2025 International Conference on Computing, Networking and Communications (ICNC 2025)

Honolulu, Hawaii, USA
17-20 February 2025

Pages 1-440

IEEE Catalog Number: CFP2559R-POD
ISBN: 979-8-3315-2097-7

Copyright © 2025 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:	CFP2559R-POD
ISBN (Print-On-Demand):	979-8-3315-2097-7
ISBN (Online):	979-8-3315-2096-0
ISSN:	2325-2626

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

Dynamic Memorable Password Generation Algorithm (DyMP-Gen) 1
Baker Al Smadi, Dileon Saint-Jean, Majd Tahat, Hosam Alamleh, Syed Raza, Ali Abdullah S. Alqahtani

Sample Length Determination from Network Traffic Based on Periodicity Analysis 7
Chikako Takasaki, Tomohiro Korikawa, Kyota Hattori

Environmental Sound Classification Using Convolutional Neural Network Based Transfer Learning 12
Jingyang Zhou, Jianrui Lu, Ruisong Wang, Ruofei Ma, Zhiliang Qin

Study on Distributed Models Combining Method for Performance and Efficiency 18
Tsuchiya Takeshi, Ryuichi Mochizuki, Hiroo Hirose, Hiroshi Ichikawa

Inter-Radar Interference Mitigation Via Self-Attention Augmented biGRU and Customized Loss Functions 23
Yudai Suzuki, Xiaoyan Wang, Masahiro Umehira, Hao Zhou

Modeling and Forecasting Overdispersed IoT Data Using an Efficient and Accurate Computation of the Dirichlet Multinomial Distribution 28
Sherenaz Al-Haj Baddar, Alessandro Languasco, Mauro Migliardi

DFTs-OFDM Radar Using Zadoff-Chu Sequence for Radar-Communication Integration 33
Masahiro Umehira, Yoshihiko Takeuchi

A Cost-Effective Node Placement Method in EONs Using Superposition Coding 38
Shota Okochi, Katsunori Yamaoka, Ken-Ichi Baba

Private Network - Anywhere and Everywhere 43
Vanlin Sathya, Mark Jimenez, Onur Sahin, Mehmet Yavuz

In-Building VOICE Call Using Private Network 50
Vanlin Sathya, Mehmet Yavuz

Improving Data Mobility Through Modern Security Infrastructure 57
Jason Zurawski, Ezra Kissel, George Robb, Corey Eichelberger, Nathaniel Mendoza

Fake News Detection Using Temporal Snapshots in Graph Neural Networks 62
Sampanna Sharma, Yi Li

Design Issues for Encodings for Inter-Satellite Optical Communications Using Single Photon Avalanche Detectors 67
Thomas Schwarz

Quantitative Analysis of RIS-Assisted NOMA Systems: BER, Outage Probability, and Ergodic Capacity in $\kappa - \mu$ Fading Channels 74
Said Awad, Mohammed Abdel-Hafez

Distributed Edge Computation for Finding an Optimal Meeting Location 79
Matthew Chou

Analysis of Greedy Hyperbolic Routing in Named Data Networking 84
Sean Cannan, Robert Simon

Machine Learning-Based Optimization of Cluster Formations in 6G Networks 91
Luis Antonio L. F. Da Costa, Rafael Kunst, Rodrigo C. De Lamare, Edison Pignaton De Freitas

A Secure TSM-Based Mobile Coupon Payment Protocol on the Mobile Network Operator Level..... 96
Shaghayegh Fereidounfar, Danai Chasaki

PlantShield: An Automated Response Tool for Critical Infrastructures 103
Sanskar Shrivastava, Tiger Lim, Aditya P. Mathur

A Light Yet Low-Delay Authentication System for the Internet of Vehicles Based on Blockchain 108
Guokai Zhao, Tongtong Zhang, Yankai Xie, Jin Ma, Chi Zhang, Lingbo Wei

Balancing Cost and Completion Time Through Variable Paths with Variable Bandwidth in HPNs 113
Liudong Zuo, Zhong Chen, Pan Lai

A Method for Extracting Related Information Around Walking Routes and Automatic Generation of Explanatory Text 118
Kento Araki, Yuki Konishi, Panote Siriaraya, Kazutoshi Sumiya, Yukiko Kawai, Shinsuke Nakajima

Leveraging Large Language Models and Topic Modeling for Toxicity Classification 123
Haniyeh Ehsani Oskouie, Christina Chance, Claire Huang, Margaret Capetz, Elizabeth Eyeson, Majid Sarrafzadeh

AI-Based Handover Decision Algorithm for Conditional Handover in Non-Terrestrial Networks (NTNs) 128
Harshit Gupta, Nidhi Srivastava, Lotiswar Borman

TCP Pacing in the Linux Kernel..... 133
Michael Welzl

Hybrid Prediction of TVWS Channel Occupancy for Cognitive Radio Systems..... 140
Joy Lebese, Thomas O. Olwal

Wearable Sensors and Machine Learning: Insights into Depression, Anxiety, and Emotional States and Changes 145
Wei Zhao, Kentaro Go

Curious Administrator’s Misbehaviors in Message Layer Security (MLS)..... 151
Hyoung-Kee Choi, Songhui Kwon

CloakFed: Exploring Stealthy and Adaptive Backdoor Attacks in Federated Learning 156
Kaibo Wang, Anqi Zhang, Tangyou Liu, Wenqian Zhang, Guanglin Zhang

Smartly Managing Traffic and Latency in a Content-Based Data Center Using Modified Packet Headers, Machine Learning, Load Balancing, and Network Telemetry..... 162
Souryendu Das, Andrew White, Malcolm Lyn, Stavros Kalafatis

A Bayesian Belief Network Framework for Protecting Generative AI-Driven Attack in Smart Grid Communication 168
Md Shirajum Munir, Sravanthi Proddatoori, Manjushree Muralidhara, Sachin Shetty

AI-Driven Secure Data Sharing: A Trustworthy and Privacy-Preserving Approach 174
Al Amin, Kamrul Hasan, Sharif Ullah, Liang Hong

Adversarial Threats and Defense Mechanisms in Machine Learning-Based SQL Injection Detection: A Security Analysis 180
Ranwa Al Mallah, Alejandro Quintero

Self-Similarity-Based DDoS Detection for Software-Defined Networks 185
Mohamad Khattar Awad, Ghazal Alsholi, Haniah Altabaa, Dania Hani Abu Daqar, Shahad Alshaher, Hamed M. K. Alazemi

Modulation Recognition Using Cyclostationary Heat Maps with Residual/Deep Learning 190
James Norris, Ryan Seeber, John Nieto

An Empirical Analysis of LoRa Mesh Configurations for Enhancing Network Efficiency Under Constrained Dwell Time Environments 195
Sheikh Tareq Ahmed, Annamalai Annamalai, Ahmed Abdelmoamen Ahmed, Mohamed Chouikha

An ML-Based Location Tracking System for LoRa Mesh Networks in GPS-Denied Environments 201
Sheikh Tareq Ahmed, Annamalai Annamalai, Ahmed Abdelmoamen Ahmed, Mohamed Chouikha, Sanjaya Subedi, Miguel Polanco

Active Data Acquisition–An Information Theoretic Approach 207
An Vuong, Anthony Q Nguyen, Thinh Nguyen

Radio Frequency Fingerprinting with Siamese Network 212
Raju Dhakal, Bhawana Poudel Devkota, Laxima Niure Kandel

Coordinated Motion Planning for Multi-Degrees of Freedom Industrial Robots Using Edge Computing Devices 217
Brook Abegaz, Lorenzo Trentini, Michael Quiroga

Supporting UAVs Swarm Missions by Multi-Agent Reinforcement Learning 222
P. Fusco, L. Porcelli, F. Palmieri, M. Ficco

Optimizing Cloud Task Scheduling with Animal-Inspired Metaheuristic Algorithms 227
Komal Shah, Yiheng Niu, Xuehan Yi, Fangxiao Guo, Michal Aibin

Flexible Routing Algorithm for Digital Intermediate Frequency Interoperability Satellite Systems Using Fair Buffer Queuing 233
Walter Roensch, Hyuck M. Kwon, Amitav Mukherjee, Khanh Pham

A Product-Oriented Assessment of Vulnerability Severity Through NVD CVSS Scores 238
Lucas Miranda, Lucas Senos, Daniel Menasché, Gaurav Srivastava, Anton Kocheturov, Enrico Lovat, Abhishek Ramchandran, Tobias Limmer

Accuracy-Privacy Trade-Off in the Mitigation of Membership Inference Attack in Federated Learning 243
Sayyed Farid Ahamed, Soumya Banerjee, Sandip Roy, Marc Vucovich, Devin Quinn, Kevin Choi, Abdul Rahman, Alison Hu, Edward Bowen, Sachin Shetty

Automatic Collection and Distribution of Discovery to Defense Attorneys 249
Foster Yeboah

HCL: A Hybrid CNN-LSTM Framework for Intrusion Detection in SDN-IoT Networks 254
Ankit Chouhan, Nashid Shahriar, Jingtao Yao

In-Vehicle Artificial Intelligence Agent System with Local Large Language Models for Agent Selection and Vehicle Control 259
Toru Furusawa

User-Aware LLM-Based Framework for Enhancing Contractual Clauses Compliance..... 265
Biagio Boi, Ilaria A. Caggiano, Christian Esposito, Lucilla Gatt

Optimizing CDN Architectures: Multi-Metric Algorithmic Breakthroughs for Edge and Distributed Performance..... 271
Md Nurul Absur, Sourya Saha, Sifat Nawrin Nova, Kazi Fahim Ahmad Nasif, Md Rahat Ul Nasib

Source Channel Model Selection for Downlink CSI Feedback Estimation Using Transfer Learning in Massive MIMO System..... 276
Liu Jingyu, Mondher Bouazizi, Tomoaki Ohtsuki

Optimizing 5G Network Slices: LSTM and Game Theory Synergy 282
Emmanuel J Samson, Kamrul Hasan, Liang Hong, Imtiaz Ahmed, Henry Onyeka, Sachin Shetty

Malware Packet Detections Via CNN Ensembles and Optimum Feature Selection..... 288
Alex Liew, Ping Ji, Sos S. Agaian

Quantum-Enhanced Transformers for Robust Acoustic Scene Classification in IoT Environments..... 295
Minh K. Quan, Mayuri Wijayasundara, Sujeeva Setunge, Pubudu N. Pathirana

Accelerating Machine Learning Models for Video Streaming Traffic 300
Bence Ladóczki

Communication Volume Reduction of Homomorphic Ciphertext with Compressed Sensing 307
Koyuki Izumi, Marin Matsumoto, Masato Oguchi

Beamforming Optimization of Secrecy Rate in Cognitive Radio Networks Assisted by STAR RIS..... 313
Nian Liu, Jia Hou

HyperTTC: Hypergraph-Empowered Tactic-Specific Traffic Clustering for Atomized APT Detection 318
Wenhui Du, Yuanhang He, Gaolei Li, Xiao Yang, Jianhua Li, Ge Ren, Kai Zhou

Lightweight Framework for PUF Based IoT Authentication Without Fuzzy Extractor 323
Franco Cirillo, Christian Esposito, Francesco Palmieri

Improving Machine Learning Classification Accuracy in Noisy Environment..... 329
Jian Ren, Tongtong Li

Optimizing Real-Time E-Commerce Data Streams: A Comparative Analysis of Serialization and Topic Design Patterns in Apache Kafka 334
Mengdi Wei, Yifan Li, Yiyi Wang, Zijian Cao, Michal Aibin

Federated Learning Framework for Nurse Scheduling to Lower Fatigue Levels of Nurses 340
Michal Aibin, F. Chen, M. Menzi, L. Scholte, Z. Jiang, Y. Chen, X. Jin, C. Liu, Ania Aibin

A Benchmark for DDoS Attacks Detection in Microservice Architectures..... 345
M. Ficco, P. Fusco, A. Guerriero, R. Pietrantuono, M. Russo, F. Palmieri, S. Russo

Cross-Layer Scheduling for MapReduce-Based Big Data Workflows in Heterogeneous Hadoop Systems..... 350
Yijie Zhang, Chase Q. Wu, Aiqin Hou

On Developing Smart IoT-Based Distributed System for Remote Detection of Slope Movements..... 356
Rahul Debnath, Ahmed Abdelmoamen Ahmed, Md Jobair Bin Alam

Frequency Prism-Based Beamforming and Resource Allocation in LEO Satellite Networks with Delay Adjustable IRS 362
Shuta Sekimori, Hiroaki Hashida, Yuichi Kawamoto, Nei Kato, Kohei Yoshida, Masayuki Ariyoshi

Enhancing Traffic Video Data Collection from Compromised Views with Adaptive Segmentation..... 367
Suman Kumar, Tyler McKinley, Bhimashankar Malbhage

20-µs Low-Latency Simple Video Coding with High Compression Ratio for IoT Video-Transmission..... 372
Mai Yamakawa, Seiji Mochizuki, Yu Kuwahara, Tsuyoshi Kato, Kousuke Imamura, Tetsuya Matsumura

A Novel Deep Learning-Based Compressed Image Enhancement Method for Machine Consumption 377
Zhenchao Ma, Forrest Paul, Sara Zhang, Hongjing Chen, Hamid Reza Tohidypour, Panos Nasiopoulos

On Software Security of Building Automation Systems 382
Christopher Morales-Gonzalez, Matthew Harper, Boya Yuan, Xinwen Fu

ResGCN: A Scalable, Robust and Efficient Approach for Radio Fingerprinting 387
Fahmida Afrin, Neda Moghim, Sachin S. Shetty

Tracking UWB Devices Through Radio Frequency Fingerprinting is Possible 394
Thibaud Ardoin, Niklas Pauli, Benedikt Groß, Mahsa Kholghi, Khan Reaz, Gerhard Wunder

On-Body e-Hub: Accessibility Technology for People with Disabilities 401
Svetlana Yanushkevich, Vlad Shmerko, Gregor Wolbring

Intent-Based 5G Core Deployment Using Generative AI..... 406
Dimitrios Brodimas, Nikolaos Tzanis, Alexios Birbas

CrossBot: An AI-Driven Smart Robot for Enhancing Pedestrian Safety at Crosswalks 411
Hovannes Kulhandjian, Oludayo Iredele

Safeguarding Industrial Automation: A Fuzzing Framework for PLC Control Logic..... 416
Marie Louise Uwibambe, Qinghua Li

Leakage Thresholds and Security Trade-Offs in Finite Blocklength Wiretap Channels..... 423
Shabnam Sodagari

Bridging Security and Efficiency: Energy-Aware Clustering for Data Encryption in Smart Agriculture..... 429
Huzaif Khan, Lokesh Purohit, Ali Jalooli

Secure-IRS: Defending Against Adversarial Physical-Layer Sensing in ISAC System..... 436
Ziyu Chen, Denny V Landika, Alvin Yang, Yizhu Wen, Haofan Cai, Yao Zheng, Hanqing Guo

Approximate Equivalence of Causalized Convergent Cross Mapping and Directed Information Under Stationary Ergodic Gaussian Random Processes 441
Tongtong Li, Jinxian Deng, Boxin Sun, Jian Ren

A Multi-Agent Reinforcement Learning Scheme for SFC Placement in Edge Computing Networks 446
Congzhou Li, Zhouxiang Wu, Divya Khanure, Jason P. Jue

Dual-Objective Optimization in Federated Cloud: Profit Equalization and Ecosystem Maximization 452
Suman Kumar, Byungkwan Jung, Kazi Amanul Islam Siddiqui

Optimizing Task Allocation for DNN Inference on Edge Devices 458
Mark Kotys, Yijie Zhang, Chase Q. Wu, Aiqin Hou

Development of a Relaxation Support System Utilizing Stereophonic AR 463
Tomoki Otsuka, Da Li, Panote Siriaraya, Shinsuke Nakajima

WanderWatch: LoRaWAN-Based Monitoring System for Wandering Risk Patients 468
Ahmed Abdelmoamen Ahmed, Vratikaben Bhadani

Exploring Potential Differences Among Various Model Architectures in Heterogeneous Time Series Through Search Methods 473
Chen Yang

Advanced Techniques for Prime Number Generation in RSA Encryption: A Path Toward Greater Efficiency 479
Kwame Assa-Agyei, Kayode Owa, Tawfik Al-Hadhrami, Seth Kwame Asafo

Generative AI for 3D Human Pose Completion Under RFID Sensing Constraints 485
Ziqi Wang, Shiwen Mao

Deep Learning-Driven Beam and Blockage Forecasting for Reliable mmWave Vehicular Networks 491
Muhammad Enayetur Rahman, Md. Shirajum Munir, Sachin Shetty

Graph Density Mutation Study to Improve Cyber-Physical Systems Intrusion Detection with Heterogeneous GNN and Express Edges 498
Hongwei Li, Danai Chasaki

AI-Powered Fruit Harvesting System Using a Robotic Arm for Precision Agriculture 505
Hovannes Kulhandjian, Nicholas Amely, Michel Kulhandjian

Privacy Drift: Evolving Privacy Concerns in Incremental Learning 510
Sayyed Farid Ahamed, Soumya Banerjee, Sandip Roy, Aayush Kapoor, Marc Vucovich, Kevin Choi, Abdul Rahman, Edward Bowen, Sachin Shetty

OT3L: Optimal Transport-Based Targeted Transfer Learning for Efficient Domain Adaptation 516
Sayyed Farid Ahamed, Amit Chakraborty, Sandip Roy, Bikash Chandra Singh, Sachin Shetty

Resource Optimized Task Offloading in Delay Sensitive Edge Networks 522
Nasif Fahmid Prangon, Abdalaziz Sawwan, Jie Wu

GraphGPT: A Self Supervised-Learning for Intuitive, Logical, and Visual Education 528
Nicholas X. Wang

Wi-Fi Ranging Under Interference 533
Anatolij Zubow, Christos Laskos, Sascha Rösler, Gerhard Wunder, Falko Dressler

A Neural Network Model for Autonomous Vehicles Safety Check Using Camera-Only/Camera-Lidar Images 538
Dengyi Liu, Honggang Wang, Hua Fang

A Non-Orthogonal Multiple Access Assisted Integrated Sensing and Communication Network Using Orthogonal Delay-Doppler Division Multiplexing 544
Salma Sultana, Shuhao Zeng, Ahmed Abdelhadi, Husheng Li, Zhu Han, H. Vincent Poor

Scalability of LEO Satellite Constellations with Static and Dynamic Topologies 551
Robert Esswein, Quincy Bayer, Mai Abdelhakim, Robert K. Cunningham

EeNCache : Neighborhood Cooperative Content Caching and Delivery in Named Data Networks 557
Pankaj Chaudhary, Neminath Hubballi

Improved DX on the Development of O-RAN Near-RT RIC E2 Interface Solutions 562
Mathias Santos De Brito, Thomas Magedanz, Marius Corici

WebScreen+: Web Traffic Screening Performance Enhancement with eBPF Filtering 567
Neminath Hubballi, Pratibha Khandait

Expanding Optical-Circuit-Switching Multi-Stage Networks to Ensure Admissible Blocking Probability in Data Centers 572
Eiji Oki, Ryotaro Taniguchi, Kazuya Anazawa, Takeru Inoue

Scalable Quantum Based Solutions for Blockchain Systems 577
Jelena Mišic, Vojislav B. Mišic

Very-Low-Delay Massive Wavelength Division Multiplexed Optical Network Using Newly Structured Hollow-Core Fiber and Its Application (Invited Talk) 583
Naoaki Yamanaka, Satoru Okamoto, Hiroyuki Tsuda, Takashi Miyamura, Motoharu Matsuura, Kazunori Mukasa

Rephrase and Contrast: Fine-Tuning Language Models for Enhanced Understanding of Communication and Computer Networks 588
Liujianfu Wang, Yuyang Du, Jingqi Lin, Kexin Chen, Soung Chang Liew

AutoPilot: Steering OFDM Pilots Away from Jamming Using Deep Learning 595
Daniel Uvaydov, Salvatore D'Oro, Tommaso Melodia

Adaptive Client Selection in Federated Learning: A Network Anomaly Detection Use Case 601
William Marfo, Deepak K. Tosh, Shirley V. Moore

Ensemble Learning Based WiFi Sensing Using Spatially Distributed TX-RX Links 606
Nafeez Fahad, Md Touhiduzzaman, Eyuphan Bulut

The Design of GBDT-Based Anomaly Detection for O-RAN Near-RT RIC 612
Chih-Cheng Tseng, Hsin-Cheng Wu, Shao-Yu Lien, Jiun-Chi You, Chang-Yi Liu, Rui-En You

Rethinking Video Generation: Overcoming the Limits of Pretrained Models 617
Ugur Demir, Charlotte Lynn Chen, Anthony Zhao, Nicholas X. Wang, Michelle Wang, Derek Li, Aggelos K. Katsaggelos

Enhancing Video Stylization with Integral Noise 622
Krzysztof Ostrowski, Michal Piasecki, Malgorzata Kudelska, Patryk Bartkowiak, Haohong Wang, Brian Bullock

Bridging the Security Gap: Lessons from 5G and What 6G Should Do Better 629
Isabella D. Lutz, Matthew C. Valenti

Analysis of a Persistent Multi-Channel Slotted ALOHA Protocol Without Acknowledgment 635
Andrea Zanella, Andrea Baiocchi, Alexey Rolich

Addressing Character Consistency Challenges in AI Filmmaking 642
Marcin Kalinski, Michal Podstawski, Krzysztof Ostrowski, Malgorzata Kudelska, Patryk Bartkowiak, Piotr Lyczko, Michal Piasecki, Thomas Visscher, Haohong Wang

Elastic Network Slice Composition with Traffic-Weighted Availability-Guarantee 649
Divya Khanure, Riti Gour, Jason P. Jue

Biologically Inspired Networking (BIN): Leveraging Neurobiological Principles for Adaptive, Scalable, and Efficient Communication 655
Razvan Cristian Voicu, Amanda Frischmann, Muhammad Hassan Tanveer, Amir Ali Amiri Moghadam, Yannique Tello, Gabriela Oprea-Ilies, Yusun Chang

Distributed Compute Offloading in Local Communications 662
Sameh Eldessoki, Christian Hofmann, Dimitrios Alanis, Panagiotis Botsinis, Tarik Tabet

NETHINT: Monitoring Local Network Interference with Passive Measurements 668
Michael Welzl, Safiqul Islam, Kristjon Ciko, Petter Barhaugen, Oskar Haukebøe

Empowering Secure Data-Driven Services for CPS: An Attribute-Based Access Control Model with Experimental Validation 675
Htet Htet Hlaing, Yuuichi Teranishi, Hitoshi Asaeda

Portable SIP4D: An Information Sharing System for Disaster Response Agencies in Network-Disconnected Areas 681
Yasunori Owada, Toshiaki Kuri, Cheikh Saliou Mbacke Babou, Goshi Sato, Taddashi Ise, Takeshi Isono

Accuracy Evaluation of TCP FlightSize Estimation: Analytical and Experimental Study 687
Mingrui Zhang, Phuong Ha, Hamid Bagheri, Lisong Xu

DSFSM: Delay-Sensitive Fractional Switch Migration for Multi-Controller Software-Defined Networks 694
Upendra Prajapati, Bijoy Chand Chatterjee, Amit Banerjee

DCTCP-FQ: Enhancing Fairness and Convergence Time in Data Center Congestion Control 699
Haoyu Wang, Xiaoqian Zhang, Allen Yang, Bo Sheng

Link Weight Design Model with Traffic-Engineering Links Based on Preventive Start-Time Optimization Against Link Failures 704
Mei Nakashima, Takashi Kurimoto, Eiji Oki

Q-Learning-Based Dynamic Drone Trajectory Planning in Uncertain Environments 709
Subrahmanya Chandra Bhamidipati, Adam Maxwell, Emily Pham, Johann Zhang, Zack Murry, Alicia Esquivel Morel, Chengyi Qu, Sharan Srinivas, Prasad Calyam

Product Line-Based Network Calculus Analysis in Vehicular Communications 716
Nurbek Halikulov, Anna Arestova, Kai-Steffen Hielscher, Reinhard German

Enhancing Network Intelligence with LLM-Based IBN and DRL: A Dynamic Approach for SAGIN Resource Management 723
Sajid Alam, Wang-Cheol Song

Radio and Computation Resource Management in Unmanned Vehicles with Edge Computing 728
Giuseppe Baruffa, Luca Rugini, Fabrizio Frescura, Paolo Banelli

DNN Inference Acceleration and Reliable Task Offloading in Mobile-Edge Computing 733
Changke Wang, Xiaowen Huang, Wenqian Zhang, Guanglin Zhang

Federated Learning for Efficient Condition Monitoring and Anomaly Detection in Industrial Cyber-Physical Systems 740
William Marfo, Deepak K. Tosh, Shirley V. Moore

Improving Slow Transfer Predictions: Generative Methods Compared 747
Jacob Taegon Kim, Alex Sim, Kesheng Wu, Jinoh Kim

Pushing the Limits of 5G Private Networks: A Practical Examination of Network Stressors 752
Onur Yener, Marcin Brzozowski, Ronald Chitauro, Peter Langendörfer

Effective Rate Enhancement for RIS-Assisted Systems: An Irregular Element-Grouping Structure 757
Yansong Bai, Liyan Li, Yunlong Cai, Minjian Zhao

Unlocking the Potential of IEEE 802.11az: A Deep Dive into Ranging Capabilities 763
Alireza Famili, Tolga Atalay, Angelos Stavrou

Implementation of an Age Prioritized Wi-Fi Network with Multi-Armed Bandit Polling 770
Alperen Balci, Batu Saatci, Emir Atak, Elif Uysal

Non-Circular Combined Expectation Propagation and Variational Bayes for Semi-Blind Channel Estimation in Cell-Free Systems 775
Zilu Zhao, Dirk Slock

Performance Evaluation of IoT LoRa Networks on Mars Through Ns-3 Simulations 780
Manuele Favero, Alessandro Canova, Marco Giordani, Michele Zorzi

Research on the Effect of Meteorological Factors on Non-Terrestrial Channel Characteristics 786
Lei Ma, Kai Ying, Lun Kun, Danni Li

A Low-Complexity Post-Distortion Linearization for Satellite and mmWave Communication Systems 791
Kai Ying, Linshan Zhao, Yingkai Cao, Lun Kun, Danni Li, Kai Kang

On WVSN Deployment and Scheduling for 3D Indoor Monitoring: A Cross-Layer Design Approach 796
Zhonghui Wang, Feng Wang, Khaled Sabbahein

Performance Evaluation of Secure Routing Protocols with Lattice Signature Scheme for Wireless Multi-Hop Networks 801
Ukyo Hasegawa, Hideharu Kojima

Leakage Minimization in Network-Assisted Full-Duplex Cell-Free Massive MIMO Systems 807
Koushi Okui, Kengo Ando, Giuseppe Abreu, Koji Ishibashi

Integrated Navigation and Frequency-Hopping Communication 813
Sang Wu Kim, Khanh D. Pham

Unified Outage Probability Analysis for Dual-Hop Decode-And-Forward Relaying with Energy Harvesting Over α - η - μ Fading Channels 818
Mohammed S. Aloqlah, Abdullah S. Aloqlah

Joint Channel Estimation and Data Detection for AFDM Receivers with Oversampling 823
Kuranage Roche Rayan Ranasinghe, Yao Ge, Giuseppe Thadeu Freitas De Abreu, Yong Liang Guan

On the Fault-Tolerant Capability of Optimal Constructions of Optical Priority Queues..... 829
Jay Cheng, Shin-Shiang Huang

Modeling Blocking Performance with Fragmentation in Spectrally-Spatially Elastic Optical Networks 834
Imran Ahmed, Eiji Oki, Bijoy Chand Chatterjee

Flexible Encryption Tunnel with Limited Quantum Key Distribution Over Classical Optical Networks 839
Yuhang Liu, Xiaosong Yu, Yongli Zhao

Trial of the External Electric Power Supply-Less IoT System Using Hollow Core Fiber..... 844
Takahiro Ishiyama, Takashi Kurimoto, Satoru Okamoto, Naoaki Yamanaka

Reliability Analysis of CNOMA System Based on STAR-RIS 849
Meiling Min, Jia Hou

Performance Analysis of Cooperative RSMA-SWIPT Communication System..... 854
Jia Qi Yan, Jia Hou

Statistical QoS-Aware Design of UAV-Enabled Integrated Sensing and Communication System 859
Zhilei Chen, Wenhao Wang, Deli Qiao

From Theory to Reality: A Design Framework for Integrated Communication and Computing Receivers 865
Kuranage Roche Rayan Ranasinghe, Kengo Ando, Giuseppe Thadeu Freitas De Abreu

Extrinsics and Linearized Component-Wise Conditionally Unbiased MMSE Estimation in Approximate Message Passing..... 871
Zilu Zhao, Dirk Slock

Gaussian Splatting: State-Of-The-Arts and Future Trends..... 876
Birendra Kathariya, Dae Yeol Lee, Tsung-Wei Huang, Tong Shao, Peng Yin, Guan-Ming Su

Author Index