

IEEE Communications Society
Publications Contents Digest
May/2024





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Magazine Editors

EIC, **IEEE Communications Magazine** – Rose Qingyang Hu
AEIC, **IEEE Communications Magazine** – Baik-Young Choi/Gabor Fodor/Nizar Zorba
EIC, **IEEE Network Magazine** – Chonggang Wang
AEIC, **IEEE Network Magazine** – Jiming Chen
EIC, **IEEE Wireless Communications Magazine** – Nirwan Ansari
EIC, **IEEE Communications Standards Magazine** – Carlos Cordeiro
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EIC, **IEEE Internet of Things Magazine** — Rath Vannithamby
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Journal Editors

EIC, **IEEE Transactions on Communications** – George Karagiannidis
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EIC, **IEEE Communications Letters** – Daniel Benevides da Costa
EIC, **IEEE Communications Surveys & Tutorials** – Dusit (Tao) Niyato
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IEEE Communications Society
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Simplified Learned Approximate Message Passing Network for Beamspace Channel Estimation in mmWave Massive MIMO Systems
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Time, Simultaneity, and Causality in Wireless Networks With
Sensing and Communications
Petar Popovski
Publication Year: 2024,Page(s):1693 - 1709
HTML

Beamforming and Device Selection Design in Federated Learning
With Over-the-Air Aggregation
Faeze Moradi Kalarde;Min Dong;Ben Liang;Yahia A. Eldemerdash
Ahmed;Ho Ting Cheng
Publication Year: 2024,Page(s):1710 - 1723
HTML

Grid-Based Channel Modeling Technique for Scenario-Specific
Wireless Channel Emulator Based on Path Parameters
Interpolation
Nopphon Keerativoranan;Kentaro Saito;Jun-Ichi Takada
Publication Year: 2024,Page(s):1724 - 1739
HTML

Performance Analysis of RIS-Assisted Communication With Direct
Link: A New Copula Application
Damoon Shahbaztabar;Imène Triguï;Wei-Ping Zhu;Wessam Ajib
Publication Year: 2024,Page(s):1740 - 1752
HTML

A Survey on Blockchain for Dynamic Spectrum Sharing
Lavan Perera;Pasika Ranaweera;Sachitha Kusaladharm;Shen
Wang;Madhusanka Liyanage
Publication Year: 2024,Page(s):1753 - 1802
HTML

When Asymmetry Helps: Joint Power and Blocklength Optimization
for Non-Orthogonal Multiple Access in Downlink Communications
Haïfa Farès;Rémi Bonnefoi;Johnny Wakim;Yassine El Lamti
Publication Year: 2024,Page(s):1803 - 1813
HTML

Scheduling Multi-Component Applications Across Federated Edge
Clusters With Phare
Gabriele Castellano;Stefano Galantino;Fulvio Rizzo;Antonio
Manzalini
Publication Year: 2024,Page(s):1814 - 1826
HTML

Resilient Disaster Relief in Industrial IoT: UAV Trajectory Design
and Resource Allocation in 6G Non-Terrestrial Networks
Amir Mohammadisarab;Ali Nouruzi;Ata Khalili;Nader Mokari;Bijan
Abbasi Arand;Eduard A. Jorswieck
Publication Year: 2024,Page(s):1827 - 1845
HTML

A Survey on Federated Learning for Reconfigurable Intelligent
Metasurfaces-Aided Wireless Networks
Sree Krishna Das;Benoit Champagne;Ioannis
Psaromiligkos;Yunlong Cai
Publication Year: 2024,Page(s):1846 - 1879
HTML

OIDC?: Open Identity Certification With OpenID Connect
Jonas Primbs;Michael Menth
Publication Year: 2024,Page(s):1880 - 1898
HTML

Hardware-Aware Joint Localization-Synchronization and Tracking
Using Reconfigurable Intelligent Surfaces in 5G and Beyond
Deeb Assad Tubail;Mohammed El-Absi;Salama Ikki;Thomas Kaiser
Publication Year: 2024,Page(s):1899 - 1915
HTML

Cellular Network From the Sky: Toward People-Centered Smart
Communities
Baha Eddine Youcef Belmekki;Abdulah Jeza Aljohani;Saud A.
Althubaity;Abdulhadi Al Harthi;Kevin Bean;Adnan Ajjaz;Mohamed-
Slim Alouini
Publication Year: 2024,Page(s):1916 - 1936
HTML

Characterizing and Utilizing the Interplay Between Quantum
Technologies and Non-Terrestrial Networks
Hayder Al-Hraishawi;Junaid Ur Rehman;Mohsen Razavi;Symeon
Chatzinotas
Publication Year: 2024,Page(s):1937 - 1957
Cited by: Papers (1)
HTML

Resource Allocation in V2X Networks: From Classical Optimization
to Machine Learning-Based Solutions
Mohammad Parvini;Philipp Schulz;Gerhard Fettweis
Publication Year: 2024,Page(s):1958 - 1974
HTML

Radio Resource Management for Intelligent Neutral Host (INH) in Multi-Operator Environments
Hojjat Navidan;Mostafa Naseri;Ingrid Moerman;Adnan Shahid
Publication Year: 2024,Page(s):1975 - 1986
HTML

Meta-Learning for Wireless Communications: A Survey and a Comparison to GNNs
Baichuan Zhao;Jiajun Wu;Yang Ma;Chenyang Yang
Publication Year: 2024,Page(s):1987 - 2015
HTML

Regulating Paid Peering: A Two-Sided Market Perspective
Ali Nikkhah;Scott Jordan
Publication Year: 2024,Page(s):2016 - 2038
HTML

Artificial Intelligence-Defined Wireless Networking for Computational Offloading and Resource Allocation in Edge Computing Networks
Syed Danial Ali Shah;Mark A. Gregory;Faycal Bouhafs;Frank Den Hartog
Publication Year: 2024,Page(s):2039 - 2057
HTML

Cellular Wireless Networks in the Upper Mid-Band
Seongjoon Kang;Marco Mezzavilla;Sundeep Rangan;Arjuna Madanayake;Satheesh Bojja Venkatakrishnan;Grégory Hellbourg;Monisha Ghosh;Hamed Rahmani;Aditya Dhananjay
Publication Year: 2024,Page(s):2058 - 2075
Cited by: Papers (2)
HTML

AP Connection Method for Maximizing Throughput Considering Moving User and Degree of Interference Based on Potential Game
Yu Kato;Jiquan Xie;Tutomu Murase;Sumiko Miyata
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HTML

The Road to Near-Capacity CV-QKD Reconciliation: An FEC-Agnostic Design
Xin Liu;Chao Xu;Yasir Noori;Soon Xin Ng;Lajos Hanzo
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HTML

Enhancing Satellite Non-Terrestrial Networks Through Advanced Constellation Management: Optimizing In-Orbit Resources for NB-IoT
Arnau Singla;Anna Calveras;Francesco Betorz;Joan A. Ruiz-De-Azua
Publication Year: 2024,Page(s):2113 - 2131
HTML

Design and Implementation of a 5G NR Transmitter With Wi-Fi Coexistence by Beamforming and Power Control
Yu-Hao Liu;Cheng-Pang Ku;Tzi-Dar Chiueh
Publication Year: 2024,Page(s):2132 - 2144
HTML

Meta Reinforcement Learning for UAV-Assisted Energy Harvesting IoT Devices in Disaster-Affected Areas
Marwan Dhuheir;Aiman Erbad;Ala Al-Fuqaha;Abegaz Mohammed Seid
Publication Year: 2024,Page(s):2145 - 2163
HTML

Federated Learning in Heterogeneous Wireless Networks With Adaptive Mixing Aggregation and Computation Reduction
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Cited by: Papers (1)
HTML

Incentive-Vacation Queueing in Extreme Edge Computing: An Analytical Reward-Based Framework
Sherif B. Azmy;Nizar Zorba;Hossam S. Hassanein
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HTML

Deep Learning Aided Secure Transmission in Wirelessly Powered Untrusted Relaying in the Face of Hardware Impairments
Vahid Shahiri;Moslem Forouzesh;Hamid Behroozi;Ali Kuhestani;Kai-Kit Wong
Publication Year: 2024,Page(s):2196 - 2210
Cited by: Papers (1)
HTML

Discrete-Time Models and Performance of Phase Noise Channels
Amina Piemontese;Giulio Colavolpe;Thomas Eriksson
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HTML

Rethinking Dense Cells for Integrated Sensing and Communications: A Stochastic Geometric View
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Cited by: Papers (1)
HTML

Unsupervised Learning for Resource Allocation and User Scheduling in Wideband MU-MIMO Systems
Chih-Ho Hsu;Zhi Ding
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HTML

CASMaT: Characteristic-Aware SFC Mapping for Telesurgery Systems in Cloud-Edge Continuum
Seyedreza Taghizadeh;Halima Elbiaze;Roch H. Glitho;Wessam Ajib
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Cited by: Papers (1)
HTML

Achieving Capacity Gains in Practical Full-Duplex Massive MIMO Systems: A Multi-Objective Optimization Approach Using Hybrid Beamforming
Mobeen Mahmood;Asil Koc;Robert Morawski;Tho Le-Ngoc
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HTML

Deep Learning for Reduced Sampling Spatial 3-D REM Reconstruction
Antoni Ivanov;Krasimir Tonchev;Vladimir Poulkov;Agata Manolova
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HTML

Energy Buffer-Aided Wireless-Powered Relaying System for Self-Sustainable Implant WBAN
Ting Ning;Can Lin;Guofa Cai;Kengyuan Xie;Jiguang He;Chongwen Huang;Mérrouane Debbah
Publication Year: 2024,Page(s):2302 - 2318
HTML

DDPG-Based Optimization for Zero-Forcing Transmission in UAV-Relay Massive MIMO Networks
Mai T. P. Le; Vien Nguyen-Duy-Nhat; Hieu V. Nguyen; Oh-Soon Shin
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HTML

A Universal Attenuation Model of Terahertz Wave in Space-Air-Ground Channel Medium
Zhirong Yang; Weijun Gao; Chong Han
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HTML

Multibeam Beamforming for Direct Radiating Arrays in Satellite Communications Using Genetic Algorithm
Juan Andrés Vásquez-Peralvo; Jorge Querol; Flor Ortíz; Jorge Luis González Ríos; Eva Lagunas; Luis Manuel Garcés-Socorrás; Juan Carlos Merlano Duncan; Marcele O. K. Mendonça; Symeon Chatzinotas
Publication Year: 2024, Page(s): 2343 - 2357
HTML

On Robust Optimal Joint Deployment and Assignment of RAN Intelligent Controllers in O-RANs
Mohammad J. Abdel-Rahman; Emadeldin A. Mazied; Fahid Hassan; Kory Teague; Allen B. Mackenzie; Scott F. Midkiff; Kleber V. Cardoso; Dimitrios S. Nikolopoulos
Publication Year: 2024, Page(s): 2358 - 2376
HTML

ODTE: A Metric for Digital Twin Entanglement
Paolo Bellavista; Nicola Bilocchi; Mattia Fogli; Carlo Giannelli; Marco Mamei; Marco Picone
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HTML

Resilience of QPSK Radio Links Under Narrowband and Broadband Electromagnetic Interferences
Asif Ali; Mireya Fernández Chimenó; Marco A. Azpúrua
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HTML

A Blockchain-Based Approach for USIM Management in Mobile Networks
Maede Hojjati; Arian Arabnouri; Alireza Shafieinejad; Halim Yanikomeroglu
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HTML

Opportunistic Information-Bottleneck for Goal-Oriented Feature Extraction and Communication
Francesco Binucci; Paolo Banelli; Paolo Di Lorenzo; Sergio Barbarossa
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HTML

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Abdulkadir Celik; Ahmed M. Eltawil
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Cited by: Papers (1)
HTML

Explainable AI for 6G Use Cases: Technical Aspects and Research Challenges
Shen Wang; M. Atif Qureshi; Luis Miralles-Pechuán; Thien Huynh-The; Thippa Reddy Gadekallu; Madhusanka Liyanage
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HTML

Maximizing Coverage and Energy Conservation in B5G Networks Using Hexagonal Tiling to Deploy FT-S2ES
Vaibhav Tiwari; Chandrasen Pandey; Satyendra Singh Yadav; Diptendu Sinha Roy; Om Jee Pandey; Linga Reddy Cenkeramaddi
Publication Year: 2024, Page(s): 2541 - 2554
HTML

Sum Rate and Fairness Optimization in RIS-Assisted VLC Systems
Salah Abdeljabar; Mahmoud Wafik Eltokhey; Mohamed-Slim Alouini
Publication Year: 2024, Page(s): 2555 - 2566
HTML

ECP: Error-Aware, Cost-Effective and Proactive Network Slicing Framework
Amr E. Aboelenen; Alaa A. Abdellatif; Aiman M. Erbad; Amr M. Salem
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HTML

Channel Coding Toward 6G: Technical Overview and Outlook
Mohammad Rowshan; Min Qiu; Yixuan Xie; Xinyi Gu; Jinhong Yuan
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HTML

Topology-Driven Synchronization Interval Optimization for Latency-Constrained Geo-Decentralized Federated Learning
Qi Chen; Wei Yu; Xinchun Lyu; Zimeng Jia; Guoshun Nan; Qimei Cui
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HTML

Achieving Optimum Received Power for Discrete-Phase RISs With Elementwise Updates in the Least Number of Steps
Dogan Kutay Pekcan; Ender Ayanoglu
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HTML

NOMA Made Practical: Removing the Receive SIC Processing Through Interference Exploitation
Abdelhamid Salem; Xiao Tong; Ang Li; Christos Masouros
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HTML

ViRSMALNet: A Twin-Tier LSTM-Based Deep Learning Network for Indoor MIMO RSMA VLC Systems
Anagha K. Kowshik; Sanjeev Gurugopinath; Sami Muhaidat
Publication Year: 2024, Page(s): 2735 - 2747
HTML

Outage-Constrained Robust Resource Allocation Framework for IRS-Empowered NOMA Systems: A DRL-Based Joint Design
Abdulhamed Waraie; Kanapathippillai Cumanan
Publication Year: 2024, Page(s): 2748 - 2764
HTML

Non-Fungible Tokens (NFTs)—Survey of Current Applications, Evolution, and Future Directions
Qaiser Razi; Aryan Devrani; Harshal Abhyankar; G. S. S. Chalapathi; Vikas Hassija; Mohsen Guizani
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Cited by: Papers (3)
HTML

Securing Digital Identity in the Zero Trust Architecture: A Blockchain Approach to Privacy-Focused Multi-Factor Authentication
Javier Jose Diaz Rivera; Afaq Muhammad; Wang-Cheol Song
Publication Year: 2024, Page(s): 2792 - 2814
HTML

A Systematic Review of Interference Mitigation Techniques in Current and Future UAV-Assisted Wireless Networks
Hazimf Shakhatreh;Ahmad Sawalmeh;Khaled F. Hayajneh;Sharief Abdel-Razeq;Wa'Ed Malkawi;Ala Al-Fuqaha
Publication Year: 2024,Page(s):2815 - 2846
HTML

Access-Side DDoS Defense for Space-Air-Ground Integrated 6G V2X Networks
Xu Chen;Wei Feng;Yunfei Chen;Ning Ge;You He
Publication Year: 2024,Page(s):2847 - 2868
HTML

Index Modulation-Aided Unsourced Random Access in the Block-Fading Channel
Yaixin Gao;Jianping Zheng
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HTML

Physical-Layer Security in Mixed UOWC-RF Networks With Energy Harvesting Relay Against Multiple Eavesdroppers
Moloy Kumar Ghosh;Milton Kumar Kundu;MD. Ibrahim;A. S. M. Badrudduza;MD. Shamim Anower;Imran Shafique Ansari;Annie Solomon;Sumit Chakravarty;Imtiaz Ahmed;Heejung Yu
Publication Year: 2024,Page(s):2884 - 2902
HTML

Inspiring Physical Layer Security With RIS: Principles, Applications, and Challenges
Mengzhao Guo;Zhi Lin;Ruiqian Ma;Kang An;Dong Li;Naofal Al-Dhahir;Jiangzhou Wang
Publication Year: 2024,Page(s):2903 - 2925
HTML

A Complex Network and Evolutionary Game Theory Framework for 6G Function Placement
Marialisa Scatá;Aurelio La Corte;Andrea Marotta;Fabio Graziosi;Dajana Cassioli
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HTML

On the Performance of LoRa Empowered Communication for Wireless Body Area Networks
Minling Zhang;Guofa Cai;Zhiping Xu;Jiguang He;Markku Juntti
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HTML

Universal Function Approximation Through Over-the-Air Computing: A Deep Learning Approach
Pavlos S. Bouzinis;Nikos G. Evgenidis;Nikos A. Mitsiou;Sotiris A. Tegos;Panagiotis D. Diamantoulakis;George K. Karagiannidis
Publication Year: 2024,Page(s):2958 - 2967
HTML

Experimental Evaluation of Network-Controlled Physical-Layer Security Through Friendly Jamming
Sayed Amir Hoseini;Parastoo Sadeghi;Faycal Bouhafs;Neda Aboutorab;Frank den Hartog
Publication Year: 2024,Page(s):2968 - 2979
HTML

Secrecy Analysis and Prediction of Ambient Backscatter NOMA Systems With I/Q Imbalance
Jiangfeng Sun;Xingchang Chuai;Yanyang Zeng;Xingwang Li
Publication Year: 2024,Page(s):2980 - 2990
HTML

Unveiling Passive and Active EMF Exposure in Large-Scale Cellular Networks
Yujie Qin;Mustafa A. Kishk;Ahmed Elzanaty;Luca Chiaraviglio;Mohamed-Slim Alouini
Publication Year: 2024,Page(s):2991 - 3006
HTML

DRL-Based IRS-Assisted Secure Hybrid Visible Light and mmWave Communications
Danya A. Saifaldeen;Abdullatif M. Al-Baseer;Bekir S. Ciftler;Mohamed M. Abdallah;Khalid A. Qaraqe
Publication Year: 2024,Page(s):3007 - 3020
HTML

Revolutionizing Batteryless IoT Systems to Enhance Nonlinear Energy Harvesting Using RIS Active and Passive Elements
Shakil Ahmed;Ahmed E. Kamal;Mohamed Y. Selim;Saifur Rahman Sabuj;Masanori Hamamura
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HTML

Learning-Based Joint User Association and Cache Replacement for Cache-Enabled Cloud RAN
Sang-Eun Jeon;Jae-Wook Jung;Kisong Lee;Jun-Pyo Hong
Publication Year: 2024,Page(s):3038 - 3049
HTML

Visibility Graph-Based Wireless Anomaly Detection for Digital Twin Edge Networks
Blaz Bertalanic;Jernej Hribar;Carolina Fortuna
Publication Year: 2024,Page(s):3050 - 3065
HTML

Resource-Efficient Spectrum-Based Traffic Classification on Constrained Devices
David Góez;Esra Aycan Beyazit;Luis A. Fletscher;Juan F. Botero;Natalia Gaviria;Steven Latré;Miguel Camelo
Publication Year: 2024,Page(s):3066 - 3088
HTML

On Multiple-Antenna Techniques for Physical-Layer Range Security in the Terahertz Band
Weijun Gao;Chong Han;Xuyang Lu;Zhi Chen
Publication Year: 2024,Page(s):3089 - 3103
HTML

AI-Driven Ground Robots: Mobile Edge Computing and mmWave Communications at Work
Giuseppe Baruffa;Andrea Detti;Luca Rugini;Francesco Crocetti;Paolo Banelli;Gabriele Costante;Paolo Valigi
Publication Year: 2024,Page(s):3104 - 3119
HTML

Power Control for 6G In-Factory Subnetworks With Partial Channel Information Using Graph Neural Networks
Daniel Abode;Ramon Adeogun;Gilberto Berardinelli
Publication Year: 2024,Page(s):3120 - 3135
HTML

Physical Layer Security in Random NOMA-Enabled Heterogeneous Networks
Elmira Shahraki;Mahtab Mirmohseni;Hengameh Keshavarz
Publication Year: 2024,Page(s):3136 - 3150
HTML

The Mobile Blockers Impact on RISs Aided mmWave/THz Communication Systems
Ahmed M. Nor;Octavian Fratu;Simona Halunga
Publication Year: 2024,Page(s):3151 - 3169
HTML

An Imperfect Monitoring Game-Theoretic Approach for
Crowdsourcing Reliable Wireless Data
Zunera Javed;Zaheer Khan;Janne J. Lehtomäki;Hamed Ahmadi;Su
P. Sone
Publication Year: 2024,Page(s):3170 - 3184
[HTML](#)

CASTER: A Computer-Vision-Assisted Wireless Channel Simulator
for Gesture Recognition
Zhenyu Ren;Guoliang Li;Chenqing Ji;Chao Yu;Shuai Wang;Rui
Wang
Publication Year: 2024,Page(s):3185 - 3195
[HTML](#)

URLLC-Enabled Full-Duplex Cell-Free Massive MIMO Systems
With Mobility
Sravani Kurma;Keshav Singh;Prabhat Kumar Sharma;Chih-Peng
Li;Theodoros A. Tsiftsis
Publication Year: 2024,Page(s):3196 - 3211
[HTML](#)

Robust Trajectory and Resource Optimization for Communication-
Assisted UAV SAR Sensing
Mohamed-Amine Lahmeri;Walid R. Ghanem;Christina
Bonfert;Robert Schober
Publication Year: 2024,Page(s):3212 - 3228
[HTML](#)

