei Hou, Beijing jiaotong university; Xin Sun, Beijing Jiaotong University; Eliane Bodanese, Anna Li, Queen Mary University of London

6 **On the Performance of NOMA-OFDM Systems with Time-Domain Interleaving**
Welelaw Yenieneh Lakew, Arafat Al-Dweik, Khalifa University; Mahmoud Aldababsa, Nisantasi University; Mohammed Abou-Khousa, Baker Mohammad, Khalifa University

7 **Performance Analysis of Ambient Backscatter Uplink NOMA Networks**
Athanasios Chrysologou, Nestor Chatzidiamantis, Aristotle University of Thessaloniki; Alexandros Boulogeorgos, University of Piraeus; George Karagiannidis, Aristotle University of Thessaloniki

8 **Performance Analysis of Broadband Countermeasure Cancellation in Multiple-access Datalink Networks**
yangzhong_yz@hotmail.com, Naval University of Engineering

9 **Performance Trade-off for NOMA-based Integrated Localization and Communication Systems**
lincong han, China Mobile Research Institute

10 **Rate-Splitting Multiple Access Precoding for Selective Security**
Sangmin Lee, Seokjun Park, Ulsan National Institute of Science and Technology; Jeonghun Park, Yonsei University; Jinseok Choi, Korea Advanced Institute of Science and Technology

---

Tuesday, 20 June 2023 Affari 3.2

W9: Technologies and Proof-of-Concept Activities for 6G 2023 (TPoC6G 2023)

1 **A PUCCH Coverage Enhancement Scheme for 5G/6G Wireless Communications**
Wenqi Luo, Beijing University of Posts and Telecommunications

2 **Clustering Method in Downlink Cell-Free MIMO Using Layered Partially Non-orthogonal ZF-Based Beamforming**
Daisuke Ishii, Takanori Hara, Tokyo University of Science; Nobuhide Nonaka, NTT DOCOMO, INC.; Kenichi Higuchi, Tokyo University of Science

3 **Improving Semi-Blind Interference Suppression on Multi-Cell Massive MIMO Systems by Multi-Antenna Users**
Kazuki Maruta, Tokyo University of Science

4 **Measurement and Characteristic Analysis of RIS-assisted Wireless Communication Channels in Sub-6 GHz Outdoor Scenarios**
Jifeng Lan, Jian Sang, Mingyong Zhou, Boning Gao, Shengguo Meng, Xiao Li, Wankai Tang, Southeast University; Shi Jin, Southern University; Qiang Cheng, Tie Jun Cui, Southeast University; Ertugrul Basar, Koc University

5 **Measurement-based Analysis and Modeling of Channel Characteristics in an Indoor-office Scenario at 100 GHz**
Shenrong Li, Pan Tang, Tong Yu, Beijing University of Posts and Telecommunications; Zhaowei Chang, Beijing University of Posts and Telecommuniation; Zhenfeng Huang, Yunhao Ni, Wenqi Zhao, Zhang Jianhua, Beijing University of Posts and Telecommunications

6 **Null-Space Expansion Technique for Linear MIMO Reception over Time-Variant Channels**
Yuki Ohi, Hidekazu Murata, Yamaguchi University; Makoto Taromaru, Fukuoka University; Tatsuhiko Iwakuni, Nippon Telegraph and Telephone Corporation; Daisei Uchida, NTT; Naoki Kita, NTT Access Network Service Systems Laboratories

7 **Proposal of Self-Interference Canceller Using DMRS for Full Duplex Mobile Communications**
Takumi Yasaka, Kogakuin University; Takayuki Yamada, Satoshi Suyama, NTT DOCOMO, INC.; Hiroyuki Otsuka, Kogakuin University

8 **Cloud and Edge Computing Empowered Mobility Digital Twin for Autonomous Driving: Design and Proof-of-Concept**
Kui Wang, Zongdian Li, Tao Yu, Kei Sakaguchi, Tokyo Institute of Technology

9 **Time-Varying Channel Prediction for Pilot Contamination Mitigation in Hybrid Massive MIMO Communications**
Yuki Ono, Yuyuan Chang, Kazuhiko Fukawa, Tokyo Institute of Technology; Satoshi Suyama, Takahiro Asai, NTT DOCOMO, INC.

10 **User-initiated Suboptial Multiuser Joint Transmit-Receive Diversity in An Asymmetric MIMO Fading Channel**
Fumiyuki Adachi, Tohoku University; Ryo Takahashi, Panasonic System Networks R&D Lab. Co., Ltd.

Tuesday, 20 June 2023 Congressi - Room 5

W10: The 3rd International Workshop on Electromagnetic Information Theory (EIT 2023)

1 **A Novel GBSM for Holographic MIMO Communication Systems**
Zheng-Rong Jin, Nanjing University of Aeronautics and Astronautics; Yue Yang, Jie Huang, Cheng-Xiang Wang, Southeast University; Qiuming Zhu, Nanjing University of Aeronautics and Astronautics

2 **Cell throughput analysis for downlink multi-user MIMO transmission with radiation pattern reconfigurable antennas**
Xi Li, Huawei Technologies, China; Chen Hu, Shijie Cai, Kunpeng Liu, Long Shen, Huawei Technologies; Hongjing Xu, Huawei Technologies, China; Qiang Li, Peng Cheng Laboratory, China

3 **Electromagnetic Information Theory in Phase-Space: A Quantum Tunnelling Approach**
Gabriele Gradoni, University of Surrey; David Miller, Stanford University; Stephen Creagh, University of Nottingham

4 **Multi-band channel measurement and characterization for 5G-Advanced wireless communications**
Chao Li, Shanghai Huawei Technologies Co., Ltd.; Hao Chen, Peng Cheng Laboratory, Shenzhen, China; Cen Ling, Huawei Technologies Co., Ltd.

5 **On the Passive Beamforming for Reconfigurable Intelligent Reflecting Surfaces with Low Resolution ADCs and Phase Noise**
Yasser Ahmed, Cairo University

6 **Optimization of Directivity, Realized Gain and Efficiency for Multi-dimensional Antenna Array**
Qian Zhu, Huawei Technologies Co. Ltd.; RUI NI, HUAWEI; Ganghua Yang, Huawei Technologies Co. Ltd.; Qiang Li, Peng Cheng Laboratory, China

---

Tuesday, 20 June 2023 Oince

W11: The 5th International Workshop on Intelligent Communication Network Technologies (ICNET-5)

1 **A Federated Channel Modeling System using Generative Neural Networks**
Saira Bano, University of Pisa; Pietro Cassara, Institute of Information Science and Technology (ISTI), CNR, Italy; Nicola Tonellotto, University of Pisa; Alberto Gotta, ISTI-CNR

2 **A Novel Statistically-Aided Learning Framework for Precise Localization of UAVs**
Akash Kumar Mandal, Indian Institute of Technology Delhi; Jun-Bae Seo, Gyeongsang National University; Swades De, Indian Institute of Technology Delhi; Ajay K Poddar, Synergy Microwave Corp., Paterson, NJ, USA; Ulrich Rohde, Federal University of the joint forces, Germany.

3 Latency-aware V2X Operation Mode Coordination in Vehicular Network Slicing
Mohammad Fardad, Gabriel-Miro Muntean, Irina Tal, Dublin City University

4 Leveraging Transfer Learning for Production-Aware Slicing in Industrial Networks
Naveenta Gautam, Indian Institute of Technology; Alessandro Lieto, Ilaria Malanchini, Qi Liao, Nokia Bell Labs

5 Mitigating Unnecessary Handovers in Ultra-Dense Networks through Machine Learning-based Mobility Prediction
Donglin Wang, Technical University of Kaiserslautern; Anjie Qiu, RPTU Kaiserslautern-Landau; Sanket Partani, University of Kaiserslautern; Qiuheng Zhou, German Research Center for Artificial Intelligence(DFKI); Hans D.Schotten, Technical University of Kaiserslautern

6 Prediction of Communication Delays in Connected Vehicles and Platoons
Shahriar Hasan, Mälardalen University; Joseba Gorospe, Arrate Alonso Gómez, Mondragon Unibertsitatea; Svetlana Girs, Elisabeth Uhlemann, Mälardalen University

7* Securing Internet of Vehicles Protocols using ASCON and GIFT-COFB
Wissal BenMassaoud, Darshan M, Lakehead University; Rutvij Jhaveri, Pandit Deendayal Energy University- PDEU (Formerly PDPU); Gautam Srivastava, Brandon University

**** Paper will be presented in virtual form only***

Tuesday, 20 June 2023 Virtual

W12: Workshop on Energy Efficiency of Open Radio Access Networks

1 Energy Efficiency of Open Radio Access Network: A Survey
Attai Abubakar, Oluwakayode Onireti, Yusuf Sambo, Lei Zhang, University of Glasgow; Ragesh Goshalakkal Keeramkulangara, Indian Institute of Information Technology, Kottayam; Muhammad Ali Imran, University of Glasgow