

2022 IEEE 96th Vehicular Technology Conference (VTC2022-Fall 2022)

**London, United Kingdom
26-29 September 2022**

Pages 1-713



**IEEE Catalog Number: CFP22VTF-POD
ISBN: 978-1-6654-5469-8**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP22VTF-POD
ISBN (Print-On-Demand):	978-1-6654-5469-8
ISBN (Online):	978-1-6654-5468-1
ISSN:	1090-3038

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

A Study on Radio Propagation Characteristics at 100 GHz Between the User Equipment and a Wearable Device.....	1
<i>Kazuki Takezawa, Tatsuya Nagao, Takahiro Hayashi</i>	
On Three-Phase S-Parameters and Its Application to Coupling Attenuation of Automotive High-Voltage Lines	7
<i>Franz G. Aletsee</i>	
Outdoor Localization of Intelligent Reflecting Surfaces Using Radio Maps	11
<i>Satya Kumar Vankayala, Purnima Lala Mehta, Seungil Yoon, Kuldeep Sharma, N Prashant, Sai Krishna Santosh Gollapudi</i>	
Practical Evaluation Method for Large IRS: RCS Pattern Synthesis of Sub-IRS with Mutual Coupling	17
<i>Hiromi Matsuno, Tatsuya Nagao, Takuya Ohto, Takahiro Hayashi, Michihiro Harada</i>	
5G Multifunctional MPAC Test Solution Based on Switch Matrix and Probe Selection	21
<i>Yuhang Guo, Yuxiang Zhang, Xiaohang Yang, Jianhua Zhang, Zhiqin Wang</i>	
An Efficient Probe Selection Method for 5G Base Station OTA Testing with MPAC Setup	26
<i>Hao Sun, Xiaohang Yang, Ying Zhu, Zhiqin Wang</i>	
Analysis of Impact of Direct Current Bias on Optical Power Signal in VLC	31
<i>Xiaoqian Wang, Liang Xia, Yifei Yuan, Guangyi Liu, Jianhua Zhang, Jiangzhou Wang</i>	
Coverage Enhancement of 5G Commercial Network Based on Reconfigurable Intelligent Surface	37
<i>Jiachen Li, Boning Gao, Zhexuan Yu, Cen Li, Wankai Tang, Le Liang, Xiao Li, Shi Jin, Qiang Cheng, Tie Jun Cui</i>	
Image Method Based 6G Channel Modeling for IIoT and Mobility Scenarios.....	42
<i>Tianyi Liao, Tianyi Zhai, Haotian Zhang, Ruijia Li, Jialing Huang, Yuxiao Li, Yinghua Wang, Jie Huang, Cheng-Xiang Wang</i>	
Emulation of Electromagnetic Plane Waves for 3D Antenna Pattern Estimation.....	48
<i>Renato Zea Vintimilla, Mario Lorenz, Markus Landmann, Giovanni Del Galdo</i>	
Hybrid-Field Channel Estimation for Massive MIMO Systems Based on OMP Cascaded Convolutional Autoencoder.....	54
<i>Hasan Nayir, Erhan Karakoca, Ali Görçin, Khalid Qaraqe</i>	
Learning-Based Path Loss Estimation Using Multiple Spatial Data and System Parameters	60
<i>Kazuya Inoue, Keita Imaizumi, Koichi Ichige, Tatsuya Nagao, Takahiro Hayashi</i>	
Mediumband Wireless Communication	65
<i>Dushyantha A. Basnayaka</i>	
Wireless 3GHz and 30 GHz Vehicle-To-Vehicle Measurements in an Urban Street Scenario	70
<i>Markus Hofer, David Lóschenbrand, Stefan Zelenbaba, Anja Dakic, Benjamin Rainer, Thomas Zemen</i>	
An Improved Equiangular Division Algorithm for SBR Based Ray Tracing Channel Modeling	75
<i>Yuyang Zhou, Yinghua Wang, Yuxiao Li, Jialing Huang, Jie Huang, Cheng-Xiang Wang</i>	

An Improved Ray Tracing Acceleration Algorithm Based on Bounding Volume Hierarchies	80
<i>Chen Wang, Yinghua Wang, Yuxiao Li, Jialing Huang, Jie Huang, Cheng-Xiang Wang</i>	
An SBR Based Ray Tracing Channel Modeling Method for THz and Massive MIMO Communications.....	86
<i>Yuanzhe Wang, Hao Cao, Yifan Jin, Zizhe Zhou, Yinghua Wang, Jialing Huang, Yuxiao Li, Jie Huang, Cheng-Xiang Wang</i>	
Asymmetric Channel Characteristics Analysis Based on Wideband Channel Measurement at 39 GHz in Indoor Office Scenario.....	92
<i>Yadong Yang, Pan Tang, Lei Tian, Zhaowei Chang, Jun Men, Jiaxin Lin, Jianhua Zhang</i>	
Propagation Path Loss Models in Forest Scenario at 605 MHz	97
<i>Zhe Xiao, Shu Sun, Zhenyu Liu, Lianming Xu, Wei Huang, Li Wang, Aiguo Fei</i>	
A Novel Estimation Method of Radio Propagation Characteristics Based on Color Images	102
<i>Takahiro Tomie, Satoshi Suyama, Koshiro Kitao, Mitsuki Nakamura</i>	
Aircraft-To-Aircraft Channel Measurements in the VHF/UHF Band: Analysis of the Line-of-Sight and Lake-Reflected Channel Components	107
<i>Miguel A. Bellido-Manganell, Uwe-Carsten Fiebig, Michael Walter</i>	
Fine-Tuning for Propagation Modeling of Different Frequencies with Few Data.....	114
<i>Tatsuya Nagao, Takahiro Hayashi</i>	
On Emulating and Controlling Rician Propagation in Wireless Laboratory.....	119
<i>Abuu B. Kihero, Hüseyin Arslan</i>	
Second-Order Statistics of Non-Stationary Channels: An Off-Body Communications Example	124
<i>Kenan Turbic, Luis M. Correia</i>	
Lateral Controller with Feedforward Compensator for Autonomous Ground Vehicle Tracking Path on Sloped Terrain	129
<i>Liunian Bian, Ling Liu, Yiqing Zhou</i>	
Multi-Period Optimal Control for Mobile Agents Considering State Unpredictability.....	134
<i>Chendi Qu, Jianping He, Jialun Li</i>	
Research on the Selection of Charging Stations by Q-Learning Optimized AHP	139
<i>Tong Wang, Haiyang Zhou, Ying Shi</i>	
Secure Charging Scheduling Strategy for Electric Vehicles Based on Blockchain	144
<i>Qian Liu, Jinkun Huan, Qilie Liu</i>	
Eco-Driving of Fuel Cell Electric Trucks: Optimal Speed Planning Combining Dynamic Programming and Pontryagin's Minimum Principle	151
<i>Alessandro Ferrara, Christoph Hametner</i>	
Electric Vehicle Battery Pack Design for Mitigating Thermal Runaway Propagation	158
<i>Ewan Copsey, Hongjian Sun, Jing Jiang</i>	
Aggressive Driving Detection on Other Vehicles.....	164
<i>Tomohiro Matsuda, Seyhan Ucar, Yongkang Liu, E. Akin Sisbot, Kentaro Oguchi</i>	
An Autonomous Valet Parking Algorithm for Path Planning and Tracking	169
<i>Yutao Shi, Ping Wang, Xinhong Wang</i>	

Decision-Making with Triple Density Awareness for Autonomous Driving Using Deep Reinforcement Learning.....	176
<i>Shuwei Zhang, Yutian Wu, Harutoshi Ogai, Shigeyuki Tateno</i>	
Deep Reinforcement Learning with Intervention Module for Autonomous Driving.....	183
<i>Huicong Chi, Ping Wang, Chao Wang, Xinhong Wang</i>	
UAV-Assisted Image Acquisition: 3D UAV Trajectory Design and Camera Control	189
<i>Xiao-Wei Tang, Shuowen Zhang, Changsheng You, Xin-Lin Huang, Rui Zhang</i>	
A Fast Multi-UAV Cooperative Reconnaissance Method Exploiting Payload Diversity	195
<i>Yinghong Ma, Xunan Li, Yi Jiao, Lin Guo, Suping Ren, Qi Zhang</i>	
Active Fault Tolerant Approach Based on Pressure Optimal Prediction and H ∞ Control.....	201
<i>Zhichao Lyu, Guangqiang Wu, Shang Peng</i>	
Autonomous Navigation for Mobile Robots with Weakly-Supervised Segmentation Network.....	208
<i>Peinan Huang, Jialun Li, Jianping He</i>	
Sample-Efficient Multi-Agent Reinforcement Learning with Demonstrations for Flocking Control	214
<i>Yunbo Qiu, Yuzhu Zhan, Yue Jin, Jian Wang, Xudong Zhang</i>	
Cybersecurity and Capacity Requirement for Data Storage of Autonomous Driving System	221
<i>Insup Kim, Ganggyu Lee, Seyoung Lee, Wonsuk Choi</i>	
Enhancing Vehicle Flow in Random Environments Through Dynamic Allocation of Sensing Resources	228
<i>Saadallah Kassir, Gustavo De Veciana</i>	
Local Perception and BSM Based Misbehavior Detection in Intelligent Transportation System	233
<i>Sohan Gyawali, Takayuki Shimizu, Hongsheng Lu, Michael Clifford, John Kenney, Yi Qian</i>	
Periodic and Event-Triggering for Joint Capacity Maximization and Safe Intersection Crossing	238
<i>Christian Vitale, Panayiotis Kolios, Georgios Ellinas</i>	
Enhancing the Safety of Vulnerable Road Users: Messaging Protocols for V2X Communication.....	245
<i>Silas Lobo, Andreas Festag, Christian Facchi</i>	
Insights into the Design of V2X-Based Maneuver Coordination for Connected Automated Driving.....	252
<i>Rafael Molina-Masegosa, Sergei S. Avedisov, Miguel Sepulcre, Yashar Z. Farid, Javier Gozalvez, Onur Altintas</i>	
Optimal Packet Transmission Rates for Platooning Under Random Access C-V2X	257
<i>Andrés Villamil, Arturo González, Gerhard Fettweis</i>	
PAVEMENT: Passing Vehicle Detection System with Autonomous Incremental Learning Using Camera and Vibration Data	262
<i>Arnan Maipradit, Yumiko Moriyama, Tomoki Okuro, Makoto Yoshida, Nobuya Tachimori, Sinya Akiyama, Hirohiko Suwa, Keiichi Yasumoto</i>	
Federated Meta-Learning for Traffic Steering in O-RAN	269
<i>Hakan Erdol, Xiaoyang Wang, Peizheng Li, Jonathan D. Thomas, Robert Piechocki, George Oikonomou, Rui Inacio, Abdelrahim Ahmad, Keith Briggs, Shipra Kapoor</i>	
Valuation-Aware Federated Learning: An Auction-Based Approach for User Selection.....	276
<i>Pan-Yang Su, Pei-Huan Tsai, Yu-Kang Lin, Hung-Yu Wei</i>	

A Novel Semi-Supervised Learning Framework for Specific Emitter Identification.....	283
<i>Xue Fu, Yu Wang, Yun Lin, Guan Gui, Haris Gacanin, Fumiuki Adachi</i>	
Data-Driven Multi-armed Beam Tracking for Mobile Millimeter-Wave Communication Systems.....	288
<i>Shengdong Zhang, Yuan Ma, Xingjian Zhang, Jian Wang</i>	
Image Generation from Scene Graph with Object Edges.....	293
<i>Chenxing Li, Yiping Duan, Qiyuan Du, Chengkang Pan, Guangyi Liu, Xiaoming Tao</i>	
Real-Time Implementation and Evaluation of SDR-based Deep Joint Source-Channel Coding	300
<i>Maolin Liu, Wei Chen, Jialong Xu, Bo Ai</i>	
Unified Mathematical Framework for Intelligent Transceiver Design.....	305
<i>Feng Li, Gang Dai, Heng Du, Yiqing Zhang, Zhengyang Hu, Guanzhang Liu, Runhua Li, Jiang Xue, Zongben Xu</i>	
Federated Learning for Multi-View Synthesizing in Wireless Virtual Reality Networks.....	310
<i>Yiyu Guo, Zhijin Qin</i>	
A Multi-Task Semantic Communication System for Natural Language Processing	315
<i>Yucheng Sheng, Fang Li, Le Liang, Shi Jin</i>	
Deep Joint Source-Channel Coding for Wireless Image Transmission with Semantic Importance	320
<i>Qizheng Sun, Caili Guo, Yang Yang, Jiujiu Chen, Rui Tang, Chuanhong Liu</i>	
Deep Semantic Coding for Wireless Image Retrieval	327
<i>Ying Wang, Chenhao Qi</i>	
Performance Optimization of Energy Efficient Semantic Communications Over Wireless Networks	332
<i>Zhaohui Yang, Mingzhe Chen, Zhaoyang Zhang, Chongwen Huang, Qianqian Yang</i>	
SemBAT: Physical Layer Black-Box Adversarial Attacks for Deep Learning-Based Semantic Communication Systems	337
<i>Zeju Li, Jinfei Zhou, Guoshun Nan, Zhichun Li, Qimei Cui, Xiaofeng Tao</i>	
A Clustering Algorithm Based on Node Cost and Service Priority for Urban Rail In-Vehicle Ad-Hoc Network	342
<i>Zhaoyang Su, Liu Liu, Shiyuan Cai, Lei Suo, Feng Bao</i>	
A Novel Dynamically Differentiated Access Scheme for Massive Grant-Free NOMA.....	347
<i>Yitian Wang, Meng Zheng, Haibin Yu, Wei Liang</i>	
Clustering-Enabled Prioritized Access Control for Massive Machine-Type Communications in Smart Grid	352
<i>Zhuoyao Shen, Zhenyu Liu, Qiang Ye, Lianming Xu, Li Wang</i>	
Hierarchical Blockchain-Based Resource Access Control Architecture and Scheme for IoT Devices	357
<i>Rong Chai, Wenhong Jiang, Xizheng Yang</i>	
Joint Placement and Passive Beamforming Design for Aerial Reconfigurable Intelligent Surface Enhanced NOMA Systems	362
<i>Zhipeng Kong, Haitao Zhao, Yiyang Ni, Hao Huang, Xixi Zhang</i>	
Efficient Pareto Optimality-Based Task Scheduling for Vehicular Edge Computing.....	367
<i>Johannes B. D. Da Costa, Allan M. De Souza, Denis Rosário, Christoph Sommer, Leandro A. Villas</i>	

Interference Aware Path Planning for Mobile Robots in mmWave Multi Cell Networks	373
<i>Yijing Ren, Vasilis Friderikos</i>	
Trading off SNR and the Number of Observations to Improve the Value of Information in IoT Networks	379
<i>Zijing Wang, Mihai-Alin Badiu, Justin P. Coon</i>	
TreeExplorer: A Coding Algorithm for Rooted Trees with Application to Wireless and Ad Hoc Routing.....	385
<i>Amirmohammad Farzaneh, Mihai-Alin Badiu, Justin P. Coon</i>	
Coverage Performance Analysis of Piggyback Mobile IoT in 5G Vehicular Networks	390
<i>Haiying Zhang, Yang Li, Chenguang He, Weixiao Meng</i>	
Dynamic Resource Allocation for 5G-Enabled Industrial Internet of Things System with Delay Tolerance	395
<i>Heng Wang, Yixuan Bai, Xin Xie</i>	
Location-Dependent Task Bundling for Mobile Crowdsensing	401
<i>Yan Zhen, Yunfei Wang, Peng He, Yaping Cui, Ruyan Wang, Dapeng Wu</i>	
Tandem Spreading Multiple Access with MIMO for Massive Reliable IoT Communications	406
<i>Jiming Dai, Guoyu Ma, Yiyuan Ma, Zhen Xue, Ning Wang, Bo Ai</i>	
Worker Selection Towards High Service Quality in Mobile Crowd Sensing	411
<i>Hong Zou, Hongli Wang, Yaping Cui, Peng He, Dapeng Wu, Ruyan Wang</i>	
An Open-Source GNU Radio Framework for LoRa Physical Layer and Collision Resolution	416
<i>Weixuan Xiao, Gil De Sousa, Nancy El Rachkidy, Alexandre Guitton</i>	
Multi Channel Spectrum Prediction Algorithm Based on GCN and LSTM.....	422
<i>Han Zhang, Qiao Tian, Yu Han</i>	
Optimal Scheduling for Minimizing Peak Age of Information in Uplink Systems	427
<i>Ridong Li, Junwei Lei, Qianying Zhou, Zhengchuan Chen, Min Wang, Zhong Tian</i>	
Sequential State Q-Learning Uplink Resource Allocation in Multi-AP 802.11be Network	434
<i>Yue Liu, Yide Yu, Zhenyu Du, Laurie Cuthbert</i>	
Situation-Aware Hybrid Time Synchronization Based on Multi-Source Timestamping Uncertainty Modeling	439
<i>Haide Wang, Pengyi Jia, Xianbin Wang</i>	
Uplink and Downlink Are Not Orthogonal in LoRaWAN!	444
<i>Rachida Saroui, Alexandre Guitton, Oana Iova, Fabrice Valois</i>	
A Novel Radio Frequency Fingerprint Identification Method Using Incremental Learning	448
<i>Jie Zhou, Yang Peng, Guan Gui, Yun Lin, Bamidele Adebisi, Haris Gacanin, Hikmet Sari</i>	
A Robust Few-Shot SEI Method Using Class-Reconstruction and Adversarial Training	453
<i>Chao Liu, Xue Fu, Yunlu Ge, Yu Wang, Yun Lin, Guan Gui, Hikmet Sari</i>	
An Automatic Pavement Crack Detection System with FocusCrack Dataset	458
<i>Xinyun Yan, Shang Shi, Xiaohu Xu, Zhengran He, Xiaofeng Zhou, Chishe Wang, Zhiyi Lu</i>	

An Effective Radio Frequency Signal Classification Method Based on Multi-Task Learning Mechanism	463
<i>Hongwei Liu, Chengyao Hao, Yang Peng, Yu Wang, Tomoaki Ohtsuki, Guan Gui</i>	
Cross-Person Activity Recognition Method Using Snapshot Ensemble Learning	468
<i>Siyuan Xu, Zhengran He, Wenjuan Shi, Yu Wang, Tomoaki Ohtsuki, Guan Gui</i>	
Data Augmentation Aided Few-Shot Learning for Specific Emitter Identification.....	473
<i>Xixi Zhang, Yu Wang, Yibin Zhang, Yun Lin, Guan Gui, Ohtsuki Tomoaki, Hikmet Sari</i>	
Dynamic Content Caching Based on Actor-Critic Reinforcement Learning for IoT Systems	478
<i>Lifeng Lai, Fu-Chun Zheng, Wanli Wen, Jingjing Luo, Ge Li</i>	
Unsupervised Learning for Energy Efficient Power Allocation in Ultra-Reliable and Low-Latency Communications.....	484
<i>Haitao Zhao, Bangning Xu, Qin Wang, Hao Huang, Xixi Zhang</i>	
Data Augmentation for RFID-Based 3D Human Pose Tracking	489
<i>Ziqi Wang, Chao Yang, Shiwen Mao</i>	
Deep Reinforcement Learning Based Resource Allocation for LoRaWAN	491
<i>Aohan Li</i>	
TinyQMIX: Distributed Access Control for mMTC Via Multi-Agent Reinforcement Learning	495
<i>Tien Thanh Le, Yusheng Ji, John C. S. Lui</i>	
Distributed ADMM for Time-Varying Communication Networks.....	501
<i>Zhuojun Tian, Zhaoyang Zhang, Richeng Jin</i>	
Information Freshness in Random-Access Poisson Network: Average AoI Versus Peak AoI.....	506
<i>Fangming Zhao, Xinghua Sun, Wen Zhan, Xijun Wang, Xiang Chen</i>	
Multi-Relational Pedestrian Trajectory Prediction in Complex Scenes.....	512
<i>Wenshuo Peng, Zhoujuan Cui, Yiping Duan, Xiaoming Tao</i>	
Peak Age of Information Optimization of Slotted Aloha.....	517
<i>Dewei Wu, Wen Zhan, Xinghua Sun, Bingpeng Zhou, Jingjing Liu</i>	
Specific Emitter Identification Based on Radio Frequency Fingerprint Using Multi-Scale Network.....	524
<i>Yibin Zhang, Yang Peng, Bamidele Adebisi, Guan Gui, Haris Gacanin, Hikmet Sari</i>	
A Group Handover Strategy for Massive User Terminals in LEO Satellite Networks.....	529
<i>Lei Yang, Xiumei Yang, Zhiyong Bu</i>	
Channel-Aware Gradient Fair Association for LEO Inter-Satellite Links	535
<i>Xinyue Fan, Jiaojiao Hu, Yaping Cui, Peng He, Dapeng Wu, Ruyan Wang</i>	
Multi-Hop Coflow Routing for LEO Distributed Computation Satellite Networks.....	540
<i>Zhikai Zhang, Shushi Gu, Shumao Li, Yi Yang, Qinyu Zhang</i>	
Quality Monitoring and Diagnostics of GNSS-Enabled Virtual Balise Capturing Using an Integrity Concept.....	545
<i>Si-Qi Wang, Jiang Liu, Bai-Gen Cai, Jian Wang, De-Biao Lu</i>	
Stochastic Geometry Analysis of LEO Constellation Coverage Under Atmospheric Attenuation.....	551
<i>Ruolin Wang, Pinyi Ren, Dongyang Xu, Lei Lu</i>	

An Overview of Channel Models for NGSO Satellites	556
<i>Victor Monzon Baeza, Eva Lagunas, Hayder Al-Hraishawi, Symeon Chatzinotas</i>	
Deep Learning Empowered Secure RIS-Assisted Non-Terrestrial Relay Networks	562
<i>Chong Huang, Gaojie Chen, Yitong Zhou, Haocheng Jia, Pei Xiao, Rahim Tafazolli</i>	
Deep Reinforcement Learning-Based Routing for Space-Terrestrial Networks.....	567
<i>Kai-Chu Tsai, Ting-Jui Yao, Pin-Hao Huang, Cheng-Sen Huang, Zhu Han, Li-Chun Wang</i>	
LiDAR Aided Wireless Networks - LoS Detection and Prediction Based on Static Maps.....	572
<i>Nalin Jayaweera, Dileepa Marasinghe, Nandana Rajatheva, Sami Hakola, Timo Koskela, Oskari Tervo, Juha Karjalainen, Esa Tirola, Jari Hulkko</i>	
Accurate and Efficient Wi-Fi Fingerprinting-Based Indoor Positioning in Large Areas	578
<i>Moises Ramires, Joaquín Torres-Sospedra, Adriano Moreira</i>	
Locating Multiple RFID Tags with Swin Transformer-Based RF Hologram Tensor Filtering.....	584
<i>Xiangyu Wang, Jian Zhang, Shiwen Mao, Senthilkumar Cg Periaswamy, Justin Patton</i>	
Reference Signal Enhancement in 5G for Extended Coverage in Multi-User Scenarios	586
<i>Birendra Ghimire, Ernst Eberlein, Mohammad Alawieh</i>	
Simultaneous Indoor and Outdoor 3D Localization with STAR-RIS-Assisted Millimeter Wave Systems.....	592
<i>Jiguang He, Aymen Fakhreddine, George C. Alexandropoulos</i>	
A Weighted Random Forest Based Positioning Algorithm for 6G Indoor Communications.....	598
<i>Yang Wu, Yinghua Wang, Jie Huang, Cheng-Xiang Wang, Chen Huang</i>	
Enabling Accurate Positioning in NLOS Scenarios by Hybrid Machine Learning with Denoising and Inpainting	604
<i>Longhai Zhao, Qi Xiong, Yunchuan Yang, Pengru Li, Bin Yu, Feifei Sun, Chengjun Sun, Peng Xue</i>	
Joint Localization and Environment Sensing by Harnessing NLOS Components in mmWave Communication Systems	609
<i>Yixuan Huang, Jie Yang, Shuqiang Xia, Shi Jin</i>	
Kernel Extreme Learning Machine-Based Dynamic Interval Construction for Outlier Detection of Telemetry Data	615
<i>Haoran Xie, Yafeng Zhan, Shuqian Ren, Jianhua Lu</i>	
Multipath Ghosts Mitigation for Radar-Based Positioning Systems	622
<i>Xunze Wang, Mu Jia, Xinjie Meng, Tingting Zhang</i>	
Analysis of GEO Satellite Relay Coded Systems.....	628
<i>Jiaming Zhang, Shaohua Wu, Aimin Li, Jian Jiao, Qinyu Zhang</i>	
Energy Efficient Sparse Precoding Design for Satellite Communication System.....	634
<i>Tedros Salih Abdu, Steven Kisieleff, Eva Lagunas, Symeon Chatzinotas, Björn Ottersten</i>	
Exploiting Phase Difference of Arrival of V2X Signals for Pedestrian Positioning.....	640
<i>Suhua Tang, Sadao Obana</i>	
Beam Squint Inspired Multiple Access Technique in Massive MIMO Systems	646
<i>Abuu B. Kihero, Liza Afeef, Hüseyin Arslan</i>	

Interference Suppression for Distributed CPU Deployments in Cell-Free Massive MIMO	652
<i>Akio Ikami, Yu Tsukamoto, Naoki Aihara, Takahide Murakami, Hiroyuki Shinbo</i>	
Maximizing Downlink User Connection Density in NOMA-Aided NB-IoT Networks Through a Graph Matching Approach	658
<i>Shashwat Mishra, Lou Salaün, Jean-Marie Gorce, Chung Shue Chen</i>	
Min-Max Design and Analysis of NOMA with Adaptive Modulation Under BLER Constraints.....	665
<i>Hamad Yahya, Emad Alsusaemad Alsusa, Arafat Al-Dweik</i>	
Pilot Signal Design for Mixed Numerology NOMA Transmission.....	670
<i>Hayato Kanke, Yukitoshi Sanada, Hiroki Matsuda, Mitsuki Takahashi, Ryota Kimura</i>	
An Analysis of the Power Imbalance on the Uplink of Power-Domain NOMA	675
<i>Shaokai Hu, Hao Huang, Guan Gui, Hikmet Sari</i>	
Multi-Agent Power and Resource Allocation for D2D Communications: A Deep Reinforcement Learning Approach	680
<i>Honglin Xiang, Jingyi Peng, Zhen Gao, Lingjie Li, Yang Yang</i>	
Optimal Power Allocation for Spatial Modulation in Cross-Media Communications	685
<i>Tao Zhan, Xia Lei, Yue Xiao, Wei Jiang, You Li</i>	
Power Allocation for Cross-Media Communications with Hybrid UAC/RF Transmission	691
<i>Shiying Li, Yue Xiao, Yulan Gao, Yufeng Han, Mingming Wu</i>	
Closed-Form Approximations of MISO Broadcast System Capacity: A Massive-Antenna Perspective.....	696
<i>Weijia Han, Fengsen Chen, Xiao Ma, Chao Xu</i>	
Edge Caching with Real-Time Guarantees.....	703
<i>Le Yang, Fu-Chun Zheng, Shi Jin</i>	
Rate-Overhead Tradeoff in Beam Training for RRS-Assisted Multi-User Communications.....	709
<i>Shupei Zhang, Yutong Zhang, Boya Di, Hongliang Zhang</i>	
TOSE: A Fast Capacity Estimation Algorithm Based on Spike Approximations	714
<i>Dandan Jiang, Lu Yang, Han Hao, Rui Wang</i>	
LiDAR Aided Wireless Networks - Beam Prediction for 5G	720
<i>Dileepa Marasinghe, Nalin Jayaweera, Nandana Rajatheva, Sami Hakola, Timo Koskela, Oskari Tervo, Juha Karjalainen, Esa Tiitola, Jari Hulkko</i>	
Performance Analysis of OSTBC in NOMA Assisted Downlink System with SIC Errors	727
<i>Rahul Makkar, Venugopalachary Kotha, Divyang Rawal, Vijay Kumar Chakka, Nikhil Sharma</i>	
Slice-Aware Open Radio Access Network Planning and Dimensioning	732
<i>Parisa Foroughi, Philippe Martins, Patrice Nivaggioli, Jean-Louis Rougier</i>	
Stochastic Geometry Analysis for RIS-Assisted Large-Scale Cellular Networks	739
<i>Tianxiong Wang, Gaojie Chen, Mihai-Alin Badiu, Justin P. Coon</i>	
Activation Control of Base Stations Based on Multi-Agent DQN for Heterogeneous Networks	745
<i>Daiki Kato, Yuto Muroki, Nobuhide Nonaka, Kenichi Higuchi</i>	

Autonomous Decentralized User Association Method to Maximize Integrated System Throughput for Multi-Service Coexistence.....	750
<i>Kazuma Matsumoto, Takanori Hara, Yasuaki Yuda, Kenichi Higuchi</i>	
CoMP Based Delta-OMA Scheme for Visible Light Communications	755
<i>Priyashantha Tennakoon, Samikkannu Rajkumar, Dushantha Nalin K. Jayakody, Marko Beko</i>	
Comparisons of Physical Cell ID Detection Methods with Carrier Frequency Offset Compensation for Millimeter-Wave Bands	761
<i>Shun Yoneda, Mamoru Sawahashi, Satoshi Nagata</i>	
Delay-Outage Analysis of OFDMA-Based Task Offloading in Edge Computing Networks	767
<i>Aigerim Ospanova, Behrouz Maham</i>	
Improving MIMO Secrecy Rate Through Efficient Power Allocation	772
<i>S Jyothisna, Lakshmi N. Theagarajan</i>	
Joint Power and Time Allocation in NOMA-SWIPT Enabled Wireless Caching Networks	777
<i>Yuan Ren, Kaiyue Qian, Xuewei Zhang, Fan Jiang, Guangyue Lu</i>	
On Relay User Equipment Activation in Beyond 5G Radio Access Networks	782
<i>Jordi Pérez-Romero, Oriol Sallent, Olga Ruiz</i>	
Resource Allocation Mechanism for Cooperative Multicast in Integrated Satellite-Terrestrial Network.....	788
<i>Jhen-Syuan Wu, Pan-Yang Su, Kuang-Hsun Lin, Hung-Yu Wei</i>	
Transmit Power Control for Indoor Small Cells: A Method Based on Federated Reinforcement Learning	795
<i>Peizheng Li, Hakan Erdol, Keith Briggs, Xiaoyang Wang, Robert Piechocki, Abdelrahim Ahmad, Rui Inacio, Shipra Kapoor, Angela Doufexi, Arjun Parekh</i>	
Wideband Delta-Sigma Radio-over-Fiber Embedding a Pulse-Distortion Model for Beyond 5G	802
<i>Masaaki Tanio, Naoto Ishii, Kazushi Muraoka</i>	
Adaptive and Efficient Key Extraction for Fast and Slow Fading Channels in V2V Communications.....	807
<i>Mahmoud A. Shawky, Muhammad Usman, Muhammad Ali Imran, Qammer H. Abbasi, Shuja Ansari, Ahmad Taha</i>	
Blockage Prediction for Millimeter-Wave Communications Based on People Flow Data.....	813
<i>Hirofumi Nakajo, Takeo Fujii</i>	
Deep Reinforcement Learning for Secure Communication.....	818
<i>Yinchao Yang, Mohammad Shikh-Bahaei</i>	
Fast Channel Estimation for Massive Machine Type Communications1	823
<i>Yonghong Zeng, Sumei Sun, Yuhong Wang, Yugang Ma</i>	
5G Antenna with Hemispherical Coverage for AR Glasses	828
<i>Elena Shepeleva, Gennady Evtyushkin, Artem Nikishov, Anton Lukyanov, Mikhail Makurin</i>	
Carrier Phase Positioning Using 5G NR Signals Based on OFDM System	833
<i>Jianfeng Li, Mengting Liu, Shunshun Shang, Xin Gao, Jianghua Liu</i>	
Smooth Transition of Vehicles' Maximum Speed for Lane Detection Based on Computer Vision.....	838
<i>Hamid Reza Ghaeini, Nils Ole Tippenhauer</i>	

FLEXE: Investigating Federated Learning in Connected Autonomous Vehicle Simulations.....	843
<i>Wellington Lobato, Johannes B. D. Da Costa, Allan M. De Souza, Denis Rosário, Christoph Sommer, Leandro A. Villas</i>	
Low Complexity, Diversity Preserving Hard Decision Decoder for CRC Codes with IoT Applications.....	848
<i>Praveen Sai Bere, Mohammed Zafar Ali Khan</i>	
Measurement-Based Cellular Band Air-to-Ground Channel Modeling for UAVs.....	853
<i>Necati Kagan Erkek, Emre Balci, Berkin Halay, Ubeydullah Erdemir, Ali Görçin, Hakan Ali Çirpan</i>	
On the Energy-Efficiency Maximization for IRS-Assisted MIMOME Wiretap Channels.....	859
<i>Anshu Mukherjee, Vaibhav Kumar, Derrick Wing Kwan Ng, Le-Nam Tran</i>	
Rate Loss Due to Beam Cusping in Grid of Beams	865
<i>Krishan K. Tiwari, Giuseppe Caire</i>	
Re-Evaluation Strategies for 5G NR V2X Communications.....	871
<i>Alejandro Molina-Galan, Baldomero Coll-Perales, Javier Gozalvez</i>	
The Nearest is Not the Fastest: on the Importance of Selecting In/Out Routing Hops Over a Satellite LEO Constellation	876
<i>Alexia Auddino, Anna Barraqué, Oana Hotescu, Jérôme Lacan, José Radzik, Emmanuel Lochin</i>	
Unsupervised Learning-Aided Discrete RIS Configuration Estimator.....	881
<i>Deepa Jagyasi, Arman Shoaiefard, Ibrahim Hemadeh, Patrick Svedman</i>	
A Two-Factor Authentication Scheme for Moving Connected Vehicles	887
<i>Daijiang Suo, Sanjay E. Sarma</i>	
Clustering-Based Pilot Assignment for User-Centric Cell-Free mmWave Massive MIMO Systems	892
<i>Bowen Zhong, Xu Zhu, Eng Gee Lim</i>	
Comparison of V2N STUN/TURN Round Trip Time Performance on a Public 5G Network	897
<i>Billy Kihei, Tyler Davison, Mfon Okpok, Jim Song</i>	
Composite Robot Aided Coexistence of eMBB, URLLC and mMTC in Smart Factory	902
<i>Wenjun Hou, Xu Zhu, Jie Cao, Haiyong Zeng, Yufei Jiang</i>	
DQN-Based Power Control and Offloading Computing for Information Freshness in Multi-UAV-Assisted V2X System.....	908
<i>Baolin Yin, Xinmin Li, Jiaxin Yan, Siyao Zhang, Xiaoqiang Zhang</i>	
Edge Intelligence in Mobile Nodes: Opportunistic Pipeline Via 5G D2D for On-Site Sensing.....	914
<i>Terry N. Guo, Hawzhin Mohammed, Syed R. Hasan</i>	
Error Analysis of an Optimal Rotated M-PSK Constellation in a SOMA-Based Wireless Communication System.....	919
<i>Badri Ramanjaneya Reddy, Soumya P. Dash, Sandeep Joshi</i>	
External Passive Intermodulation Suppression by General Linear Combination Based Robust Adaptive Beamforming	925
<i>Zhongrui Wang, Xu Zhu, Yufei Jiang, Haiyong Zeng, Baiqi Li</i>	

Federated Learning-Based Inter-slice Attack Detection for 5G-V2X Sliced Networks	931
<i>Abdelwahab Boualouache, Thomas Engel</i>	
Identification of Distorted RF Components Via Deep Multi-Task Learning.....	937
<i>Mehmet Ali Aygül, Ebubekir Memişoğlu, Hakan Ali Çirpan, Hüseyin Arslan</i>	
Multicast MMSE-Based Precoded Satellite Systems: User Scheduling and Equivalent Channel Impact.....	942
<i>Eva Lagunas, Vu Nguyen Ha, Trinh Van Chien, Stefano Andrenacci, Nicolò Mazzali, Symeon Chatzinotas</i>	
On the Performance of Dual RIS-Assisted V2I Communication Under Nakagami-m Fading.....	948
<i>Mohd Hamza Naim Shaikh, Khaled Rabie, Xingwang Li, Theodoros Tsiftsis, Galymzhan Nauryzbayev</i>	
Outage Probability of Indoor-Outdoor C-NOMA Enabled UAV-Relay Over $K\mu$ Fading	953
<i>Adel Alqahtani, Emad Alsusa, Arafat Al-Dweik</i>	
Performance Analysis of V2I Zone Activation and Scalability for C-V2X Transactional Services	959
<i>Mahdi Zaman, Md Saifuddin, Mahdi Razzaghpoor, Yaser P. Fallah</i>	
Performance Comparison of Error-Control Schemes in Collaborative Multiple-Input Multiple-Output Systems.....	964
<i>Hokuto Taromaru, Hidekazu Murata</i>	
Performance of RIS-Empowered NOMA-based D2D Communication Under Nakagami-m Fading	969
<i>Mohd Hamza Naim Shaikh, Sultangali Arzykulov, Abdulkadir Celik, Ahmed M. Eltawil, G. Nauryzbayev</i>	
Research on Fairness Algorithm of User Allocation Problem in MOBA Edge Gaming	974
<i>Yaping Dang, Haoze Cheng, Fukang Li, Shouyi Yang</i>	
Social-Assisted Hypergraph Based Subchannel Assignment for UAV Cellular Networks	979
<i>Kanhu Charan Gouda, Sangya Shrivastava, Rahul Thakur</i>	
The Impact of Distributed Data Preprocessing on Automotive Data Streams.....	986
<i>Amal Tawakuli, Thomas Engel</i>	
Towards Quantum Annealing for Multi-User NOMA-based Networks	989
<i>Eldar Gabdulsattarov, Khaled Rabie, Xingwang Li, Galymzhan Nauryzbayev</i>	
Channel Estimation for Reconfigurable Intelligent Surface Assisted Wireless Communications Via Structured Sparse Bayesian Learning.....	995
<i>Ning Jin, Fanyi Shu, Gang Yang, Ying-Chang Liang, Xiaodong Chen</i>	
Imperfect CSI Based Design for Intelligent Reflecting Surface Assisted MISO Systems	1001
<i>Hongchao Chen, Simeng Xu, Jiajia Wang, Meifang Jing, Yuhuan Hu, Yi Zhao, Xiaohui Yang</i>	
Indoor Enhancement of mmWave Based on Reconfigurable Intelligent Surface: IRS Or DF Relay Connection?.....	1006
<i>Hao Feng, Yuping Zhao</i>	
On the Ergodic Capacity of Reconfigurable Intelligent Surface (RIS)-Aided MIMO Channels.....	1012
<i>Chongjun Ouyang, Hao Xu, Xujie Zang, Hongwen Yang</i>	
Parameter Estimation and Beam Tracking in Integrated Sensing and Communication System.....	1017
<i>Ruotong Xu, Chenhao Qi, Kangjian Chen</i>	

Approximate Noise-Whitening in MIMO Detection Via Banded-Inverse Extension	1022
<i>Sha Hu, Hao Wang</i>	
Bilinear Approximate Message Passing Based Off-Grid Channel Estimation for Multi-user Millimeter-Wave MIMO System.....	1029
<i>Yang Li, Shuyi Chen, Weixiao Meng</i>	
Distributed Optimization of Uplink Cell-Free Massive MIMO Networks.....	1035
<i>Rui Wang, Yi Jiang</i>	
Low Complexity IA Design for the Multi-Cell MIMO Downlink Cellular Network.....	1040
<i>Weihua Liu, Junchuan Fan, Yuanyuan Zhang, Zeqi Yu, Yong Cui</i>	
Uplink MIMO Precoding Under Random Phase Imperfections.....	1046
<i>Hongxiang Xie, Hao Wang, Dževdan Kapetanovic</i>	
Beam Squint Effect in Multi-Beam mmWave Massive MIMO Systems	1051
<i>Liza Aseef, Hüseyin Arslan</i>	
Deep Learning-Aided Delay-Tolerant Zero-Forcing Precoding in Cell-Free Massive MIMO	1056
<i>Wei Jiang, Hans D. Schotten</i>	
Evaluation of Uplink Capacity of User-Cluster-Centric Cell-Free Massive MIMO	1061
<i>Ryo Takahashi, Hidenori Matsuo, Sijie Xia, Qiang Chen, Fumiyuki Adachi</i>	
Joint AP On/Off and User-Centric Clustering for Energy-Efficient Cell-Free Massive MIMO Systems.....	1066
<i>Masaaki Ito, Issei Kanno, Yoshiaki Amano, Yoji Kishi, Wei-Yu Chen, Thomas Choi, Andreas F. Molisch</i>	
Layer-1 Mobility in Distributed MIMO with Non-Coherent Joint Transmission.....	1071
<i>Peng Lin, Omer Haliloglu</i>	
System Design and Performance for Antenna Reservation in Massive MIMO.....	1076
<i>Sidra Muneer, Jesus Rodriguez Sanchez, Liesbet Van Der Perre, Ove Edfors, Henrik Sjöland, Liang Liu</i>	
Towards Implementation of Neural Networks for Non-Coherent Detection MIMO Systems	1081
<i>Alexis Falempin, Julien Schmitt, Trung Dung Nguyen, Jean-Baptiste Doré</i>	
URLLC with Coded Massive MIMO Via Random Linear Codes and GRAND	1086
<i>Sahar Allahkaram, Francisco A. Monteiro, Ioannis Chatzigeorgiou</i>	
Autoencoding Graph Neural Networks for Scalable Transceiver Design	1091
<i>Junbeom Kim, Hoon Lee, Seok-Hwan Park</i>	
On the Performance of Quantized Neural Networks Based Digital Predistortion for PA Linearization in OFDM Systems.....	1093
<i>Alexis Falempin, Johan Laurent, Jean-Baptiste Doré, Rafik Zayani, Emilio Calvanese Strinati</i>	
Exploiting OTFS Frame Structure for PAPR Reduction	1098
<i>Ahmet Sacid Sümer, Talha Yilmaz, Ebubekir Memisoglu, Hüseyin Arslan</i>	
Learning Based Delay-Doppler Channel Estimation with Interleaved Pilots in OTFS.....	1103
<i>Sandesh Rao Mattu, A. Chockalingam</i>	

OTFS Waveform with Phase Noise in sub-THz	1109
<i>Yaya Bello, Samuel Barnola, David Demmer, Jean-Baptiste Doré</i>	
A Beam Scheduling Scheme Based on Real-Time Traffic Distribution in 5G Millimeter-Wave Networks	1114
<i>Guangcan Yan, Wei Li, Yi Zhao, Yupu Liu, Huiyang Wang, Jiajia Wang</i>	
A Low-Complexity DNN-Based DoA Estimation Method for EHF and THF Cell-Free Massive MIMO.....	1119
<i>Seyyed Saleh Hosseini, Benoit Champagne, Xiao-Wen Chang</i>	
Adaptive DNN-Based CSI Feedback with Quantization for FDD Massive MIMO Systems.....	1126
<i>Junjie Gao, Mondher Bouazizi, Tomoaki Ohtsuki, Guan Gui</i>	
An Experimental Study on Multibeam Digital Predistorter with Intercarrier Interference Suppression	1131
<i>Tomoya Ota, Alexander N. Lozhkin, Ken Tamanoi, Hiroyoshi Ishikawa, Takurou Nishikawa</i>	
Band-Oriented Predistorter for Fully Connected Hybrid Antenna Arrays.....	1137
<i>Alexander N. Lozhkin, Tomoya Ota, Ken Tamanoi, Hiroyoshi Ishikawa, Takurou Nishikawa</i>	
Codebook Design of All Index Modulation with Deep Reinforcement Learning	1143
<i>Ya-Yi Chuang, Jen-Ming Wu</i>	
Delay-Doppler Frequency Domain-Aided Superimposing Pilot OTFS Channel Estimation Based on Deep Learning	1148
<i>Chaoyi Yang, Junlong Wang, Zhenni Pan, Shigeru Shimamoto</i>	
Design and Analysis of Probabilistic Shaping for Polar Coded Communication Systems with Finite Blocklength	1154
<i>Hongjie He, Bin Xia, Yinghong Guo, Manlin Wang</i>	
Design of Robust LoS-MIMO Transmission in HAPS Feeder Link	1160
<i>Motoshi Tawada, Yoshichika Ohta, Atsushi Nagate</i>	
Enhanced Informed Dynamic BP Decoding Scheduling Strategies for 5G NR LDPC Codes	1167
<i>Tofar C.-Y. Chang, I-Hsiang Lee, Pin-Han Wang, Jian-Jia Weng, Yu T. Su</i>	
Federated Deep Reinforcement Learning for THz-Beam Search with Limited CSI	1173
<i>Po-Chun Hsu, Li-Hsiang Shen, Chun-Hung Liu, Kai-Ten Feng</i>	
HARQ Using Hierarchical Tree-Structured Random Access Identifiers with Random Retransmission Time Back-Off in NOMA-Based Random Access.....	1179
<i>Katsuya Yanai, Takanori Hara, Nobuhide Nonaka, Kenichi Higuchi</i>	
Highly Efficient OFDM Applying Symbol-Edges Truncating Transmission Technique.....	1185
<i>Yuu Ichikawa, Keiichi Mizutani, Hiroshi Harada</i>	
Inter-Access Point Coordinated User and Beam Selection for mmWave Distributed MIMO Systems.....	1190
<i>Jun Shikida, Kazushi Muraoka, Toshiki Takeuchi, Naoto Ishii</i>	
Optimal Multicast Scheduling for Switched Beamforming Systems Leveraging Reflections	1195
<i>Chao Chen, Ziye Li, Seung Jun Baek, Rui Yin, Xiaohan Yu, Chuanhuang Li</i>	
PAPR Reduction Using Null Space in MIMO Channel Based on Signal Processing at Base Station for Downlink AF-Based Relaying MIMO-OFDM Signals	1200
<i>Asuka Kakehashi, Nobuhide Nonaka, Kenichi Higuchi</i>	

Physical Layer Security Performance Analysis of RIS-Assisted Wireless Communication Systems	1206
<i>Suneel Yadav, Ashutosh Kumar Yadav, Devendra Singh Gurjary, Anshul Pandeyz</i>	
Repetition-Based NOMA-HARQ with Adaptive Termination for URLLC	1213
<i>Go Takita, Takanori Hara, Yasuaki Yuda, Kenichi Higuchi</i>	
Spectrally Precoded OTFS Modulation.....	1218
<i>Wei-Chang Chen, Chang-Hung Lu, Char-Dir Chung</i>	
Structured Phase Retrieval-Aided Channel Estimation for Millimeter-Wave/Sub-Terahertz MIMO Systems.....	1225
<i>Kai-Hui Liu, Xiangning Li, Haiyang Zhao, Guoping Fan</i>	
Virtualized Terminal Utilizing Terahertz Band Radio Waves for Beyond 5G: Timing Synchronization Scheme of Relay Device	1230
<i>Yoshio Kunisawa, Yoshiaki Amano, Takahiro Hayashi</i>	
A Joint Design of Coherent Transmission and Coherent Receiving in 5G-Advanced Networks	1235
<i>Guohua Zhou, Ye Wang, Hanqing Wang, Jian Yu</i>	
An Improved PAPR Reduction Method Based on Imperialist Competition Algorithm for OTFS System	1240
<i>Xiangnan Xu, Ping Yang, Bo Zhang, Yue Xiao, Shaoqian Li</i>	
Blind Signal Recognition Method of STBC Based on Multi-Channel Convolutional Neural Network.....	1246
<i>Yuting Guy, Yu Wang, Bamidele Adebisiz, Guan Guiy, Haris Gacaniny, Hikmet Sariy</i>	
Massive SIMO System Based on Energy Difference Detection in Rician Channels	1251
<i>Huan Meng, Lin Zheng, Chao Yang, Jianmei Chen, Xiaofang Deng, Junyi Wang</i>	
Noise-Assisted List Decoding for 5G LDPC Codes.....	1257
<i>Jian Gao, Hao Wang, Kuangda Tian</i>	
NOMA Based Terahertz Communication for High Altitude Platform System.....	1262
<i>Mao Wang, Wataru Tachikawa, Kazutoshi Yoshii, Shigeru Shimamoto</i>	
User Traffic Based Adaptive Beam Codebook Management for mm-Wave Communication.....	1267
<i>Qing Zhu, Meifang Jing, Hui Chen, Xiangli Lin, Weili Cui, Jinjing Huang, Jiajia Wang</i>	
When the CSI from Alice to Bob is Unavailable: What Can Eve Do to Eliminate the Artificial Noise?.....	1273
<i>Hong Niu, Yue Xiao, Xia Lei, Gang Wang, Ming Xiao, Shahid Mumtaz</i>	
Control of Fractional Delay Effect for SC Transmission in Beyond 5G Networks	1278
<i>Talha Yilmaz, Armed Tusha, Hüseyin Arslan</i>	
Forney Observation Models for Faster-Than-Nyquist Signaling on Nonlinear Satellite Links.....	1283
<i>Philipp Mohr, Rainer Grünheid, Gerhard Bauch</i>	
Hardware Implementation of 60 GHz D&F Relay Node for Use in 5G Co-Operative Networks.....	1289
<i>Randy Verdecia-Peña, José I. Alonso</i>	
Secrecy Performance of RIS-Aided Wireless Systems in the Presence of Mobile Interferers and Eavesdropper Mobility	1295
<i>Aman Sikri, Aashish Mathur</i>	

Deep Reinforcement Learning Based Rate Adaptation for Wi-Fi Networks	1300
<i>Wenhai Lin, Ziyang Guo, Peng Liu, Mingjun Du, Xinghua Sun, Xun Yang</i>	
Deep Reinforcement Learning Based Relay Selection for SWIPT Systems with Data Buffer and Energy Storage	1305
<i>Jianping Quan, Peng Xu, Chenghong Luo, Chong Huang, Gaojie Chen</i>	
DRL-Based Underlay Dynamic Spectrum Access for Cognitive Satellite Networks Under Spectrum Sensing Errors	1310
<i>Boren Yu, Shuying Zhang, Zuyao Ni, Meilin Gao</i>	
Energy-Efficient Symbiotic Radio Using Generalized Benders Decomposition.....	1315
<i>Haoran Peng, Cheng-Yuan Ho, Yen-Ting Lin, Li-Chun Wang</i>	
Kriging-Based Trust Nodes Aided REM Construction Under Threatening Environment.....	1320
<i>Ying Gao, Takeo Fujii</i>	
Physical Layer Security of Overlay Cognitive NOMA Systems with Control-Jamming	1327
<i>Kajal Yadav, Prabhat K. Upadhyay, Janne Lehtomäki, Jules M. Moualeu</i>	
Fast Spectrum Sharing in Vehicular Networks: A Meta Reinforcement Learning Approach	1334
<i>Kai Huang, Zezhou Luo, Le Liang, Shi Jin</i>	
Heterogeneous Mean-Field Multi-Agent Reinforcement Learning for Communication Routing Selection in SAGI-Net.....	1339
<i>Hengxi Zhang, Huaze Tang, Yuanquan Hu, Xiaoli Wei, Chenye Wu, Wenbo Ding, Xiao-Ping Zhang</i>	
Smart Contract-Based Distributed Spectrum Sensing for Blockchain-enabled Spectrum Sharing	1344
<i>Xiaoyue Zhang, Youping Zhao</i>	
The Optimized Sparse Fourier Transform for Band-Limited Signal	1349
<i>Longhui Wang, Qixiang Wang, Jian Wang, Xudong Zhang</i>	
A Fully-Distributed Radio Source Detector for Fast Fading Rayleigh Channels	1356
<i>Juan Augusto Maya, Andrea M. Tonello</i>	
Adaptive Resource Allocation for Satellite Illumination Pattern Design	1363
<i>Lin Chen, Eva Lagunas, Lei Lei, Symeon Chatzinotas, Björn Ottersten</i>	
Deep Learning-Based Dynamic Spectrum Access for Coexistence of Aeronautical Communication Systems.....	1369
<i>David Kopyto, Sebastian Lindner, Leonard Schulz, Daniel Stolpmann, Gerhard Bauch, Andreas Timm-Giel</i>	
QoE-Oriented Resource Allocation Design Coping with Time-Varying Demands in Wireless Communication Networks.....	1374
<i>Teweldebrhan Mezgebo Kebedew, Vu Nguyen Ha, Eva Lagunas, Joel Grotz, Symeon Chatzinotas</i>	
A Smart Contract Based Spectrum Trading System for Elastic Virtual Optical Networks.....	1379
<i>Qiwei Hu, Tao Jiang</i>	
A Secure Turbo Codes Design on Physical Layer Security Based on Interleaving and Puncturing.....	1384
<i>Ahmed Aladi, Emad Alsusa</i>	

Cooperative Spectrum Sensing Algorithm for UAV Based on Deep Learning	1391
<i>Wei Wang, Juncheng Peng</i>	
Minimum Target Coverage for Air Quality Monitoring Using Bus Routes.....	1396
<i>Bodhayan Roy, Vorapong Suppakitpaisarn, Bubai Manna, Cam Ly Nguyen</i>	
NOMA-Based Full-Duplex UAV Network with K-Means Clustering for Disaster Scenarios	1403
<i>Thi My Chinh Chu, Hans-Jürgen Zepernick, Trung Q. Duong</i>	
Outage Performance with Deep Learning Analysis for UAV-Borne IRS Relaying NOMA Systems with Hardware Impairments	1410
<i>Chandan Kumar Singh, Prabhat Kumar Upadhyay, Janne Lehtomäki, Markku Juntti</i>	
PSO-Based Joint UAV Positioning and Hybrid Precoding in UAV-Assisted Massive MIMO Systems.....	1417
<i>Mobeen Mahmood, Asil Koc, Tho Le-Ngoc</i>	
PSO-OLSR: A Particle Swarm Optimization Based Proactive Routing Protocol for UAV Networks	1423
<i>Fatima Zahra Rabahi, Saadi Boudjit, Nour El Houda Bahloul, Soufiane Djahel, Chemseddine Bemoussat</i>	
FedDD: Federated Double Distillation in IoV.....	1430
<i>Peng Yang, Mengjiao Yan, Yaping Cui, Peng He, Dapeng Wu, Ruyan Wang, Luo Chen</i>	
Impacts of Obstacles and Jittering on Coverage and Throughput Performance of Large-Scale UAV Networks	1435
<i>Bonan Yin, Chenxi Liu, Mugen Peng</i>	
Spatial-Temporal Correlation Multi-Agent Caching Policy in IoV	1441
<i>Yaping Cui, Li Cao, Peng He, Ruyan Wang, Dapeng Wu</i>	
UAV-Based Intelligent Reflecting Surface Transmission: Weighted Sum Rate Maximization of Wireless Network	1446
<i>Wen-Jing Wang, Ziyang Du, Sha Li, Guangyue Lu, Long Chen, Nan Qi</i>	
Cognitive Risk Control for Anti-Eavesdropping in Connected and Autonomous Vehicles Network	1452
<i>Yu Yao, Junhui Zhao, Zeqing Li, Xu Cheng, Lenan Wu, Xuan Li</i>	
Cost Efficient UAV Deployment and Resource Allocation for UAV-Assisted Networks.....	1459
<i>Lin He, Rong Chai, Ruijin Sun</i>	
Crowdsourcing and Monetization as a Strategy to Reduce Vehicular Greenhouse Gases Emissions	1464
<i>Wilson Melo, Paulo Nascimento, Kauã Gomes, Malkai Oliveira, Raphael Machado</i>	
Energy Efficient 3-D Placement of Capacity Constrained UAV Network for Guaranteed QoS.....	1469
<i>Kirtan Gopal Panda, Debarati Sen</i>	
Evaluating Participation in Cooperative Maneuvers Among Connected and Automated Vehicles	1475
<i>Bernhard Häfner, Georg A. Schmitt, Jörg Ott</i>	
Multi-Agent Reinforcement Learning Aided Resources Allocation Method in Vehicular Networks	1481
<i>Yuxin Ji, Xixi Zhang, Yu Wang, Haris Gacanin, Hikmet Sari, Fumiyuki Adachi, Guan Gui</i>	
Optimal Index Code Design for IC-NOMA Transmission in VANETs.....	1486
<i>Sreelakshmi Pazhoor, Jesy Pachat, Nujoom Sageer Karat, Vinay Joseph, P. P. Deepthi, B. Sundar Rajan</i>	

Study on Optical Fiber Communication in Vehicle	1493
<i>Toshihito Tatsuoka, Zhenni Pan, Shigeru Shimamoto</i>	
UAV Path Planning in Urban Environments with Dynamic Risk-Map Generation by Vehicle and Pedestrian Perception	1498
<i>Yuuri Iwashina, Masashi Kunibe, Sho Kato, Hiroshi Shigeno</i>	
Vehicle Localization Utilizing a Novel Hybrid TDOA-Based Estimation	1503
<i>Oscar Owen, Zhenni Pan, Shigeru Shimamoto</i>	
Vehicle Tracking Under Vehicle-Road Collaboration Using Improved Particle Flow Filtering Algorithm	1509
<i>Chenxi He, Ping Wang, Xinhong Wang</i>	
Mobility-Aware Computation Offloading for Cloud-Assisted Mobile Edge Computing in Vehicular Networks	1515
<i>Qilie Liu, Rui Luo, Qian Liu</i>	
Radio Frequency Fingerprints Extraction for LTE-V2X: A Channel Estimation Based Methodology	1522
<i>Tianshu Chen, Hong Shen, Aiqun Hu, Weihang He, Jie Xu, Hongxing Hu</i>	
Sparse Measurement Data Driven Air-To-Ground Path Loss Prediction Over Vegetation Area	1528
<i>Hanpeng Li, Xiaomin Chen, Kai Mao, Fuqiao Duan, Yanheng Qiu, Qiuming Zhu, Boyu Hua, Farman Ali</i>	
Trust-Based Intermediary Vehicle Election Provisioning with Resilience Under Information Asymmetry	1533
<i>Guifu Zhang, Yanfei Lu, Xiaoxuan Wang, Xuehan Li</i>	
Experimental Characterization of Delay and Age of Information in DSRC V2V	1538
<i>David Jiménez-Soria, Beatriz Soret, M. Carmen Aguayo-Torres</i>	
NOMA-Dependent Low-Powered Retransmission in Sensing-based SPS for Cellular-V2X Mode 4	1545
<i>Takeshi Hirai, Naoki Wakamiya, Tutomu Murase</i>	
On Alleviating Cell Overload in Vehicular Scenarios	1552
<i>Martín Trullenque Ortiz, Oriol Sallent, Daniel Camps-Mur, Josep Escrig, Carlos Herranz-Claveras, Jad Nasreddine, Jordi Pérez-Romero</i>	
Resource Scheduling Under Knock-Out Congestion Control in New Radio (NR) Sidelink Mode 2	1559
<i>Kyeongnam Park, Hyogon Kim</i>	
Network Resource Optimization for Multi-View Streaming Mobile Augmented Reality	1564
<i>Zhaohui Huang, Vasilis Friderikos</i>	
QoS Prediction-Based Radio Resource Management	1571
<i>José Perdomo, M. A. Gutierrez-Estevez, Apostolos Kousaridas, Chan Zhou, Jose F. Monserrat</i>	
STARS Enabled Integrated Sensing and Communications: A CRB Optimization Perspective	1577
<i>Zhaolin Wang, Xidong Mu, Yuanwei Liu</i>	
A Novel Subjective Perception Quality Evaluation Method of Video Based on EEG Signals	1583
<i>Bingrui Geng, Yujing Zhang, Zanlin Dai</i>	
Design of Quality-Of-Experience Criteria for Resource Allocation Toward 6G Wireless Networks: A Review and New Directions	1588
<i>Mingming Wu, Yue Xiao, Yulan Gao, Xianfu Lei</i>	

Measuring Human Perception of Audiovisual Errors Using EEG.....	1595
<i>Dingcheng Gao, Bingrui Geng, Yiping Duan, Xiaoming Tao, Chengkang Pan</i>	
Random Access Modelling and Performance Analysis for the 802.11ax UORA Mechanism in Multiple BSs.....	1601
<i>Jinyue Yang, Rong He, Xuming Fang, Long Yan, Honghao Ju</i>	
A Novel Malware Traffic Classification Method Based on Differentiable Architecture Search	1607
<i>Yunxiao Shi, Xixi Zhang, Zhengran He, Jie Yang</i>	
Authorized and Rogue LTE Terminal Identification Using Wavelet Coefficient Graph with Auto- Encoder.....	1612
<i>Zhenyi Wu, Lining Peng, Junqing Zhang, Ming Liu, Hua Fu, Aiqun Hu</i>	
Few-Shot Malware Traffic Classification Method Using Network Traffic and Meta Transfer Learning	1617
<i>Hanyi Guo, Xixi Zhang, Yu Wang, Bamidele Adebisi, Haris Gacanin, Guan Gui</i>	
Physical Layer Encryption Scheme Based on Dynamic Constellation Rotation.....	1622
<i>Yujie Hou, Guyue Li, Shuping Dang, Lei Hu, Aiqun Hu</i>	
TD3-Based Joint UAV Trajectory and Power Optimization in UAV-Assisted D2D Secure Communication Networks.....	1627
<i>Ziyi Zhang, Jie Tian, Di Wang, Jingping Qiao, Tiantian Li</i>	
A Dynamic Spatiotemporal Prediction Method for Urban Network Traffic.....	1632
<i>Zhenyu Li, Yuchuan Fu, Pincan Zhao, Chang Li</i>	
Analysis on Age of Information in Partial Computing Edge Computing Systems with Multi Source- Destination Pairs.....	1637
<i>Haozhe Li, Guangwei Gong, Jiao Zhang, Haitao Zhao, Li Zhou, Jibo Wei</i>	
Broadcast Collision and Overhead Tradeoff for Enhanced Broadcast Service in IEEE 802.11bc	1644
<i>Yingying Tian, Honghao Ju, Xuming Fang, Yan Long, Rong He</i>	
Delay Evaluation for Cellular-Connected Drones: Experiments and Analysis.....	1649
<i>Jingjing Luo, Peng Zhao, Fu-Chun Zheng, Lingyu Li</i>	
Application-Level Data Rate Adaptation in Wi-Fi Networks Using Deep Reinforcement Learning	1654
<i>Ibrahim Sammour, Gerard Chalhoub</i>	
IEEE 802.1 TSN Time Synchronization Over Wi-Fi and 5G Mobile Networks	1661
<i>Minh-Thuyen Thi, Sosthène Guédon, Siwar Ben Hadj Said, Michael Boc, David Miras, Jean-Baptiste Dore, Marc Laugeois, Xavier Popon, Benoit Misopein</i>	
Message Source Identification in Controller Area Network by Utilizing Diagnostic Communications and an Intrusion Detection System.....	1668
<i>Masaru Matsabayashi, Takuma Koyama, Masashi Tanaka, Yasushi Okano, Asami Miyajima</i>	
Optimum Jamming in User-Centric Cell-Free Networks	1674
<i>Ahmad Halimi Razlighi, S. Mohammad Razavizadeh, Behrouz Maham</i>	
Physical-Layer-Security-based OFDM Transmission with Phase Error Insertion.....	1679
<i>Ahmed Aladi, Emad Alsusa</i>	
Throughput-Fairness Tradeoff MAC for Multiuser IBFD (TFMAC).....	1686
<i>Yazeed Alkhrijah, Joseph Camp, Dinesh Rajan</i>	

Toward a Multi-Layer Intrusion Response System for Connected Vehicles	1692
<i>Jan Lauinger, Mohammad Hamad, Sebastian Steinhorst</i>	
Virtual MIMO Based Self-Interference Utilization for a Full-Duplex AF Relay OFDM System.....	1694
<i>Qingyu Cao, Xu Zhu, Yufei Jiang</i>	
3-D Placement Strategy for VLC Enabled UAV Network with Guaranteed QoS	1700
<i>Ankana Das, Kirtan Gopal Panda, Murala Laxmi Naresh Kumar, Debarati Sen, Sandip Chakraborty</i>	
Cloud Game Computing Offload Based on Multi-Agent Reinforcement Learning	1706
<i>Kaicong Tian, Yitong Liu, Hongwen Yang, Qingbi Zheng</i>	
Decentralized Smart Grid System:A Survey on Machine Learning-Based Intrusion Detection Approaches.....	1713
<i>Makhmoor Fiza Murk, Noman Zahid, Ali Hassan Sodhro, Bilal Zahid</i>	
Deep Reinforcement Learning for Over-The-Air Federated Learning in SWIPT-Enabled IoT Networks	1718
<i>Xinran Zhang, Hui Tian, Wanli Ni, Mengying Sun</i>	
Digital Twins for Smart Cities: Case Study and Visualisation Via Mixed Reality	1723
<i>William Piper, Hongjian Sun, Jing Jiang</i>	
Model Prediction Control Path Tracking Algorithm Based on Adaptive Stanley.....	1728
<i>Qiang Hua, Baoshan Peng, Xiaolin Mou, Ouwen Zhang, Tao He, Li Xia, Heyan Li</i>	
Research on Energy Consumption Model of Campus Micro-Cycle Bus System.....	1733
<i>Ouwen Zhang, Jinrong Tan, Bian Gong, Qiang Hua, Qi Wang, Heyan Li</i>	
Temporal Graph Based Overcommitted Routing for Deterministic Networking	1738
<i>Fei Liu, Hongyan Li, Keyi Shi</i>	
Temporal Graph Based Overcommitted Routing for Deterministic Networking	1744
<i>Fei Liu, Hongyan Li, Keyi Shi</i>	
An Effective Traffic Management Approach for Decentralized BSNs.....	1750
<i>Noman Zahid, Ahmed Alkhayyat, Muhammad Ismail, Ali Hassan Sodhro</i>	
CNN-Based Hybrid Precoding Design with Geometric Mean Decomposition.....	1755
<i>Mahmoud A. Abugubba, Nagia M. Gaboua, Taissir Y. Elganimi, Khaled M. Rabie</i>	
Development of a Mixed Reality System Based on IoT and Augmented Reality	1761
<i>Dhia Jenzeri, Abdellah Chehri, Gwanggil Jeon</i>	
FedCLS:A Federated Learning Client Selection Algorithm Based on Cluster Label Information	1766
<i>Changsong Li, Hao Wu</i>	
IRS-Assisted Beamspace Millimeter-wave Massive MIMO with Interference-Aware Beam Selection	1771
<i>Taissir Y. Elganimi, Retaj I. Elmajdub, Galymzhan Nauryzbayev, Khaled M. Rabie</i>	
Metamorphic Testing for Edge Real-Time Face Recognition and Intrusion Detection Solution.....	1777
<i>Mourad Raif, El Mehdi Ouafiq, Abdessamad El Rharras, Abdellah Chehri, Rachid Saadane</i>	
Real-Time Emotion Recognition Using Deep Learning Algorithms.....	1782
<i>Abderrahmane El Mettiti, Mohammed Oumsis, Abdellah Chehri, Rachid Saadane</i>	

Reinforcement Learning Based Multi-Connectivity Resource Allocation in Factory Automation Systems.....	1787
<i>Mohammad Farzanullah, Hung V. Vu, Tho Le-Ngoc</i>	
A Comparative Measurement Study of Commercial WLAN and 5G LAN Systems	1792
<i>Vanlin Sathya, Lyutianyang Zhang, Mehmet Yavuz</i>	
Age of Information Optimization in UAV-Enabled Intelligent Transportation System Via Deep Reinforcement Learning.....	1799
<i>Xinmin Li, Jiahui Li, Baolin Yin, Jiaxin Yan, Yuan Fang</i>	
LSTM-Based RIS Phase Shift Control for V2X Communication Systems.....	1804
<i>Hyunsoo Kim, Yongsuk Byun, Byonghyo Shim</i>	
Multipath Ghost Target Identification for Automotive MIMO Radar	1809
<i>Yunda Li, Xiaolei Shang</i>	
On the Reliability Analysis of C-V2X Mode 4 for Next Generation Connected Vehicle Applications.....	1814
<i>Aslihan Reyhanoglu, Emrah Kar, Feyzi Ege Kumec, Yahya Sukur Can Kara, Sercan Karaagac, Bugra Turan, Sinem Coleri</i>	
Research, Implementation and Practice of Congestion Control Mechanism in LTE-V2X.....	1819
<i>Jinling Hu, Li Zhao, Yuan Feng, Yinghao Liu, Mingjun Gao</i>	
Sensing-Assisted Robust Vehicle-to-Vehicle Communication with Multiple Antennas.....	1824
<i>Yanjie Pu, Zhiying Song, Fuxi Wen, Shenghua Zhou</i>	
The Enhanced Sidelink Resource Reservation Mechanism of NR-V2X.....	1829
<i>Li Zhao, Jinling Hu, Rui Zhao, Yan Shi</i>	
Detection of Constrained Unknown Beacon Signals of Terrestrial Transmitters and LEO Satellites with Application to Navigation.....	1834
<i>Mohammad Neinavaie, Joe Khalife, Zaher M. Kassas</i>	
Embrace Imperfect Datasets: New Time Representation for RFF Identification	1839
<i>Xinyu Qi, Aiqun Hu</i>	
ESP32-Driven Physical Layer Key Generation: A Low-cost, Integrated, and Portable Implementation.....	1845
<i>Guangchuan Cao, Yan Zhang, Zijie Ji, Mengyi Zhang, Zunwen He</i>	
Green Jamming Power Control for Secure OFDMA in Industrial IoT	1850
<i>Bhawna Ahuja, Ganesh Prasady, Deepak Mishraz</i>	
Optimal AI-Enabled Secured NOMA Among Untrusted Users.....	1855
<i>Sapna Thapar, Ganesh Prasad, Deepak Mishra, Ravikant Saini</i>	
Secret Key Rate Upper-Bound for Reconfigurable Intelligent Surface-combined System Under Spoofing	1860
<i>Zhuangkun Wei, Liang Wang, Weisi Guo</i>	
Real-Time Optimal Resource Allocation in Multiuser Mobile Edge Computing in Digital Twin Applications with Deep Reinforcement Learning : (Invited Paper)	1866
<i>Yijiu Li, James Adu Ansere, Octavia A. Dobre, Trung Q. Duong</i>	

Robust Q-Learning for Fast and Optimal Flying Base Station Placement Aided by Digital Twin for Emergency Use..... <i>Terry N. Guo</i>	1871
Cooperative Positioning with the Aid of Reconfigurable Intelligent Surfaces and Zero Access Points..... <i>Mustafa Ammous, Shahrokh Valaei</i>	1877
Early Wildfire Detection Using UAVs Integrated with Air Quality and LiDAR Sensors	1882
<i>Doaa Rjoub, Ahmad Alsharoa, Ala'Eddin Masadeh</i>	
Joint RIS Calibration and Multi-User Positioning..... <i>Yi Lu, Hui Chen, Jukka Talvitie, Henk Wymeersch, Mikko Valkama</i>	1887
Power Allocation in Infrastructure Limited Integration Sensing and Localization Wireless Networks	1893
<i>Mu Jia, Jiayan Yang, Tingting Zhang</i>	
A Deep Learning-Based Channel Aware Single Step Signal Detection in Downlink Multi-User NOMA..... <i>Sarang Kumar, Mohamed Elnourani, Baltasar Beferull-Lozano, Surender Redhu</i>	1898
Bridging the Digital Divide Using SuperCell Massive MIMO	1904
<i>Unnikrishnan Kunnath Ganesan, Emil Björnson, Erik G. Larsson</i>	
Cooperative MARL for Resource Allocation in High Mobility NGMA-Enabled HetNets.....	1910
<i>Leyou Yang, Jie Jia, Jian Chen, Xingwei Wang</i>	
Federated Reinforcement Learning for RIS-Aided Non-Orthogonal Multiple Access MEC	1915
<i>Zhong Yang, Yaxing Li, Hongbo Liu, Fangmin He</i>	
Joint Task Offloading and Resource Allocation in STAR-RIS Assisted NOMA System	1920
<i>Liang Guo, Jie Jia, Jian Chen, An Du, Xingwei Wang</i>	
Non-Orthogonal Neighbor Election Random Access for Distributed 6G Wireless Networks.....	1925
<i>Xu Li, Wenjun Huang, Mingqiang Yang, Yanan Liang</i>	
Secrecy Performance of RIS Aided NOMA Networks..... <i>Yingjie Pei, Xinwei Yue, Wenqiang Yi, Yuanwei Liu, Xuehua Li, Zhiguo Ding</i>	1930
User-Pair Selection for QoS-Aware Secrecy Rate Maximization in Untrusted NOMA.....	1936
<i>Sapna Thapar, Deepak Mishra, Ravikant Saini, Zhiguo Ding</i>	
Achievable Rate and Capacity Analysis for Ambient Backscatter Communications with Dynamic Sources	1941
<i>Jixiang Chen, Hua Yu, Quansheng Guan, Gang Yang, Ying-Chang Liang</i>	
Channel Estimation and Optimal Training Design for Ambient Backscatter Communication Systems Under Sensitivity Constraint	1946
<i>Ziqi Cui, Gongpu Wang, Xusheng Wei, Rongtao Xu, Xia Chen</i>	
Cybertwin-Driven Multi-Intelligent Reflecting Surfaces Aided Vehicular Edge Computing Leveraged by Deep Reinforcement Learning	1951
<i>Xuhui Zhang, Huijun Xing, Weilin Zang, Zhenzhen Jin, Yanyan Shen</i>	
Energy-Efficient Symbiotic Cellular-UAV Communication Via Aerial RIS: Joint Trajectory Design and Resource Optimization	1958
<i>Ning Jin, Yating Liao, Gang Yang, Ying-Chang Liang, Xiaodong Chen</i>	

Optimal Designs for Throughput and Range Maximization in Backscattering Tag-To-Tag Network.....	1964
<i>Dongming Bi, Deepak Mishra, Shaghik Atakaramians, Aruna Seneviratne</i>	
Reconfigurable Intelligent Surface Assisted Secure Symbiotic Radio Multicast Communications	1971
<i>Chao Zhou, Bin Lyu, Dinh Thai Hoang, Shimin Gong</i>	
SNR-Based Configuration for RIS-Integrated NR	1977
<i>Visa Tapio, Deepa Jagyasi, Arman Shojaeifard, Pekka Pirinen, Markku Juntti</i>	
Symbiotic Backscatter System Over Cascaded Fading Channels	1982
<i>Haiyang Ding, Maged Elkashlan, Hancheng Yang, Haipeng Li, Kewei Xin</i>	
Interference Identification Based on China Mobile Current Network Data	1989
<i>Bingrui Geng, Baoping Cheng, Lei Zhang, Shuai Liu, Guangjin Zhang, Jun Lei, Tao Xiang</i>	
Investigation of Infants' Crying Detection in Noisy Home Scene with Deep Learning.....	1994
<i>Jiaming Lin, Baoping Cheng, Jun Lei</i>	
Path-Based Multimodal Trajectories Prediction	2000
<i>Ziqi Zhao, Yiping Duan, Xiaoming Tao</i>	
Robust Semantic Communications Against Semantic Noise.....	2005
<i>Qiyu Hu, Guangyi Zhang, Zhijin Qin, Yunlong Cai, Guanding Yu, Geoffrey Ye Li</i>	
Semantic Communication Approach for Multi-Task Image Transmission.....	2011
<i>Zhenguo Zhang, Qianqian Yang, Shibo He, Zhiguo Shi</i>	
Semantic Communication as a Signaling Game with Correlated Knowledge Bases	2013
<i>Jinho Choi, Jihong Park</i>	
SemKey: Boosting Secret Key Generation for RIS-Assisted Semantic Communication Systems	2018
<i>Ran Zhao, Qi Qin, Ningya Xu, Guoshun Nan, Qimei Cui, Xiaofeng Tao</i>	
Signal Shaping for Semantic Communication Systems with a Few Message Candidates	2023
<i>Shuaishuai Guo, Yanghu Wang, Peng Zhang</i>	
Centralized Resource Allocation Latency of SideLink Communication in NR V2X.....	2028
<i>Saif Sabeeh</i>	
Connotation of Unconventional Drones for Agricultural Applications with Node Arrangements Using Neural Networks	2034
<i>Gautam Srivastava, Hariprasath Manoharan, Thippa Reddy Gadekallu, Rutvij H. Jhaveri, Shitharth Selvarajan, Ramana Kadiyala</i>	
Optimal Path Selection in Cascaded Intelligent Reflecting Surfaces	2040
<i>Awais Bin Asif, Christos Liaskos, Andreas Pitsillides, Hassaan Khalid Qureshi, Marios Lestas</i>	
Performance Evaluation Over DL-Based Channel Prediction Algorithm on Realistic CSI	2045
<i>Qiuhe Zhou, Wei Jiang, Donglin Wang, Hans D. Schotten</i>	
A Convolutional Attention Based Deep Learning Solution for 5G UAV Network Attack Recognition Over Fading Channels and Interference.....	2050
<i>Joseanne Viana, Hamed Farkhari, Luis Miguel Campos, Pedro Sebastião, Katerina Koutlida, Sandra Lagén, Luis Bernardo, Rui Dinis</i>	
Distributive ACB Factor Estimation for Delay-Sensitive Applications in Non-Terrestrial Networks.....	2055
<i>Changwei Zhang, Xinghua Sun, Wencho Xia, Ruochen Huang, Hongbo Zhu</i>	

Integration of Aerial-Relay-Based Network with Terrestrial Network Towards B5G/6G Evolution	2061
<i>Terry N. Guo</i>	
Joint Caching and Computing of Software-Defined Space-Air-Ground Integrated Networks for Video Streaming Service Improvement.....	2068
<i>Tianyi Zhou, Chengchao Liang, Qianbin Chen</i>	
Joint Space Location Optimization and Resource Allocation for UAV-Assisted Emergency Communication System.....	2073
<i>Yuan Ren, Xinxin Cao, Xuewei Zhang, Fan Jiang, Guangyue Lu</i>	
Low Overhead Drone Relaying in Dense Urban and Suburban Environments.....	2078
<i>Mateen Ashraf, Bo Tan, Mikko Valkama</i>	
Power Allocation for Distributed Massive LoS MIMO with Nonlinear Power Amplifiers.....	2083
<i>Bin Liu, François Rottenberg, Sofie Pollin</i>	
Underwater Optical Communication Module: An Extension to the Ns-3 Network Simulator.....	2088
<i>Rabia Qadar, Waleed Bin Qaim, Bo Tan, Jari Nurmi</i>	
A Linear MMSE Receiver for SWIPT-Enabled Wireless Networks.....	2093
<i>Yuan Guo, Christodoulos Skouroumounis, Ioannis Krikidis</i>	
Black-Box Model for Estimating Efficiency Curves in DC-DC Converters for Energy Storage Systems.....	2099
<i>Marco Virgili, Pete James, Andrew J. Forsyth</i>	
Cost-Efficient Deployment of a Reliable Multi-UAV Unmanned Aerial System.....	2104
<i>Nithin Babu, Petar Popovski, Constantinos B. Papadias</i>	
Empirical Characterization of Solar Panel Outlay and Dimension for Net-Zero Energy IoT System.....	2109
<i>Atul Banotra, Deepak Mishra, Sudhakar Modem</i>	
Enabling On-Demand Cyber-Physical Control Applications with UAV Access Points	2114
<i>Igor Donevski, Jimmy Jessen Nielsen</i>	
Multi-Site Energy Harvesting for Battery-Less Internet-of-Things Devices: Prospects and Limits	2119
<i>Morteza Tavana, Emil Björnson, Jens Zander</i>	
Optimizing IRS-Assisted Uplink NOMA System for Power Constrained IoT Networks	2125
<i>Mahmoud Alaaeldin, Emad Alsusa, Karim G. Seddik, Mohammad Al-Jarrah</i>	
Path Design for Portable Access Point in Joint Sensing and Communications Under Energy Constraints.....	2131
<i>Xiaoye Jing, Fan Liu, Christos Masouros</i>	
PV-Powered Base Stations Equipped by UAVs in Urban Areas.....	2136
<i>Mahshid Javidsharifi, Hamoun Pourroshanfekr Arabani, Tamas Kerekes, Dezso Sera, Josep M. Guerrero</i>	
Resource Allocation Policies for Hybrid Power-Grid and Harvested Energy Communication Systems.....	2140
<i>Iman Valiulahi, Christos Masouros, Abdelhamid Salem</i>	

Author Index