

IEEE Communications Society  
**Publications Contents Digest**  
**July/2018**





Direct links to magazine and journal abstracts and full paper pdfs via IEEE Xplore

ComSoc Vice President – Publications – Nelson Fonseca

Director – Journals – Khaled B. Letaief

Director – Magazines – Raouf Boutaba

#### **Magazine Editors**

EIC, *IEEE Communications Magazine* – Tarek El-Bawab

AEIC, *IEEE Communications Magazine* – Antonio Sanchez-Esquavillas | Ravi Subrahmanyam

EIC, *IEEE Network Magazine* – Mohsen Guizani

AEIC, *IEEE Network Magazine* – David Soldani

EIC, *IEEE Wireless Communications Magazine* – Hamid Gharavi

AEIC, *IEEE Wireless Communications Magazine* – Yi Qian

EIC, *IEEE Communications Standards Magazine* – Glenn Parsons

AEIC, *IEEE Communications Standards Magazine* – Zander Lei

EIC, *China Communications* – Chen Junliang

#### **Journal Editors**

EIC, *IEEE Transactions on Communications* – Naofal Al-Dhahir

EIC, *IEEE Journal on Selected Areas In Communications (J-SAC)* – Raouf Boutaba

EIC, *IEEE Communications Letters* – O. A. Dobre

Editor, *IEEE Communications Surveys & Tutorials* – Ying-Dar Lin

EIC, *IEEE Transactions on Network & Service Management (TNSM)* – Filip De Turck

EIC, *IEEE Wireless Communications Letters* – Wei Zhang

EIC, *IEEE Transactions on Wireless Communications* – Martin Haenggi

EIC, *IEEE Transactions on Mobile Communications* – Marwan Krunz

EIC, *IEEE/ACM Transactions on Networking* – Eytan Modiano

EIC, *IEEE/OSA Journal of Optical Communications & Networking (JOCN)* – Jane M. Simmons

EIC, *IEEE/OSA Journal of Lightwave Technology* – Peter J. Winzer

Co-EICs, *IEEE/KICS Journal of Communications & Networks (JCN)* – Anthony Ephremides | Saewoong Bahk

EIC, *IEEE Transactions on Multimedia* – Wenwu Zhu

EIC, *IEEE Transactions on Cloud Computing* – Hui Lei

EIC, *IEEE Transactions on Cognitive Communications and Networking* – Michele Zorzi

EIC, *IEEE Transactions on Molecular, Biological, and Multi-Scale Communications* – Urbashi Mitra

EIC, *IEEE Transactions on Signal and Information Processing over Networks* – Petar Djuric

EIC, *IEEE Internet of Things Journal* – Sherman Shen

EIC, *IEEE Transactions on Green Communications* – Ender Ayanoglu

EIC, *IEEE Journal on Biomedical Health Informatics* – Dimitrios I. Fotiadis

EIC, *IEEE Life Sciences Letters* – Paolo Bonato

EIC, *IEEE Transactions on Applied Superconductivity* – Britton L. T. Plourde

EIC, *IEEE Transactions on Network Science and Engineering* – Dapeng Oliver Wu

EIC, *IEEE Transactions on Smart Grid* – Juanhui Wang

**IEEE Communications Society**

3 Park Avenue

New York, NY 10016 USA

212 705 8900

Front cover  
PDF (1792 KB)

Cover 2  
PDF (493 KB)

Table of Contents  
PDF (255 KB)

ComSoc Membership  
PDF (502 KB)

The President's Page  
Khaled B. Letaief ; Robert S. Fish  
PDF (657 KB)

Global Communications Newsletter  
Stefano Bregni ; Song Guo ; Abdullah Almuttiri ; Kashif Bashir ;  
Keattisak Sripimanwat  
PDF (1150 KB)

Conference Calendar  
PDF (79 KB)

Future 5G Millimeter-Wave Systems and Terminals: Propagation  
Channel, Communication Techniques, Devices, and Measurements  
Pablo Padilla ; Jiro Hirokawac ; Lars J. Foged ; Juha Ala-  
Laurinahoo ; Damir Senic ; Astrid Algaba-Brazalez ; Ahmed  
Hussain ; Juan F. Valenzuela-Valdes  
PDF (584 KB)

Gap Waveguide Technology for Millimeter-Wave Antenna Systems  
Eva Rajo-Iglesias ; Miguel Ferrando-Rocher ; Ashraf Uz Zaman  
PDF (1470 KB)

Diffusion Bonding Manufacturing of High Gain W-Band Antennas  
for 5G Applications  
Eduardo Garcia-Marin ; Jose Luis Masa-Campos ; Pablo Sanchez-  
Olivares  
PDF (1252 KB)

Low-Cost Millimeter-Wave Antenna with Simultaneous Sum and  
Difference Patterns for 5G Point-to-Point Communications  
Adrian Tamayo-Dominguez ; Jose-Manuel Fernandez-Gonzalez ;  
Manuel Sierra Castaner  
PDF (2329 KB)

My IEEE  
PDF (595 KB)

Lens Antennas for 5G Communications Systems  
Oscar Quevedo-Teruel ; Mahsa Ebrahimpouri ; Fatemeh  
Ghasemifard  
PDF (2119 KB)

RF Lens-Embedded Antenna Array for mmWave MIMO: Design  
and Performance  
Yae Jee Cho ; Gee-Yong Suk ; Byoungnam Kim ; Dong Ku Kim ;  
Chan-Byoung Chae  
PDF (1312 KB)

Feasible Transmission Strategies for Downlink MIMO in Sparse  
Millimeter-Wave Channels  
Adrian Vega Delgado ; Matilde Sanchez-Fernandez ; Jaime Llorca ;  
Antonia Tulino  
PDF (298 KB)

Feasibility of Mobility for Millimeter-Wave Systems Based on  
Channel Measurements  
Sooyoung Hur ; Hyunkyu Yu ; Jeongho Park ; Wonil Roh ;  
Celalettin U. Bas ; Rui Wang ; Andreas F. Molisch  
PDF (604 KB)

Over-the-Air Radiated Testing of Millimeter-Wave Beam-Steerable  
Devices in a Cost-Effective Measurement Setup  
Wei Fan ; Pekka Kyosti ; Moray Rumney ; Xiaoming Chen ; Gert  
Frolund Pedersen  
PDF (789 KB)

On the Use of Unmanned Aerial Vehicles for Antenna and  
Coverage Diagnostics in Mobile Networks  
Maria Garcia Fernandez ; Yuri Alvarez Lopez ; Fernando Las-Heras  
Andres  
PDF (2820 KB)

IEEE.TV  
PDF (594 KB)

Imminent Communication Technologies for Smart Communities:  
Part 2  
Syed Hassan Ahmed ; Mohsen Guizani ; Jaime Lloret ; Danda B.  
Rawat ; Wael Guibene ; Zhimeng Zhong  
PDF (456 KB)

Privacy-Preserving and Efficient Aggregation Based on Blockchain  
for Power Grid Communications in Smart Communities  
Zhitao Guan ; Guanlin Si ; Xiaosong Zhang ; Longfei Wu ; Nadra  
Guizani ; Xiaojiang Du ; Yinglong Ma  
PDF (339 KB)

Toward an Energy and Resource Efficient Internet of Things: A  
Design Principle Combining Computation, Communications, and  
Protocols  
Zhengguo Sheng ; Daxin Tian ; Victor C. M. Leung  
PDF (926 KB)

sTube: An Architecture for IoT Communication Sharing  
Dan Wang ; Wei Bao ; Chuang Hu ; Yi Qian ; Muqiao Zheng ; Shi  
Wang  
PDF (753 KB)

Swarm Robotics Control and Communications: Imminent  
Challenges for Next Generation Smart Logistics  
Jinming Wen ; Li He ; Fumin Zhu  
PDF (2182 KB)

Big Sensed Data: Evolution, Challenges, and a Progressive  
Framework  
Sharief M. A. Oteafy ; Hossam S. Hassanein  
PDF (701 KB)

IEEE Foundation  
PDF (685 KB)

LocalFocus: A Big Data Service Platform for Local Communities and Smarter Cities  
Claudio Bergamini ; Filippo Bosi ; Antonio Corradi ; Carlos Roberto De Rolt ; Luca Foschini ; Stefano Monti ; Maria Seralessandri  
PDF (315 KB)

Ad Hoc and Sensor Networks  
Edoardo Biagioni ; Silvia Giordano ; Ciprian Dobre  
PDF (269 KB)

Bluetooth 5: A Concrete Step Forward toward the IoT  
Mario Collotta ; Giovanni Pau ; Timothy Talty ; Ozan K. Tonguz  
PDF (554 KB)

SDN-Enabled Tactical Ad Hoc Networks: Extending Programmable Control to the Edge  
Konstantinos Poularakis ; George Iosifidis ; Leandros Tassioulas  
PDF (1231 KB)

Socially Oriented Edge Computing for Energy Awareness in IoT Architectures  
Constandinos X. Mavromoustakis ; Jordi Mongay Batalla ; George Mastorakis ; Evangelos Markakis ; Evangelos Pallis  
PDF (448 KB)

Flexible Multimodal Sub-Gigahertz Communication for Heterogeneous Internet of Things Applications  
Jeroen Famaey ; Rafael Berkvens ; Glenn Ergeerts ; Eli De Poorter ; Floris Van den Abeele ; Tomas Bolckmans ; Jeroen Hoebeke ; Maarten Weyn  
PDF (779 KB)

Aerial Drones with Location-Sensitive Ears  
Prasant Misra ; A. Anil Kumar ; Pragyan Mohapatra ; Balamuralidhar P.  
PDF (1270 KB)

Network and Service Management  
George Pavlou ; Jurgen Schonwalder  
PDF (200 KB)

Automated Network Service Scaling in NFV: Concepts, Mechanisms and Scaling Workflow  
Oscar Adamuz-Hinojosa ; Jose Ordonez-Lucena ; Pablo Ameigeiras ; Juan J. Ramos-Munoz ; Diego Lopez ; Jesus Folgueira  
PDF (256 KB)

Self-Healing Framework for Next-Generation Networks through Dimensionality Reduction  
David Palacios ; Sergio Fortes ; Isabel de-la-Bandera ; Raquel Barco  
PDF (240 KB)

City of Things: Enabling Resource Provisioning in Smart Cities  
Jose Santos ; Thomas Vanhove ; Merlijn Sebrechts ; Thomas Dupont ; Wannes Kerckhove ; Bart Braem ; Gregory Van Seghbroeck ; Tim Wauters ; Philip Leroux ; Steven Latre ; Bruno Volckaert ; Filip De Turck  
PDF (729 KB)

Orchestration of End-to-End Network Services in the 5G-Crosshaul Multi-Domain Multi-Technology Transport Network  
Jorge Baranda ; Josep Mangues-Bafalluy ; Inaki Pascual ; Jose Nunez-Martinez ; Juan Luis De la Cruz ; Ramon Casellas ; Ricard Vilalta ; Josep X. Salvat ; Charles Turaygyenda  
PDF (989 KB)

Data Collection in Smart Communities Using Sensor Cloud: Recent Advances, Taxonomy, and Future Research Directions  
Ihsan Ali ; Abdullah Gani ; Ismail Ahmedy ; Ibrar Yaqoob ; Suleman Khan ; Mohammad Hossein Anisi  
PDF (345 KB)

DISCO: Interference-Aware Distributed Cooperation with Incentive Mechanism for 5G Heterogeneous Ultra-Dense Networks  
Chungang Yang ; Jia Xiao ; Jiandong Li ; Xiaoqiang Shao ; Alagan Anpalagan ; Qiang Ni ; Mohsen Guizani  
PDF (1080 KB)

On Low-Resolution ADCs in Practical 5G Millimeter-Wave Massive MIMO Systems  
Jiayi Zhang ; Linglong Dai ; Xu Li ; Ying Liu ; Lajos Hanzo  
PDF (587 KB)

Intelligent Power Equipment Management Based on Distributed Context-Aware Inference in Smart Cities  
Chang Choi ; Christian Esposito ; Haoxiang Wang ; Zhe Liu ; Junho Choi  
PDF (326 KB)

Wireless Communications for Optogenetics-Based Brain Stimulation: Present Technology and Future Challenges  
Sasitharan Balasubramaniam ; Stefanus A. Wirdatmadja ; Michael Taynnan Barros ; Yevgeni Koucheryavy ; Michal Stachowiak ; Josep Miquel Jornet  
PDF (697 KB)

Cover 3  
PDF (558 KB)

Cover 4  
PDF (1367 KB)

# IEEE COMMUNICATIONS STANDARDS MAGAZINE

JUNE 2018, VOL. 2, NO. 2

Front cover  
PDF (1138 KB)

Cover 2  
PDF (584 KB)

Table of Contents  
PDF (181 KB)

The Important Contributions of Standards Professionals  
PDF (241 KB)

The History of the IEEE 802 Standard  
Don Wright  
PDF (43 KB)

API Specifications and SDKs: The New Standards DevOps Dance  
Dan Pitt ; Bithika Khargharia  
PDF (39 KB)

When Disaster Strikes  
Yatin Trivedi  
PDF (105 KB)

Standards News  
Holger Butscheidt ; Joan Triay ; Stefan Arntzen ; Igor Faynberg ;  
Bruno Chatras ; Francisco-Javier Ramon Salguero ; Pal Gronlund ;  
Mark Pecen ; Michael Gundlach ; Seungwon Choi ; Markus D.  
Mueck ; Michele Berionne ; Charles Brookson ; J. Farserotu ; H.  
Tanaka ; M. Hamalainen ; M. Girod-Genet ; L. Mucchi ; T. Paso ; D.  
Anzai ; M. Pagnozzi ; Renato Lombardi ; Robert Sarfati ; Ingo  
Wendler ; John D'Ambrosia  
PDF (322 KB)

Comsoc Membership  
PDF (503 KB)

Time-Sensitive Networking Standards  
Janos Farkas ; Lucia Lo Bello ; Craig Gunther  
PDF (285 KB)

Norman Finn  
PDF (205 KB)

Time-Sensitive Networking: An Introduction  
John L. Messenger  
PDF (142 KB)

Distributing Deterministic, Accurate Time for Tightly Coordinated  
Network and Software Applications: IEEE 802.1AS, the TSN profile  
of PTP  
Kevin B. Stanton  
PDF (3360 KB)

My IEEE  
PDF (595 KB)

Traffic Planning for Time-Sensitive Communication  
Wilfried Steiner ; Silviu S. Craciunas ; Ramon Serna Oliver  
PDF (215 KB)

Design Aspects of Low-Latency Services with Time-Sensitive  
Networking  
Csaba Simon ; Markosz Maliosz ; Miklos Mate  
PDF (441 KB)

Enabling Fog Computing for Industrial Automation Through Time-  
Sensitive Networking (TSN)  
Paul Pop ; Michael Lander Raagaard ; Marina Gutierrez ; Wilfried  
Steiner  
PDF (272 KB)

Level 5 by Layer 2: Time-Sensitive Networking for Autonomous  
Vehicles  
Soheil Samii ; Helge Zinner  
PDF (256 KB)

IEEE.TV  
PDF (594 KB)

Internet-of-Things (IoT)  
Afif Osseiran ; Omar Elloumi ; JaeSeung Song ; Jose F. Monserrat  
PDF (306 KB)

VITAL-OS: An Open Source IoT Operating System for Smart Cities  
Aqeel Kazmi ; Martin Serrano ; John Soldatos  
PDF (3880 KB)

OFDM Numerology Design for 5G New Radio to Support IoT,  
eMBB, and MBSFN  
Ali A. Zaidi ; Robert Baldemair ; Vicent Moles-Cases ; Ning He ;  
Karl Werner ; Andreas Cedergren  
PDF (248 KB)

Overview of 3GPP Release 14 Further Enhanced MTC  
Andreas Høglund ; Johan Bergman ; Xingqin Lin ; Olof Liberg ; Antti  
Ratilainen ; Hazhir Shokri Razaghi ; Tuomas Tirronen ; Emre A.  
Yavuz  
PDF (280 KB)

3GPP Release 15 Early Data Transmission  
Andreas Høglund ; Dung Pham Van ; Tuomas Tirronen ; Olof  
Liberg ; Yutao Sui ; Emre A. Yavuz  
PDF (214 KB)

Cover 3  
PDF (565 KB)

Cover 4  
PDF (558 KB)



# IEEE WIRELESS COMMUNICATIONS

June 2018, Vol. 25, No. 3

[Front cover]  
PDF (1959 KB)

[Front inside cover]  
PDF (594 KB)

Table of contents  
PDF (73 KB)

Scanning the Literature  
PDF (160 KB)

Industry Perspective  
Cosine Jheng ; Pavan Nuggehalli ; Mukesh Chouhan  
PDF (129 KB)

Membership  
PDF (503 KB)

Spectrum Policy and Regulatory Issues  
Michael J. Marcus  
PDF (47 KB)

Content-Centric Collaborative Edge Caching in 5G Mobile Internet  
Xiaofei Wang ; Tarik Taleb ; Zhu Han ; Shugong Xu ; Victor C. M. Leung  
PDF (372 KB)

Hierarchical Caching for Statistical QoS Guaranteed Multimedia Transmissions over 5G Edge Computing Mobile Wireless Networks  
Xi Zhang ; Qixuan Zhu  
PDF (559 KB)

Edge-CoCaCo: Toward Joint Optimization of Computation, Caching, and Communication on Edge Cloud  
Min Chen ; Yixue Hao ; Long Hu ; M. Shamim Hossain ; Ahmed Ghoneim  
PDF (647 KB)

Learn to Cache: Machine Learning for Network Edge Caching in the Big Data Era  
Zheng Chang ; Lei Lei ; Zhenyu Zhou ; Shiwen Mao ; Tapani Ristaniemi  
PDF (227 KB)

Temporal-Spatial Mobile Application Usage Understanding and Popularity Prediction for Edge Caching  
Ming Zeng ; Tzu-Heng Lin ; Min Chen ; Huan Yan ; Jiaxin Huang ; Jing Wu ; Yong Li  
PDF (206 KB)

Collaborative Caching and Matching for D2D Content Sharing  
Dan Wu ; Liang Zhou ; Yueming Cai ; Yi Qian  
PDF (266 KB)

Caching-Aided Collaborative D2D Operation for Predictive Data Dissemination in Industrial IoT  
Antonino Orsino ; Roman Kovalchukov ; Andrey Samuylov ; Dmitri Moltchanov ; Sergey Andreev ; Yevgeni Koucheryavy ; Mikko Valkama  
PDF (1462 KB)

Data Quality Guarantee for Credible Caching Device Selection in Mobile Crowdsensing Systems  
Cong Zhao ; Shusen Yang ; Ping Yan ; Qing Yang ; Xinyu Yang ; Julie McCann  
PDF (782 KB)

REPSYS: A Robust and Distributed Incentive Scheme for Collaborative Caching and Dissemination in Content-Centric Cellular-Based Vehicular Delay-Tolerant Networks  
Naercio Magaia ; Zhengguo Sheng ; Paulo Rogerio Pereira ; Miguel Correia  
PDF (247 KB)

On the Incentive Mechanisms for Commercial Edge Caching in 5G Wireless Networks  
Tingting Liu ; Jun Li ; Feng Shu ; Haibing Guan ; Shihao Yan ; Dushantha Nalin K. Jayakody  
PDF (359 KB)

IEEE Standards Education  
PDF (488 KB)

Cooperative Content Caching in 5G Networks with Mobile Edge Computing  
Ke Zhang ; Supeng Leng ; Yejun He ; Sabita Maharjan ; Yan Zhang  
PDF (722 KB)

ECCN: Orchestration of Edge-Centric Computing and Content-Centric Networking in the 5G Radio Access Network  
He Li ; Kaoru Ota ; Mianxiang Dong  
PDF (537 KB)

Collaborative Edge Caching through Service Function Chaining: Architecture and Challenges  
Lei Lei ; Xiong Xiong ; Lu Hou ; Kan Zheng  
PDF (540 KB)

Secure Social Networks in 5G Systems with Mobile Edge Computing, Caching, and Device-to-Device Communications  
Ying He ; F. Richard Yu ; Nan Zhao ; Hongxi Yin  
PDF (312 KB)

Resource Allocation in NOMA-Based Fog Radio Access Networks  
Haijun Zhang ; Yu Qiu ; Keping Long ; George K. Karagiannidis ; Xianbin Wang ; Arumugam Nallanathan  
PDF (201 KB)

Security in Mobile Edge Caching with Reinforcement Learning  
Liang Xiao ; Xiaoyue Wan ; Canhuang Dai ; Xiaojiang Du ; Xiang  
Chen ; Mohsen Guizani  
PDF (297 KB)

IEEE Access  
PDF (493 KB)

Ultra-Reliable and Low-Latency Communications in 5G Downlink:  
Physical Layer Aspects  
Hyungju Ji ; Sunho Park ; Jeongho Yeo ; Younsun Kim ; Juho Lee  
; Byonghyo Shim  
PDF (525 KB)

Interference Coordination for 5G New Radio  
Beatriz Soret ; Antonio De Domenico ; Samer Bazzi ; Nurul H.  
Mahmood ; Klaus I. Pedersen  
PDF (432 KB)

Cross-Layer Data Delivery in Satellite-Aerial-Terrestrial  
Communication  
Yongpeng Shi ; Jiajia Liu ; Zubair Md. Fadlullah ; Nei Kato  
PDF (237 KB)

Compressive Sensing Techniques for Next-Generation Wireless  
Communications  
Zhen Gao ; Linglong Dai ; Shuangfeng Han ; Chih-Lin I ;  
Zhaocheng Wang ; Lajos Hanzo  
PDF (862 KB)

An Edge Computing Empowered Radio Access Network with UAV-  
Mounted FSO Fronthaul and Backhaul: Key Challenges and  
Approaches  
Yanjie Dong ; Md. Zoheb Hassan ; Julian Cheng ; Md. Jahangir  
Hossain ; Victor C. M. Leung  
PDF (290 KB)

[Back inside cover]  
PDF (536 KB)

[Back cover]  
PDF (558 KB)

# China 中国通信 Communications

June 2018 Vol.15 No.6

Indexed by SCIE

Front and back cover  
PDF (1775 KB)

Contents  
PDF (500 KB)

Integrated terrestrial-satellite networks: Part one  
Linling Kuang ; Zhiyong Feng ; Yi Qian ; Giovanni Giambene  
PDF (467 KB)

Efficient recovery of structured sparse signals via approximate message passing with structured spike and slab prior  
Xiangming Meng ; Sheng Wu ; Michael Riis Andersen ; Jiang Zhu ; Zuyao Ni  
PDF (1708 KB)

Spectral coexistence between LEO and GEO satellites by optimizing direction normal of phased array antennas  
Chen Zhang ; Jin Jin ; Hao Zhang ; Ting Li  
PDF (21406 KB)

Hybrid-Traffic-Detour based load balancing for onboard routing in LEO satellite networks  
Peilong Liu ; Hongyu Chen ; Songjie Wei ; Limin Li ; Zhencai Zhu  
PDF (2033 KB)

Topology discovery sub-layer for integrated terrestrial-satellite network routing schemes  
Zengyin Yang ; Hewu Li ; Qian Wu ; Jianping Wu  
PDF (1622 KB)

Low-complexity detection and decoding scheme for LDPC-coded MLC NAND flash memory  
Xusheng Lin ; Guojun Han ; Shijie Ouyang ; Yanfu Li ; Yi Fang  
PDF (827 KB)

The impact of the superposition coding concept on admission control strategy in OFDMA-based network  
Yosra Abbes ; Sameh Najeh ; Hichem Besbes  
PDF (946 KB)

A hybrid handover forecasting mechanism based on fuzzy forecasting model in cellular networks  
Hua Qu ; Yanpeng Zhang ; Jihong Zhao ; Gongye Ren ; Weipeng Wang  
PDF (1056 KB)

Achievement of interference alignment in general underlay cognitive radio networks: Scenario classification and adaptive spectrum sharing  
Mei Rong  
PDF (817 KB)

Preventing "bad" content dispersal in named data networking  
Yi Wang ; Zhuyun Qi ; Bin Liu  
PDF (763 KB)

Improving centralized path calculation based on graph compression  
Zhenglian Li ; Lixin Ji ; Ruiyang Huang ; Shuxin Liu  
PDF (721 KB)

An accurate and extensible machine learning classifier for flow-level traffic classification  
Gang Lu ; Ronghua Guo ; Ying Zhou ; Jing Du  
PDF (960 KB)

Analyzing the operational performance migration of telecom operators  
Xiaohang Zhang ; Yu Du ; Zhengren Li ; Qi Wang  
PDF (874 KB)

Lightweight mutual authentication scheme for protecting identity in insecure environment  
Xu Wu ; Jin Xu ; Binxing Fang  
PDF (1229 KB)

Scaling factor optimization of turbo-polar iterative decoding  
Zhenzhen Liu ; Kai Niu ; Jiaru Lin ; Jingyuan Sun ; Hao Guan  
PDF (890 KB)

AMP dual-turbo iterative detection and decoding for LDPC coded multibeam MSC uplink  
Yang Yang ; Wenjing Wang ; Xiqi Gao  
PDF (1212 KB)

An iterative decoding scheme for Davey-MacKay construction  
Yuan Liu ; Weigang Chen  
PDF (993 KB)



# IEEE TRANSACTIONS ON COMMUNICATIONS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY



**JULY 2018**

**VOLUME 66**

**NUMBER 7**

**IECMBT**

**(ISSN 0090-6778)**

Table of contents  
PDF (315 KB)

IEEE Communications Society  
PDF (97 KB)

On the Average Locality of Locally Repairable Codes  
Mostafa Shahabinejad ; Majid Khabbazi ; Masoud Ardakani  
PDF (804 KB)

Recursive Block Markov Superposition Transmission of Short  
Codes: Construction, Analysis, and Applications  
Shancheng Zhao ; Xiao Ma ; Qin Huang ; Baoming Bai  
PDF (1637 KB)

Approaching Miscorrection-Free Performance of Product Codes  
With Anchor Decoding  
Christian Häger ; Henry D. Pfister  
PDF (1132 KB)

Random Caching Based Cooperative Transmission in  
Heterogeneous Wireless Networks  
Wanli Wen ; Ying Cui ; Fu-Chun Zheng ; Shi Jin ; Yanxiang Jiang  
PDF (1720 KB)

Performance Analysis of Buffer-Aided Priority-Based Max-Link  
Relay Selection in DF Cooperative Networks  
B. R. Manoj ; Ranjan K. Mallik ; Manav R. Bhatnagar  
PDF (1586 KB)

New Achievable Sum Degrees of Freedom in Half-Duplex Single-  
Antenna Multi-User Multi-Hop Networks  
Chao Wang ; Ping Wang ; Fuqiang Liu ; Geyong Min  
PDF (1181 KB)

High-Diversity Joint Precoder Design for Non-Concurrent Two-Way  
AF MIMO Relaying  
Biswajit Dutta ; Rohit Budhiraja ; Ravinder D. Koilpillai  
PDF (1359 KB)

A Low-Complexity Coded Transmission Scheme Over Finite-Buffer  
Relay Links  
Ye Li ; Shibing Zhang ; Jue Wang ; Xiaodong Ji ; Huangnan Wu ;  
Zhihua Bao  
PDF (1810 KB)

Optimal Power Allocation Strategies in Two-Hop X-Duplex Relay  
Channel  
Alessandro Nordin ; Carla-Fabiana Chiasserini ; Emanuele Viterbo  
PDF (1227 KB)

Energy Harvesting Multiple Access Channels: Optimal and Near-  
Optimal Online Policies  
Abdulrahman Baknina ; Sennur Ulukus  
PDF (1277 KB)

Delay Minimal Policies in Energy Harvesting Communication  
Systems  
Ahmed Arafa ; Tian Tong ; Minghan Fu ; Sennur Ulukus ; Wei Chen  
PDF (1145 KB)

Beam-On-Graph: Simultaneous Channel Estimation for mmWave  
MIMO Systems With Multiple Users  
Matthew Kokshoorn ; He Chen ; Yonghui Li ; Branka Vucetic  
PDF (2172 KB)

Adaptive Wavelet Packet Modulation  
Marwa Chafii ; Jacques Palicot ; Rémi Gribonval ; Faouzi Bader  
PDF (2335 KB)

Dynamic Threshold Detection Based on Pearson Distance  
Detection  
Kees A. Schouhamer Immink ; Kui Cai ; Jos H. Weber  
PDF (884 KB)

Joint Spectrum Reservation and On-Demand Request for Mobile  
Virtual Network Operators  
Yingxiao Zhang ; Suzhi Bi ; Ying-Jun Angela Zhang  
PDF (1433 KB)

Capacity Lower Bounds of the Noncentral Chi-Channel With  
Applications to Soliton Amplitude Modulation  
Nikita A. Shevchenko ; Stanislav A. Derevyanko ; Jaroslaw E.  
Prilepsy ; Alex Alvarado ; Polina Bayvel ; Sergei K. Turitsyn  
PDF (1342 KB)

Demodulation and Detection Schemes for a Memoryless Optical  
WDM Channel  
Kamran Keykhosravi ; Morteza Tavana ; Erik Agrell ; Giuseppe  
Durisi  
PDF (2525 KB)

Full-Duplex Small-Cell Networks: A Physical-Layer Security  
Perspective  
Ayda Babaei ; Abdol Hamid Aghvami ; Arman Shojaeifard ; Kai-Kit  
Wong  
PDF (1473 KB)

High-Agreement Uncorrelated Secret Key Generation Based on  
Principal Component Analysis Preprocessing  
Guyue Li ; Aiqun Hu ; Junqing Zhang ; Linning Peng ; Chen Sun ;  
Daming Cao  
PDF (1775 KB)

A Source Coding Perspective on Node Deployment in Two-Tier Networks  
Jun Guo ; Erdem Koyuncu ; Hamid Jafarkhani  
PDF (1275 KB)

Quadrature Space-Frequency Index Modulation for Energy-Efficient 5G Wireless Communication Systems  
Piya Patcharamaneepakorn ; Cheng-Xiang Wang ; Yu Fu ; El-Hadi M. Aggoune ; Mohammed M. Alwakeel ; Xiaofeng Tao ; Xiaohu Ge  
PDF (2782 KB)

A General 3-D Non-Stationary 5G Wireless Channel Model  
Shangbin Wu ; Cheng-Xiang Wang ; el-Hadi M. Aggoune ; Mohammed M. Alwakeel ; Xiaohu You  
PDF (2335 KB)

On Base Station Coordination in Cache- and Energy Harvesting-Enabled HetNets: A Stochastic Geometry Study  
Huici Wu ; Xiaofeng Tao ; Ning Zhang ; Danyang Wang ; Shan Zhang ; Xuemin Shen  
PDF (1502 KB)

Effects of Base-Station Spatial Interdependence on Interference Correlation and Network Performance  
Juan Wen ; Min Sheng ; Kaibin Huang ; Jiandong Li  
PDF (1272 KB)

Joint and Competitive Caching Designs in Large-Scale Multi-Tier Wireless Multicasting Networks  
Ying Cui ; Zitian Wang ; Yang Yang ; Feng Yang ; Lianghai Ding ; Liang Qian  
PDF (1835 KB)

Optimal Fairness-Aware Time and Power Allocation in Wireless Powered Communication Networks  
Zhaohui Yang ; Wei Xu ; Yijin Pan ; Cunhua Pan ; Ming Chen  
PDF (1512 KB)

AMC and HARQ: How to Increase the Throughput  
Mohammed Jabi ; Leszek Szczecinski ; Mustapha Benjillali ; Abdellatif Benyouss ; Benoit Pelletier  
PDF (1463 KB)

A Tractable Framework for the Analysis of Dense Heterogeneous Cellular Networks  
Serkan Ak ; Hazer Inaltekin ; H. Vincent Poor  
PDF (1683 KB)

Bidirectional User Throughput Maximization Based on Feedback Reduction in LiFi Networks  
Mohammad Dehghani Soltani ; Xiping Wu ; Majid Safari ; Harald Haas  
PDF (2341 KB)

Backscatter Relay Communications Powered by Wireless Energy Beamforming  
Shimin Gong ; Xiaoxia Huang ; Jing Xu ; Wei Liu ; Ping Wang ; Dusit Niyato  
PDF (1569 KB)

On the Interplay Between Communication and Computation in Green C-RAN With Limited Fronthaul and Computation Capacity  
Kun Guo ; Min Sheng ; Jianhua Tang ; Tony Q. S. Quek ; Zhiliang Qiu  
PDF (1570 KB)

Power Control and Channel Allocation for D2D Underlaid Cellular Networks  
Asmaa Abdallah ; Mohammad M. Mansour ; Ali Chehab  
PDF (2408 KB)

IEEE Communications Society  
PDF (76 KB)

# IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY



APRIL 2018

VOLUME 36

NUMBER 4

ISACEM

(ISSN 0733-8716)

Table of contents  
PDF (394 KB)

IEEE Journal on Selected Areas in Communications  
PDF (82 KB)

Guest Editorial Physical Layer Security for 5G Wireless Networks,  
Part I  
Yongpeng Wu ; Ashish Khisti ; Chengshan Xiao ; Giuseppe Caire ;  
Kai-Kit Wong ; Xiqi Gao  
PDF (702 KB)

A Survey of Physical Layer Security Techniques for 5G Wireless  
Networks and Challenges Ahead  
Yongpeng Wu ; Ashish Khisti ; Chengshan Xiao ; Giuseppe Caire ;  
Kai-Kit Wong ; Xiqi Gao  
PDF (6427 KB)

Securing On-Body IoT Devices By Exploiting Creeping Wave  
Propagation  
Wei Wang ; Lin Yang ; Qian Zhang ; Tao Jiang  
PDF (1660 KB)

The Secrecy Capacity of Gaussian MIMO Wiretap Channels Under  
Interference Constraints  
Limeng Dong ; Sergey Loyka ; Yong Li  
PDF (1244 KB)

Secure Communication Over Finite State Multiple-Access Wiretap  
Channel With Delayed Feedback  
Bin Dai ; Zheng Ma ; Ming Xiao ; Xiaohu Tang ; Pingzhi Fan  
PDF (957 KB)

Fundamental Limits on a Class of Secure Asymmetric Multilevel  
Diversity Coding Systems  
Congduan Li ; Xuan Guang ; Chee Wei Tan ; Raymond W. Yeung  
PDF (595 KB)

An LDPC Code Based Physical Layer Message Authentication  
Scheme With Perfect Security  
Dajiang Chen ; Ning Zhang ; Rongxing Lu ; Xiaojie Fang ; Kuan  
Zhang ; Zhiguang Qin ; Xuemin Shen  
PDF (1675 KB)

Polar Coding for the Cognitive Interference Channel With  
Confidential Messages  
Mengfan Zheng ; Wen Chen ; Cong Ling  
PDF (1097 KB)

Robust Beamforming for Physical Layer Security in BDMA Massive  
MIMO  
Fengchao Zhu ; Feifei Gao ; Hai Lin ; Shi Jin ; Junhui Zhao ;  
Gongbin Qian  
PDF (1393 KB)

Exploiting Inter-User Interference for Secure Massive Non-  
Orthogonal Multiple Access  
Xiaoming Chen ; Zhaoyang Zhang ; Caijun Zhong ; Derrick Wing  
Kwan Ng ; Rundong Jia  
PDF (1269 KB)

Secure Massive MIMO With the Artificial Noise-Aided Downlink  
Training  
Nam-Phong Nguyen ; Hien Quoc Ngo ; Trung Q. Duong ; Hoang  
Duong Tuan ; Kamel Tourki  
PDF (1407 KB)

Optimal Transmit Antenna Selection for Massive MIMO Wiretap  
Channels  
Saba Asaad ; Ali Beryhi ; Amir Masoud Rabiei ; Ralf R. Müller ;  
Rafael F. Schaefer  
PDF (1047 KB)

Physically Securing Energy-Based Massive MIMO MAC via Joint  
Alignment of Multi-User Constellations and Artificial Noise  
Yan-Yu Zhang ; Jian-Kang Zhang ; Hong-Yi Yu  
PDF (1413 KB)

Constant Envelope Hybrid Precoding for Directional Millimeter-  
Wave Communications  
Yongming Huang ; Jianjun Zhang ; Ming Xiao  
PDF (2599 KB)

Multiple Antennas Secure Transmission Under Pilot Spoofing and  
Jamming Attack  
Hui-Ming Wang ; Ke-Wen Huang ; Theodoros A. Tsiftsis  
PDF (1510 KB)

Mapping-Variied Spatial Modulation for Physical Layer Security:  
Transmission Strategy and Secrecy Rate  
Yuli Yang ; Mohsen Guizani  
PDF (1656 KB)

Secure and Precise Wireless Transmission for Random-Subcarrier-Selection-Based Directional Modulation Transmit Antenna Array  
Feng Shu ; Xiaomin Wu ; Jinsong Hu ; Jun Li ; Riqing Chen ;  
Jiangzhou Wang  
PDF (2672 KB)

Optimization or Alignment: Secure Primary Transmission Assisted  
by Secondary Networks  
Yang Cao ; Nan Zhao ; F. Richard Yu ; Minglu Jin ; Yunfei Chen ;  
Jie Tang ; Victor C. M. Leung  
PDF (1652 KB)

Artificial Noise Aided Secure Cognitive Beamforming for  
Cooperative MISO-NOMA Using SWIPT  
Fuhui Zhou ; Zheng Chu ; Haijian Sun ; Rose Qingyang Hu ; Lajos  
Hanzo  
PDF (2740 KB)

Robust Secure Beamforming for 5G Cellular Networks Coexisting  
With Satellite Networks  
Zhi Lin ; Min Lin ; Jun-Bo Wang ; Yongming Huang ; Wei-Ping Zhu  
PDF (2174 KB)

Resource Management for Device-to-Device Communication: A  
Physical Layer Security Perspective  
Jiaheng Wang ; Yongming Huang ; Shi Jin ; Robert Schober ;  
Xiaohu You ; Chunming Zhao  
PDF (1166 KB)

Call For Papers-IEEE JSAC Special Issue  
PDF (652 KB)

Information for Authors  
PDF (147 KB)

IEEE Open Access Publishing  
PDF (1252 KB)

Introducing IEEE Collabratec  
PDF (558 KB)

Learning Has No Boundaries  
PDF (585 KB)

Member Get-A-Member (MGM) Program  
PDF (3454 KB)

IEEE Communications Society Information  
PDF (114 KB)

# IEEE COMMUNICATIONS LETTERS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY



JULY 2018

VOLUME 22

NUMBER 7

ICLEF6

(ISSN 1558-2558)

Table of contents  
PDF (282 KB)

IEEE Communications Society  
PDF (88 KB)

Enhancing the Expected Lifetime of NAND Flash by Short  $q$ -Ary WOM Codes  
Bing Fan ; Minghai Qin ; Paul H. Siegel  
PDF (385 KB)

An Adaptive IR-HARQ Scheme for Polar Codes by Polarizing Matrix Extension  
Ming-Min Zhao ; Gongzheng Zhang ; Chen Xu ; Huazi Zhang ; Rong Li ; Jun Wang  
PDF (802 KB)

Capacity-Approaching Variable-Length Pearson Codes  
Congzhe Cao ; Ivan Fair  
PDF (547 KB)

Information-Propagation-Based Scheduling for the Fast Convergence of Shuffled Decoding  
Taehyun Kim ; Jun Heo  
PDF (977 KB)

Parameter-Free  $e//p$ -Box Decoding of LDPC Codes  
Qiong Wu ; Fan Zhang ; Hao Wang ; Jun Lin ; Yang Liu  
PDF (513 KB)

Reliability-Based Windowed Decoding for Spatially Coupled LDPC Codes  
Peng Kang ; Yixuan Xie ; Lei Yang ; Jinhong Yuan  
PDF (581 KB)

Spatially Distributed Molecular Communications: An Asynchronous Stochastic Model  
Flavio Zabin  
PDF (867 KB)

SPLMax: Exploiting the Simple Path Introduced Locality for Maximum Flow Acceleration  
Wei Wei ; Yang Liu ; Ruqing Zhang  
PDF (466 KB)

Equal Gain Combining-Based Maximum Likelihood Detector for FFH/MFSK Systems  
Fucheng Yang ; Wei Xiong ; Jie Song  
PDF (274 KB)

Low RF-Complexity Receive Spatial Modulation for Millimeter-Wave MIMO Communications  
Jing Zhu ; Ping Yang ; Yue Xiao ; Xia Lei ; Qiong Chen  
PDF (610 KB)

Direction Vector-Based Algorithm for the Nash Bargaining Solution in Dynamic Networks  
Jisoo Choi ; Hyunggon Park  
PDF (871 KB)

Thwarting Worm Spread in Heterogeneous Networks With Diverse Variant Placement  
Jianjian Ai ; Zehua Guo ; Hongchang Chen  
PDF (681 KB)

Dynamic Pricing Mechanism in Smart Grid Communications Is Shaping Up  
Saba Al-Rubaye ; Anwer Al-Dulaimi ; Shahid Mumtaz ; Jonathan Rodriguez  
PDF (806 KB)

Optimal Capacity Partitioning in Homogeneous P2P Network  
Nitin Singha ; Yatindra Nath Singh  
PDF (361 KB)

A Tight Lower Bound on the Gaussian  $Q$ -Function With a Simple Inversion Algorithm, and an Application to Coherent Optical Communications  
Ming-Wei Wu ; Yan Li ; Mohan Gurusamy ; Pooi-Yuen Kam  
PDF (1259 KB)

Multicast Virtual Network Services Embedding for Improved Disaster Recovery Support  
Mahsa Pourvali ; Hao Bai ; Jorge Crichigno ; Nasir Ghani  
PDF (1413 KB)

Cooperative Multi PTP Slaves for Timing Improvement in an fGn Environment  
Monika Pinchas  
PDF (569 KB)

- Loop-Free Rerouting of Multiple Policies With Overlaps  
Jinping Yu ; Jingping Bi ; Guoqiang Zhang ; Xinxin Fan ; Zhongcheng Li  
PDF (811 KB)
- Power Allocation in Land Mobile Satellite Systems: An Energy-Efficient Perspective  
Kang An ; Tao Liang ; Xiaojuan Yan ; Yusheng Li ; Xiaoqiang Qiao  
PDF (462 KB)
- Estimating the Randomness of Domain Names for DGA Bot Callbacks  
Akihiro Satoh ; Yutaka Nakamura ; Daiki Nobayashi ; Takeshi Ikenaga  
PDF (587 KB)
- Secrecy Rate Closed-Form Expressions for the SISO VLC Wiretap Channel With Discrete Input Signaling  
Mohamed Amine Arfaoui ; Ali Ghrayeb ; Chadi Assi  
PDF (831 KB)
- Blind Spectrum Sensing Using Extreme Eigenvalues for Cognitive Radio Networks  
Kaïs Bouallegue ; Iyad Dayoub ; Mohamed Gharbi ; Kais Hassan  
PDF (592 KB)
- Continuous Phase Modulation Classification via Baum-Welch Algorithm  
Jingwen Zhang ; Fanggan Wang ; Zhangdui Zhong ; Shilian Wang  
PDF (426 KB)
- Closed-Form Expressions for Channel Shortening Receivers Using *APriori* Information  
Albert Abelló ; Jean-Marie Freixe ; Damien Roque  
PDF (508 KB)
- Signal Classification and Jamming Detection in Wide-Band Radios Using Naïve Bayes Classifier  
M. O. Mughal ; Sunwoo Kim  
PDF (442 KB)
- Communication Signal Pre-Processing in Impulsive Noise: A Bandpass Myriad Filtering-Based Method  
Guosheng Yang ; Jun Wang ; Guoyong Zhang ; Shaoqian Li  
PDF (586 KB)
- ADMM-Based TDOA Estimation  
Yanping Zhu ; Bowen Deng ; Aimin Jiang ; Xiaofeng Liu ; Yibin Tang ; Xiao Yao  
PDF (438 KB)
- Visible Light Communications-Based Indoor Positioning via Compressed Sensing  
Kristina Gligorić ; Manisha Ajmani ; Dejan Vukobratović ; Sinan Sinanović  
PDF (701 KB)
- A Generalized Sparse Bayesian Learning Algorithm for 1-bit DOA Estimation  
Xiangming Meng ; Jiang Zhu  
PDF (545 KB)
- Sliding-Window-Based Detection for Spectrum Sensing in Radar Bands  
Dayan A. Guimarães ; Chang Heon Lim  
PDF (660 KB)
- Localization of Near-Field Sources: A Reduced-Dimension MUSIC Algorithm  
Xiaofei Zhang ; Weiyang Chen ; Wang Zheng ; Zhongxi Xia ; Yunfei Wang  
PDF (852 KB)
- Optimally Probing Channel in Opportunistic Spectrum Access  
Kehao Wang ; Quan Liu ; Qingju Fan ; Qingsong Ai  
PDF (416 KB)
- Semidefinite Programming for NLOS Error Mitigation in TDOA Localization  
Zhenqiang Su ; Genfu Shao ; Huaping Liu  
PDF (664 KB)
- Energy-Efficiency Gains of Caching for Interference Channels  
Jad Hachem ; Urs Niesen ; Suhas Diggavi  
PDF (220 KB)
- Three-Dimensional Geometry-Based UAV-MIMO Channel Modeling for A2G Communication Environments  
Hao Jiang ; Zaichen Zhang ; Liang Wu ; Jian Dang  
PDF (695 KB)
- A New Optimization Problem in FSO Communication System  
Mohammad Ali Amirabadi ; Vahid Tabataba Vakili  
PDF (401 KB)
- Coverage Analysis of User-Centric Wireless Network in a Comprehensive Fading Environment  
Jingrui Chen ; Chaowei Yuan  
PDF (761 KB)
- A Power-Efficient and Social-Aware Relay Selection Method for Multi-Hop D2D Communications  
Bidi Ying ; Amiya Nayak  
PDF (698 KB)
- A Cooperation Strategy Based on Bargaining Game for Fair User-Centric Clustering in Cloud-RAN  
Mostafa M. Abdelhakam ; Mahmoud M. Elmesalawy ; Korany R. Mahmoud ; Ibrahim. I. Ibrahim  
PDF (622 KB)
- Coverage Performance of NOMA in Wireless Caching Networks  
Zhongyuan Zhao ; Mingfeng Xu ; Weiliang Xie ; Zhiguo Ding ; George K. Karagiannidis  
PDF (417 KB)
- Reliable IoT Storage: Minimizing Bandwidth Use in Storage Without Newcomer Nodes  
Xiaobo Zhao ; Daniel E. Lucani ; Xiaohong Shen ; Haiyan Wang  
PDF (514 KB)
- Cooperative Group Secret Key Generation Based on Secure Network Coding  
Shuaifang Xiao ; Yunfei Guo ; Kaizhi Huang ; Liang Jin  
PDF (443 KB)
- Downlink Dual Connectivity Approach in mmWave-Aided HetNets With Minimum Rate Requirements  
Youwei Shi ; Hua Qu ; Jihong Zhao ; Gongye Ren  
PDF (573 KB)
- Performance Metric on the Best Achievable Accuracy for Hybrid TOA/AOA Target Localization  
Yin-Ya Li ; Guo-Qing Qi ; An-Dong Sheng  
PDF (354 KB)



Minimizing the Maximum Link Utilization in Multicast Multi-Commodity Flow Networks  
Jianwei Zhang ; Xinchang Zhang ; Meng Sun ; Chunling Yang  
PDF (577 KB)

Analysis of Pure and Slotted ALOHA With Multi-Packet Reception and Variable Packet Size  
Andrea Baiocchi ; Fabio Ricciato  
PDF (344 KB)

Limited Feedback Hybrid Beamforming Based on Dual Polarized Array Antenna  
Lakju Sung ; Daehee Park ; Dong-Ho Cho  
PDF (868 KB)

Prolonging User Battery Lifetime Using Green Communication in Spectrum Sharing Networks  
Pimmy Gandotra ; Rakesh Kumar Jha ; Sanjeev Jain  
PDF (772 KB)

Mixed Quality of Service in Cell-Free Massive MIMO  
Manijeh Bashar ; Kanapathippillai Cumanan ; Alister G. Burr ; Hien Quoc Ngo ; H. Vincent Poor  
PDF (486 KB)

Beam Selection for mmWave Massive MIMO Systems Under Hybrid Transceiver Architecture  
Shuang Qiu ; Kai Luo ; Tao Jiang  
PDF (670 KB)

Allocating Power to Lossy-Forward Relays  
Diana Cristina González ; Albrecht Wolf ; Luciano Leonel Mendes ; José Cândido Silveira Santos Filho ; Michel Daoud Yacoub ; Gerhard Fettweis  
PDF (582 KB)

Investigating the V2V Millimeter-Wave Channel Near a Vehicular Headlight in an Engine Bay  
Erik Kampert ; Paul A. Jennings ; Matthew D. Higgins  
PDF (1505 KB)

A Non-Stationary Geometry-Based Scattering Vehicle-to-Vehicle MIMO Channel Model  
Hao Jiang ; Zaichen Zhang ; Liang Wu ; Jian Dang  
PDF (842 KB)

IEEE Communications Society  
PDF (76 KB)

# IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS

A PUBLICATION OF THE IEEE COMMUNICATIONS SOCIETY AND THE IEEE SIGNAL PROCESSING SOCIETY



JULY 2018

VOLUME 17

NUMBER 7

ITWCAX

(ISSN 1536-1276)

Table of contents  
PDF (238 KB)

IEEE Transactions on Wireless Communications  
PDF (84 KB)

Optimal Hierarchical Radio Resource Management for HetNets  
With Flexible Backhaul  
Naeimeh Omidvar ; An Liu ; Vincent Lau ; Fan Zhang ; Danny H. K.  
Tsang ; Mohammad Reza Pakravan  
PDF (2496 KB)

A MAP-Based Layered Detection Algorithm and Outage Analysis  
Over MIMO Channels  
Yavuz Yapıcı ; İsmail Güvenç ; Yuichi Kakishima  
PDF (1854 KB)

Asynchronous Two-Way MIMO Relaying: A Multi-Relay Scenario  
Razgar Rahimi ; Shahram Shahbazpanahi  
PDF (1320 KB)

Energy-Spectral Efficiency Trade-Off in Underlying Mobile D2D  
Communications: An Economic Efficiency Perspective  
Rui Zhang ; Yongzhao Li ; Cheng-Xiang Wang ; Yuhan Ruan ; Yu  
Fu ; Hailin Zhang  
PDF (2371 KB)

Optimal Power Allocation by Imperfect Hardware Analysis in  
Untrusted Relaying Networks  
Ali Kuhestani ; Abbas Mohammadi ; Kai-Kit Wong ; Phee Lep Yeoh  
; Majid Moradikia ; Muhammad R. A. Khandaker  
PDF (1596 KB)

Wireless Transmission of Big Data: A Transmission Time Analysis  
Over Fading Channel  
Wen-Jing Wang ; Hong-Chuan Yang ; Mohamed-Slim Alouini  
PDF (1440 KB)

A Distance-Based Mode Selection Scheme for D2D-Enabled  
Networks With Mobility  
Aymen Omri ; Mazen O. Hasna  
PDF (1724 KB)

An Efficient Transmit Power Control Strategy for Underlay  
Spectrum Sharing Networks With Spatially Random Primary Users  
Zhi Yan ; Xing Zhang ; Hong-Li Liu ; Ying-Chang Liang  
PDF (1305 KB)

BER Analysis of Dual-Hop Relaying With Energy Harvesting in  
Nakagami-  $m$   
Fading Channel  
Mohammadreza Babaei ; Ümit Aygözü ; Ertugrul Basar  
PDF (1620 KB)

Hybrid ARQ-Based Fairness Enhancement in Uplink WLAN  
Jayeong Kim ; Seong Hwan Kim ; Dan Keun Sung  
PDF (1800 KB)

Performance Analysis and Power Control for Multi-Antenna V2V  
Underlay Massive MIMO  
Xinxin Liu ; Yunzhou Li ; Limin Xiao ; Jing Wang  
PDF (1306 KB)

Mobility Model-Based Non-Stationary Mobile-to-Mobile Channel  
Modeling  
Ruisi He ; Bo Ai ; Gordon L. Stüber ; Zhangdui Zhong  
PDF (1836 KB)

Coverage Analysis of a Vehicular Network Modeled as Cox  
Process Driven by Poisson Line Process  
Vishnu Vardhan Chetlur ; Harpreet S. Dhillon  
PDF (1775 KB)

Full-Duplex Relaying for D2D Communication in Millimeter Wave-  
based 5G Networks  
Bojiang Ma ; Hamed Shah-Mansouri ; Vincent W. S. Wong  
PDF (2006 KB)

Robust Single-Carrier Frequency-Domain Equalization for  
Broadband MIMO Systems With Imperfect Channel Estimation  
Pengfei Zhe ; Yu Zhu ; Khaled Ben Letaief  
PDF (1945 KB)

Optimal Caching in 5G Networks With Opportunistic Spectrum  
Access  
Mostafa Emara ; Hesham Elsayy ; Sameh Sorour ; Samir Al-  
Ghadhban ; Mohamed-Slim Alouini ; Tareq Y. Al-Naffouri  
PDF (1733 KB)

Two-Timescale Hybrid RF-Baseband Precoding With MMSE-VP for  
Multi-User Massive MIMO Broadcast Channels  
Ruikai Mai ; Tho Le-Ngoc ; Duy H. N. Nguyen  
PDF (1054 KB)

Pilot Contamination in Massive MIMO Induced by Timing and Frequency Errors  
Fuqian Yang ; Penghao Cai ; Hua Qian ; Xiliang Luo  
PDF (1973 KB)

Toward Human-in-the-Loop Mobile Networks: A Radio Resource Allocation Perspective on Haptic Communications  
Adnan Aijaz  
PDF (1963 KB)

One-Bit Sphere Decoding for Uplink Massive MIMO Systems With One-Bit ADCs  
Yo-Seb Jeon ; Namyoong Lee ; Song-Nam Hong ; Robert W. Heath  
PDF (1381 KB)

Multistatic Scatter Radio Sensor Networks for Extended Coverage  
Panos N. Alevizos ; Konstantinos Tountas ; Aggelos Bletsas  
PDF (1885 KB)

Scaling Analysis for Massive MIMO Systems With Hardware Impairments in Rician Fading  
Qi Zhang ; Tony Q. S. Quek ; Shi Jin  
PDF (1537 KB)

Short-Packet Downlink Transmission With Non-Orthogonal Multiple Access  
Xiaofang Sun ; Shihao Yan ; Nan Yang ; Zhiguo Ding ; Chao Shen ; Zhangdui Zhong  
PDF (1594 KB)

Peer-Assisted Computation Offloading in Wireless Networks  
Yeli Geng ; Guohong Cao  
PDF (2162 KB)

Graph-Based Resource Sharing in Vehicular Communication  
Le Liang ; Shijie Xie ; Geoffrey Ye Li ; Zhi Ding ; Xingxing Yu  
PDF (3608 KB)

Interest-Aware Information Diffusion in Evolving Social Networks  
Jiaqi Liu ; Luoyi Fu ; Zhe Liu ; Xiao-Yang Liu ; Xinbing Wang  
PDF (1834 KB)

RT-CaCC: A Reliable Transport With Cache-Aware Congestion Control Protocol in Wireless Sensor Networks  
Melchizedek I. Alipio ; Nestor Michael C. Tiglao  
PDF (2039 KB)

Outdoor Wideband Channel Measurements and Modeling in the 3–18 GHz Band  
Vinod Kristem ; C. Umit Bas ; Rui Wang ; Andreas F. Molisch  
PDF (3640 KB)

Hybrid Precoding With Rate and Coverage Constraints for Wideband Massive MIMO Systems  
Lingxiao Kong ; Shengqian Han ; Chenyang Yang  
PDF (1752 KB)

Fundamental Limits of Low-Density Spreading NOMA With Fading  
Mai T. P. Le ; Guido Carlo Ferrante ; Tony Q. S. Quek ; Maria-Gabriella Di Benedetto  
PDF (1125 KB)

Prediction-Based Mobile Data Offloading in Mobile Cloud Computing  
Dongqing Liu ; Lyes Khoukhi ; Abdelhakim Hafid  
PDF (1633 KB)

Proactive Resource Management for LTE in Unlicensed Spectrum: A Deep Learning Perspective  
Ursula Challita ; Li Dong ; Walid Saad  
PDF (2264 KB)

The Exponential Correlation Matrix: Eigen-Analysis and Applications  
Ranjan K. Mallik  
PDF (844 KB)

Finite-Alphabet Precoding for Massive MU-MIMO With Low-Resolution DACs  
Chang-Jen Wang ; Chao-Kai Wen ; Shi Jin ; Shang-Ho Tsai  
PDF (2255 KB)

Closed-Form Secrecy Outage Analysis of Cellular Downlink Systems in the Presence of Co-Channel Interference  
Bin Li ; Jianjiang Zhou ; Yulong Zou ; Fei Wang  
PDF (1352 KB)

Resource Optimization With Load Coupling in Multi-Cell NOMA  
Lei You ; Di Yuan ; Lei Lei ; Sumei Sun ; Symeon Chatzinotas ; Björn Ottersten  
PDF (1963 KB)

Aggregation and Resource Scheduling in Machine-Type Communication Networks: A Stochastic Geometry Approach  
Onel L. Alcaraz López ; Hirley Alves ; Pedro H. Juliano Nardelli ; Matti Latva-aho  
PDF (1301 KB)

Covert Communication Achieved by a Greedy Relay in Wireless Networks  
Jinsong Hu ; Shihao Yan ; Xiangyun Zhou ; Feng Shu ; Jun Li ; Jiangzhou Wang  
PDF (1393 KB)

Interference Analysis and Mitigation for Time-Asynchronous OFDM CoMP Systems  
Ahmed M. Hamza ; Jon W. Mark ; Essam A. Sourour  
PDF (1715 KB)

A Scalable and Statistically Robust Beam Alignment Technique for Millimeter-Wave Systems  
Xiaoshen Song ; Saeid Haghhighatshoar ; Giuseppe Caire  
PDF (1573 KB)

Time-to-Space Division Multiplexing for Tb/s Mobile Cells  
Romain Bonjour ; Samuel Welschen ; Juerg Leuthold  
PDF (3169 KB)

Energy-Efficient Cross-Layer Resource Allocation for Heterogeneous Wireless Access  
Lei Xu ; Weihua Zhuang  
PDF (1172 KB)

Two-Level Spatial Multiplexing Using Hybrid Beamforming for Millimeter-Wave Backhaul  
Xiaohang Song ; Wolfgang Rave ; Nithin Babu ; Sudhan Majhi ; Gerhard Fettweis  
PDF (2511 KB)

Bounds on the Optimal Feedback Rate for Multi-Antenna Systems in Interference-Limited Cellular Networks  
Moonsik Min  
PDF (1148 KB)

Secure Beamforming for Untrusted MISO Cognitive Radio Networks  
Meng Zhang ; Yuan Liu  
PDF (1091 KB)

A Novel Cooperative Non-Orthogonal Multiple Access (NOMA) in Wireless Backhaul Two-Tier HetNets  
Tri Minh Nguyen ; Wessam Ajib ; Chadi Assi  
PDF (1752 KB)

A New Filter-Bank Multicarrier System: The Linearly Processed FBMC System  
Jintae Kim ; Yosub Park ; Sungwoo Weon ; Jinkyoo Jeong ; Sooyong Choi ; Daesik Hong  
PDF (2340 KB)

Measurement Selection: A Random Matrix Theory Approach  
Khalil Elkhailil ; Abia Kammoun ; Tareq Y. Al-Naffouri ; Mohamed-Slim Alouini  
PDF (1482 KB)

Unified Analytical Volume Distribution of Poisson-Delaunay Simplex and Its Application to Coordinated Multi-Point Transmission  
Minghua Xia ; Sonia Aïssa  
PDF (1035 KB)

On Adjacent Channel Co-Existence With Receiver Nonlinearity  
Aditya V. Padaki ; Ravi Tandon ; Jeffrey H. Reed  
PDF (1621 KB)

IEEE Communications Society  
PDF (72 KB)

Blank page  
PDF (5 KB)

# IEEE TRANSACTIONS ON MOBILE COMPUTING

A joint publication of the



IEEE Computer Society



IEEE Signal  
Processing Society



IEEE Circuits and Systems Society



IEEE Communications Society

Indexed in ISI

## July 2018

CLEVER: A Cooperative and Cross-Layer Approach to Video Streaming in HetNets

Stefania Colonnese ; Francesca Cuomo ; Luca Chiaraviglio ;  
Valentina Salvatore ; Tommaso Melodia ; Izhak Rubin  
PDF (966 KB)

Dynamic SON-Enabled Location Management in LTE Networks

Emad Aqeeli ; Abdallah Moubayed ; Abdallah Shami  
PDF (1184 KB)

Energy Efficiency Maximization in Mobile Wireless Energy Harvesting Sensor Networks

Songtao Guo ; Yawei Shi ; Yuanyuan Yang ; Bin Xiao  
PDF (977 KB)

Fast Cell Discovery in mm-Wave 5G Networks with Context Information

Ilario Filippini ; Vincenzo Sciancalepore ; Francesco Devoti ;  
Antonio Capone  
PDF (1393 KB)

Leveraging Audio Signals for Early Recognition of Inattentive Driving with Smartphones

Xiangyu Xu ; Jiadi Yu ; Yingying Chen ; Yanmin Zhu ; Shiyong Qian ;  
Minglu Li  
PDF (2339 KB)

Leveraging Intelligence from Network CDR Data for Interference Aware Energy Consumption Minimization

Ahmed Zoha ; Arsalan Saeed ; Hasan Farooq ; Ali Rizwan ; Ali Imran ; Muhammad Ali Imran  
PDF (1915 KB)

LinkForecast: Cellular Link Bandwidth Prediction in LTE Networks

Chaoqun Yue ; Ruofan Jin ; Kyoungwon Suh ; Yanyuan Qin ; Bing Wang ; Wei Wei  
PDF (1918 KB)

Low Cost and High Accuracy Data Gathering in WSNs with Matrix Completion

Kun Xie ; Lele Wang ; Xin Wang ; Gaogang Xie ; Jigang Wen  
PDF (1579 KB)

MiLift: Efficient Smartwatch-Based Workout Tracking Using Automatic Segmentation

Chenguang Shen ; Bo-Jhang Ho ; Mani Srivastava  
PDF (1291 KB)

Motivating Human-Enabled Mobile Participation for Data Offloading

Xiaonan Zhang ; Linke Guo ; Ming Li ; Yuguang Fang  
PDF (2094 KB)

Multi-Objective Optimization Based Allocation of Heterogeneous Spatial Crowdsourcing Tasks

Liang Wang ; Zhiwen Yu ; Qi Han ; Bin Guo ; Haoyi Xiong  
PDF (1129 KB)

Protocol Function Block Mapping of Software Defined Protocol for 5G Mobile Networks

Ruihan Wen ; Gang Feng ; Wei Tan ; Rui Ni ; Shuang Qin ; Gang Wang  
PDF (1747 KB)

Recurring Contacts between Groups of Devices: Analysis and Application

Nuno Cruz ; Hugo Miranda  
PDF (3438 KB)

RF Energy Harvesting and Transfer for Spectrum Sharing Cellular IoT Communications in 5G Systems

Ali Ö. Ercan ; M. Oğuz Sunay ; Ian F. Akyildiz  
PDF (1666 KB)

Routing to Multi-Instantiated Destinations: Principles, Practice, and Applications

J. J. Garcia-Luna-Aceves ; Jesus Elohim Martinez-Castillo ;  
Rolando Menchaca-Mendez  
PDF (1252 KB)

Stochastic Programming Methods for Workload Assignment in an Ad Hoc Mobile Cloud

Chen-Khong Tham ; Bin Cao  
PDF (850 KB)

Two-Hop Distance-Bounding Protocols: Keep Your Friends Close

Anjia Yang ; Elena Pagnin ; Aikaterini Mitrokotsa ; Gerhard P. Hancke ; Duncan S. Wong  
PDF (901 KB)

# JOURNAL OF Optical Communications and Networking

Front cover  
PDF (1939 KB)

Contents  
PDF (77 KB)

Inside front cover  
PDF (35 KB)

Special issue on optical data center networks  
Anna Tzanakaki ; Lena Wosinska ; Laurent Schares ; Hong Liu ;  
Dimitra Simeonidou  
PDF (44 KB)

HiFOST: a scalable and low-latency hybrid data center network  
architecture based on flow-controlled fast optical switches  
Fulong Yan ; Xuwei Xue ; Nicola Calabretta  
PDF (2453 KB)

Application-triggered automatic distributed cloud/network resource  
coordination by optically networked inter/intra data center [invited]  
Naoaki Yamanaka ; Satoru Okamoto ; Masayuki Hirono ; Yukihiro  
Imakiire ; Wataru Muro ; Takehiro Sato ; Eiji Oki ; Andrea Fumagalli  
; Malathi Veeraghavan  
PDF (4956 KB)

Silicon photonics-based 100 Gbit/s, PAM4, DWDM data center  
interconnects  
Radhakrishnan Nagarajan ; Mark Filer ; Yang Fu ; Masaki Kato ;  
Todd Rope ; James Stewart  
PDF (5299 KB)

Applying multi-controller collaboration in fine-grained all-optical  
intra-datacenter networks  
Yinqiu Jia ; Nan Hua ; Yanhe Li ; Xiaoping Zheng  
PDF (1470 KB)

Experimental demonstration of a 64-port wavelength routing thin-  
CLOS system for data center switching architectures  
R. Proietti ; X. Xiao ; K. Zhang ; G. Liu ; H. Lu ; P. Fotouhi ; J.  
Messig ; S. J. B. Yoo  
PDF (2869 KB)

Location-aware energy efficient virtual network embedding in  
software-defined optical data center networks  
Yue Zong ; Yanni Ou ; Ali Hammad ; Koteswararao Kondepu ;  
Reza Nejabati ; Dimitra Simeonidou ; Yejun Liu ; Lei Guo  
PDF (1284 KB)

TCP congestion control in datacenter optical packet networks on  
hybrid switches  
Artur Minakhmetov ; Cédric Ware ; Luigi Iannone  
PDF (773 KB)

Design and verification of large-scale optical circuit switch using  
ULCF AWGs for datacenter application  
H. Nagai ; Y. Mori ; H. Hasegawa ; K. Sato  
PDF (1723 KB)

Fully SDN-enabled all-optical architecture for data center  
virtualization with time and space multiplexing  
K. Kondepu ; C. Jackson ; Y. Ou ; A. Beldachi ; A. Pagès ; F. Agraz  
; F. Moscatelli ; W. Miao ; V. Kamchevska ; N. Calabretta ; G. Landi  
; S. Spadaro ; S. Yan ; D. Simeonidou ; R. Nejabati  
PDF (4161 KB)

High-port and low-latency optical switches for disaggregated data  
centers: the HipoAaos switch architecture  
N. Terzenidis ; M. Moralis-Pegios ; G. Mourgias-Alexandris ; T.  
Alexoudi ; K. Vyrsokinos ; N. Pleros  
PDF (4016 KB)

CBOSS: bringing traffic engineering inside data center networks  
N. Benzaoui ; J. M. Estarán ; E. Dutisseuil ; H. Mardoyan ; G. De  
Valicourt ; A. Dupas ; Q. Pham Van ; D. Verchere ; B. Ušćumlić ; M.  
Szczerban Gonzalez ; P. Dong ; Y. -K. Chen ; S. Bigo ; Y.  
Pointurier  
PDF (2463 KB)

Reimagining datacenter topologies with integrated silicon photonics  
Cyriel Minkenbergh ; Nathan Farrington ; Aaron Zilkie ; David Nelson  
; Caroline P. Lai ; Dan Brunina ; Jerry Byrd ; Bhaskar Chowdhuri ;  
Nick Kucharewski ; Karl Muth ; Amit Nagra ; German Rodriguez ;  
David Rubi ; Thomas Schrans ; Pradeep Srinivasan ; Yeong Wang ;  
Chiang Yeh ; Andrew Rickman  
PDF (3854 KB)

Inter-domain optimization and orchestration for optical datacenter  
networks  
G. Landi ; M. Capitani ; A. Kretsis ; K. Kontodimas ; P. Kokkinos ; D.  
Gallico ; M. Biancani ; K. Christodoulououlos ; E. Varvarigos  
PDF (2819 KB)

Joint jobs scheduling and lightpath provisioning in fog computing  
micro datacenter networks  
Zhen Liu ; Jiawei Zhang ; Yanan Li ; Lin Bai ; Yuefeng Ji  
PDF (1838 KB)

In compute/memory dynamic packet/circuit switch placement for  
optically disaggregated data centers  
Adaranijo Peters ; George Oikonomou ; Georgios Zervas  
PDF (3948 KB)



# IEEE TRANSACTIONS ON **MULTIMEDIA**

A PUBLICATION OF  
THE IEEE CIRCUITS AND SYSTEMS SOCIETY  
THE IEEE SIGNAL PROCESSING SOCIETY  
THE IEEE COMMUNICATIONS SOCIETY  
THE IEEE COMPUTER SOCIETY



<http://www.signalprocessingsociety.org/tmm/>

**JULY 2018**

**VOLUME 20**

**NUMBER 7**

**ITMUF8**

**(ISSN 1520-9210)**

Table of Contents  
PDF (202 KB)

IEEE Transactions on Multimedia  
PDF (105 KB)

Optimized Data Representation for Interactive Multiview Navigation  
Rui Ma ; Thomas Maugey ; Pascal Frossard  
PDF (1333 KB)

Efficient and Robust Image Coding and Transmission Based on  
Scrambled Block Compressive Sensing  
Zan Chen ; Xingsong Hou ; Xueming Qian ; Chen Gong  
PDF (1378 KB)

Hybrid Intraprediction Based on Local and Nonlocal Correlations  
Tao Zhang ; Xiaopeng Fan ; Debin Zhao ; Ruiqin Xiong ; Wen Gao  
PDF (3711 KB)

HEVC Selective Encryption Using RC6 Block Cipher Technique  
Ahmed I. Sallam ; Osama S. Faragallah ; El-Sayed M. El-Rabaia  
PDF (1655 KB)

Multistage Object Detection With Group Recursive Learning  
Jianan Li ; Xiaodan Liang ; Jianshu Li ; Yunchao Wei ; Tingfa Xu ;  
Jiashi Feng ; Shuicheng Yan  
PDF (1082 KB)

Multimodal Recurrent Neural Networks With Information Transfer  
Layers for Indoor Scene Labeling  
Abrar H. Abdalnabi ; Bing Shuai ; Zhen Zuo ; Lap-Pui Chau ; Gang  
Wang  
PDF (1679 KB)

Parallax-Tolerant Image Stitching Based on Robust Elastic Warping  
Jing Li ; Zhengming Wang ; Shiming Lai ; Yongping Zhai ; Maojun  
Zhang  
PDF (2218 KB)

Spatio-Temporal Saliency Networks for Dynamic Saliency  
Prediction  
Cagdas Bak ; Aysun Kocak ; Erkut Erdem ; Aykut Erdem  
PDF (1255 KB)

Optimal Transmission Estimation via Fog Density Perception for  
Efficient Single Image Defogging  
Zhigang Ling ; Jianwei Gong ; Guoliang Fan ; Xiao Lu  
PDF (1231 KB)

Leveraging Structural Context Models and Ranking Score Fusion  
for Human Interaction Prediction  
Qihong Ke ; Mohammed Bennamoun ; Senjian An ; Ferdous  
Sohel ; Farid Boussaid  
PDF (983 KB)

Photo Stylistic Brush: Robust Style Transfer via Superpixel-Based  
Bipartite Graph  
Jiaying Liu ; Wenhan Yang ; Xiaoyan Sun ; Wenjun Zeng  
PDF (1795 KB)

Geodesic Path-Based Diffusion Acceleration for Image Denoising  
Sung In Cho ; Suk-Ju Kang  
PDF (1199 KB)

Nonnegative OPLS for Supervised Design of Filter Banks:  
Application to Image and Audio Feature Extraction  
Sergio Muñoz-Romero ; Jerónimo Arenas-García ; Vanessa  
Gómez-Verdejo  
PDF (1456 KB)

Multiple Speaker Tracking in Spatial Audio via PHD Filtering and  
Depth-Audio Fusion  
Qingju Liu ; Wenwu Wang ; Teófilo de Campos ; Philip J. B.  
Jackson ; Adrian Hilton  
PDF (2041 KB)

Towards Individual QoE for Multiparty Videoconferencing  
Marwin Schmitt ; Judith Redi ; Dick Bulterman ; Pablo S. Cesar  
PDF (851 KB)

No-Reference Image Sharpness Assessment Based on Maximum  
Gradient and Variability of Gradients  
Yibing Zhan ; Rong Zhang  
PDF (1284 KB)

PQTable: Nonexhaustive Fast Search for Product-Quantized Codes  
Using Hash Tables  
Yusuke Matsui ; Toshihiko Yamasaki ; Kiyoharu Aizawa  
PDF (2548 KB)

Regularized Semi-non-negative Matrix Factorization for Hashing  
Yong Chen ; Hui Zhang ; Xiaopeng Zhang ; Rui Liu  
PDF (2012 KB)

Multigranular Event Recognition of Personal Photo Albums  
Cong Guo ; Xinmei Tian ; Tao Mei  
PDF (1036 KB)

Exploiting Video Quality Information With Lightweight Network  
Coordination for HTTP-Based Adaptive Video Streaming  
Zheng Lu ; Sangeeta Ramakrishnan ; Xiaoqing Zhu  
PDF (3644 KB)

Toward Rendering-Latency Reduction for Composable Web  
Services via Priority-Based Object Caching  
Han Hu ; Yuanlong Li ; Yonggang Wen  
PDF (1516 KB)

Perceptual Quality Maximization for Video Calls With Packet  
Losses by Optimizing FEC, Frame Rate, and Quantization  
Eymen Kurdoglu ; Yong Liu ; Yao Wang  
PDF (1524 KB)

Improving Existing Collaborative Filtering Recommendations via  
Serendipity-Based Algorithm  
Yongjian Yang ; Yuanbo Xu ; En Wang ; Jiayu Han ; Zhiwen Yu  
PDF (787 KB)

Fast-PADMA: Rapidly Adapting Facial Affect Model From Similar  
Individuals  
Michael Xuelin Huang ; Jiajia Li ; Grace Ngai ; Hong Va Leong ;  
Kien A. Hua  
PDF (1107 KB)

IEEE Transactions on Multimedia information for authors  
PDF (66 KB)

IEEE Transactions on Multimedia  
PDF (51 KB)

IEEE JOURNAL OF

# BIOMEDICAL AND HEALTH INFORMATICS

A PUBLICATION OF  
THE IEEE ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY  
THE IEEE COMMUNICATIONS SOCIETY  
THE IEEE SIGNAL PROCESSING SOCIETY



TECHNICALLY COSPONSORED BY THE IEEE COMPUTER SOCIETY



**JULY 2018**

**VOLUME 22**

**NUMBER 4**

**IJBHA9**

**(ISSN 2168-2194)**

Front Cover  
PDF (245 KB)

Cover  
PDF (73 KB)

Table of Contents  
PDF (208 KB)

Validation of a Commercial Android Smartwatch as an Activity Monitoring Platform  
James D. Amor ; Christopher J. James  
PDF (918 KB)

Automatic Recognition of Activities of Daily Living Utilizing Insole-Based and Wrist-Worn Wearable Sensors  
Nagaraj Hegde ; Matthew Bries ; Tracy Swibas ; Edward Melanson ; Edward Sazonov  
PDF (2008 KB)

Activity Recognition Using Complex Network Analysis  
Nahed Jalloul ; Fabienne Porée ; Geoffrey Viardot ; Phillipe L'Hostis ; Guy Carrault  
PDF (1176 KB)

Assessment of Homomorphic Analysis for Human Activity Recognition From Acceleration Signals  
Sebastián R. Vanrell ; Diego H. Milone ; H. Leonardo Rufiner  
PDF (611 KB)

Detection of Nocturnal Scratching Movements in Patients with Atopic Dermatitis Using Accelerometers and Recurrent Neural Networks  
Arnaud Moreau ; Peter Anderer ; Marco Ross ; Andreas Cerny ; Timothy H. Almazan ; Barry Peterson  
PDF (604 KB)

Quantitative Evaluation of Rehabilitation Effect on Peripheral Circulation of Diabetic Foot  
Yao-Kuang Huang ; Chang-Cheng Chang ; Pin-Xing Lin ; Bor-Shyh Lin  
PDF (859 KB)

Optimal Classification of Respiratory Patterns From Manual Analyses Using Expectation-Maximization  
Carlos Alejandro Robles-Rubio ; Karen A. Brown ; Robert E. Kearney  
PDF (2178 KB)

Cardiorespiratory Model-Based Data-Driven Approach for Sleep Apnea Detection  
Sandeep Gutta ; Qi Cheng ; Hoa Dinh Nguyen ; Bruce A. Benjamin  
PDF (948 KB)

Temporal Analysis of Cardiovascular and Respiratory Complexity by Multiscale Entropy Based on Symbolic Dynamics  
Sina Reulecke ; Sonia Charleston-Villalobos ; Andreas Voss ; Ramón González-Camarena ; Jesús A. González-Hermosillo ; Mercedes J. Gaitán-González ; Guadalupe Hernández-Pacheco ; Rico Schroeder ; Tomás Aljama-Corrales  
PDF (2106 KB)

Variational Mode Extraction: A New Efficient Method to Derive Respiratory Signals from ECG  
Mojtaba Nazari ; Sayed Mahmoud Sakhaei  
PDF (1308 KB)

Cuff-Less Blood Pressure Estimation Using Pulse Waveform Analysis and Pulse Arrival Time  
Young-Zoon Yoon ; Jae Min Kang ; Yongjoo Kwon ; Sangyun Park ; Seungwoo Noh ; Younho Kim ; Jongae Park ; Sung Woo Hwang  
PDF (995 KB)

Estimating SpO<sub>2</sub> via Time-Efficient High-Resolution Harmonics Analysis and Maximum Likelihood Tracking  
Feiyi Fan ; Yuepeng Yan ; Kun Zhao ; Fei Long ; Hao Zhang  
PDF (882 KB)

A Parametric Computational Analysis Into Galvanic Coupling Intrabody Communication  
M. Amparo Callejón ; P. del Campo ; Javier Reina-Tosina ; Laura M. Roa  
PDF (1232 KB)

Maximum-Entropy-Rate Selection of Features for Classifying Changes in Knee and Ankle Dynamics During Running  
Garry Allan Einicke ; Haider A. Sabti ; David V. Thiel ; Marta Fernandez  
PDF (765 KB)

S-EMG Signal Compression in One-Dimensional and Two-Dimensional Approaches  
Marcel H. Trabuco ; Marcus V. C. Costa ; Bruno Macchiavello ; Francisco Assis de O. Nascimento  
PDF (1262 KB)

Weighted Performance Metrics for Automatic Neonatal Seizure Detection Using Multiscored EEG Data  
Amir Hossein Ansari ; Perumpillichira Joseph Cherian ; Alexander Caicedo Dorado ; Katrien Jansen ; Anneleen Dereymaeker ; Leen De Wispelaere ; Charlotte Dielman ; Jan Vervisch ; Paul Govaert ; Maarten De Vos ; Gunnar Nauelaers ; Sabine Van Huffel  
PDF (1834 KB)

Success Rate and Technical Quality of Home Polysomnography With Self-Applicable Electrode Set in Subjects With Possible Sleep Bruxism  
Tomi Miettinen ; Katja Myllymaa ; Susanna Westeren-Punnonen ; Jari Ahlberg ; Taina Hukkanen ; Juha Töyräs ; Reijo Lappalainen ; Esa Mervaala ; Kirsi Sipilä ; Sami Myllymaa  
PDF (903 KB)

Riemann Liouville Fractional Integral Based Empirical Mode Decomposition for ECG Denoising  
Shweta Jain ; Varun Bajaj ; Anil Kumar  
PDF (924 KB)

Estimation of Pulse Transit Time From Radial Pressure Waveform Alone by Artificial Neural Network  
Hanguang Xiao ; Mark Butlin ; Isabella Tan ; Ahmad Qasem ; Alberto P. Avolio  
PDF (1113 KB)

Effectiveness Evaluation of Real-Time Scalp Signal Separating Algorithm on Near-Infrared Spectroscopy Neurofeedback  
Wei Chun Ung ; Tsukasa Funane ; Takusige Katura ; Hiroki Sato ; Tong Boon Tang ; Ahmad Fadzil M. Hani ; Masashi Kiguchi  
PDF (1089 KB)

Detection of Snores Using Source Separation on an Emfit Signal  
Jose Maria Perez-Macias ; Mirja Tenhunen ; Alpo Värrä ; Sari-Leena Himanen ; Jari Viik  
PDF (978 KB)

Optimized Computer-Aided Segmentation and Three-Dimensional Reconstruction Using Intracoronary Optical Coherence Tomography  
Lambros Athanasiou ; Farhad Rikhtegar Nezami ; Micheli Zanotti Galon ; Augusto Celso Lopes ; Pedro Alves Lemos ; José M. de la Torre Hernandez ; Eyal Ben-Assa ; Elazer R. Edelman  
PDF (1542 KB)

Real-Time Adaptation to Time-Varying Constraints for Medical Video Communications  
Zinonas C. Antoniou ; Andreas S. Panayides ; Marios Pantzaris ; Anthony G. Constantinides ; Constantinos S. Pattichis ; Marios S. Pattichis  
PDF (958 KB)

A New Ensemble Classification System For Fracture Zone Prediction Using Imbalanced Micro-CT Bone Morphometrical Data  
Vasileios Ch. Korfiatis ; Simone Tassani ; George K. Matsopoulos  
PDF (815 KB)

Multi-Hypergraph Learning for Incomplete Multimodality Data  
Mingxia Liu ; Yue Gao ; Pew-Thian Yap ; Dinggang Shen  
PDF (1244 KB)

Clustering of Morphological Features for Identifying Femur Cavity Subtypes With Difficulties of Intramedullary Nail Implantation  
Fang Chen ; Zhe Zhao ; Cong Gao ; Jia Liu ; Xiuyun Su ; Jingxin Zhao ; Peifu Tang ; Hongen Liao  
PDF (763 KB)

Automated Breast Ultrasound Lesions Detection Using Convolutional Neural Networks  
Moi Hoon Yap ; Gerard Pons ; Joan Martí ; Sergi Ganau ; Melcior Sentís ; Reyer Zwiggelaar ; Adrian K. Davison ; Robert Martí  
PDF (896 KB)

An Automatic Detection System of Lung Nodule Based on Multigroup Patch-Based Deep Learning Network  
Hongyang Jiang ; He Ma ; Wei Qian ; Mengdi Gao ; Yan Li  
PDF (4306 KB)

Designing of Ground-Truth-Annotated DBT-TU-JU Breast Thermogram Database Toward Early Abnormality Prediction  
Mrinal Kanti Bhowmik ; Usha Rani Gogoi ; Gautam Majumdar ; Debotosh Bhattacharjee ; Dhritiman Datta ; Anjan Kumar Ghosh  
PDF (790 KB)

Automatic Polyp Detection via a Novel Unified Bottom-Up and Top-Down Saliency Approach  
Yixuan Yuan ; Dengwang Li ; Max Q. -H. Meng  
PDF (1199 KB)

A New Active Contours Approach for Finger Extensor Tendon Segmentation in Ultrasound Images Using Prior Knowledge and Phase Symmetry  
Nelson Martins ; Saad Sultan ; Diana Veiga ; Manuel Ferreira ; Filipa Teixeira ; Miguel Coimbra  
PDF (827 KB)

Segmentation and Measurement of Chronic Wounds for Bioprinting  
Peyman Gholami ; Mohammad Ali Ahmadi-pajouh ; Nabiollah Abolfthahi ; Ghassan Hamarneh ; Mohammad Kayvanrad  
PDF (774 KB)

Size-Scalable Content-Based Histopathological Image Retrieval From Database That Consists of WSIs  
Yushan Zheng ; Zhiguo Jiang ; Haopeng Zhang ; Fengying Xie ; Yibing Ma ; Huaqiang Shi ; Yu Zhao  
PDF (1158 KB)

A Trust Model for Ubiquitous Healthcare Environment on the Basis of Adaptable Fuzzy-Probabilistic Inference System  
Georgia Athanasiou ; George C. Anastassopoulos ; Eleni Tiritidou ; Dimitrios Lymberopoulos  
PDF (3327 KB)

A Novel Authentication and Key Agreement Scheme for Implantable Medical Devices Deployment  
Mohammad Wazid ; Ashok Kumar Das ; Neeraj Kumar ; Mauro Conti ; Athanasios V. Vasilakos  
PDF (911 KB)

Design of Secure and Lightweight Authentication Protocol for Wearable Devices Environment

Ashok Kumar Das ; Mohammad Wazid ; Neeraj Kumar ; Muhammad Khurram Khan ; Kim-Kwang Raymond Choo ; YoungHo Park

PDF (1006 KB)

Machine Learning Approaches on Diagnostic Term Encoding With the ICD for Clinical Documentation

Aitziber Atutxa ; Alicia Pérez ; Arantza Casillas

PDF (641 KB)

IEEE Journal of Biomedical and Health Informatics (J-BHI) information for authors

PDF (44 KB)

# IEEE TRANSACTIONS ON SMART GRID

A PUBLICATION OF  
THE IEEE POWER & ENERGY SOCIETY



TECHNICALLY COSPONSORED BY THE IEEE COMMUNICATIONS SOCIETY,  
THE IEEE COMPUTATIONAL INTELLIGENCE SOCIETY, THE IEEE COMPUTER SOCIETY,  
THE IEEE CONSUMER ELECTRONICS SOCIETY, THE IEEE CONTROL SYSTEMS SOCIETY,  
THE IEEE INDUSTRIAL ELECTRONICS SOCIETY, THE IEEE INDUSTRY APPLICATIONS SOCIETY,  
THE IEEE INSTRUMENTATION AND MEASUREMENT SOCIETY, THE IEEE POWER ELECTRONICS SOCIETY  
AND THE IEEE SIGNAL PROCESSING SOCIETY



JULY 2018

VOLUME 9

NUMBER 4

ITSGBQ

(ISSN 1949-3053)

[Table of contents](#)  
PDF (871 KB)

[IEEE Transactions on Smart Grid publication information](#)  
PDF (77 KB)

[An Adaptive Markov Strategy for Defending Smart Grid False Data Injection From Malicious Attackers](#)  
Jianye Hao ; Eunsuk Kang ; Jun Sun ; Zan Wang ; Zhaopeng Meng ; Xiaohong Li ; Zhong Ming  
PDF (886 KB)

[Lifestyle Segmentation Based on Energy Consumption Data](#)  
Jungsuk Kwac ; June Flora ; Ram Rajagopal  
PDF (1557 KB)

[Energy Storage Control for Dispatching Photovoltaic Power](#)  
Morris Brenna ; Federica Foiadelli ; Michela Longo ; Dario Zaninelli  
PDF (2188 KB)

[Distributed Nonlinear Hierarchical Control of AC Microgrid via Unreliable Communication](#)  
He Cai ; Guoqiang Hu  
PDF (4905 KB)

[Tracking Transformer Tap Position in Real-Time Distribution Network Power Flow Applications](#)  
Rabih A. Jabr ; Izudin Džafić ; Sami karaki  
PDF (1168 KB)

[Consensus-Based Distributed Control for Accurate Reactive, Harmonic, and Imbalance Power Sharing in Microgrids](#)  
Jianguo Zhou ; Sunghyok Kim ; Huaguang Zhang ; Qiuye Sun ; Renke Han  
PDF (3193 KB)

[QoE-Aware Power Management in Vehicle-to-Grid Networks: A Matching-Theoretic Approach](#)  
Ming Zeng ; Supeng Leng ; Yan Zhang ; Jianhua He  
PDF (1131 KB)

[Resilient End-to-End Message Protection for Cyber-Physical System Communications](#)  
Youngjin Kim ; Vladimir Kolesnikov ; Marina Thottan  
PDF (1725 KB)

[Intelligent Out of Step Predictor for Inter Area Oscillations Using Speed-Acceleration Criterion as a Time Matching for Controlled Islanding](#)  
Mohammad Reza Salimian ; Mohammad Reza Aghamohammadi  
PDF (2229 KB)

[An Online Mechanism for Detection of Gray-Hole Attacks on PMU Data](#)  
Seemita Pal ; Biplab Sikdar ; Joe H. Chow  
PDF (1202 KB)

[Toward Cost-Oriented Forecasting of Wind Power Generation](#)  
Guo Li ; Hsiao-Dong Chiang  
PDF (1091 KB)



- Multi-Residential Demand Response Scheduling With Multi-Class Appliances in Smart Grid  
Seokjae Moon ; Jang-Won Lee  
PDF (1227 KB)
- Decentralized Model-Free Wind Farm Control via Discrete Adaptive Filtering Methods  
Shan Zhong ; Xiaodong Wang  
PDF (1233 KB)
- Modeling of Intrusion and Defense for Assessment of Cyber Security at Power Substations  
Ying Chen ; Junho Hong ; Chen-Ching Liu  
PDF (1323 KB)
- Smart House Management and Control Without Customer Inconvenience  
Thamer Alquthami ; A. P. Sakis Meliopoulos  
PDF (2169 KB)
- Uncertainty Level of Voltage in Distribution Network: An Analysis Model With Elastic Net and Application in Storage Configuration  
Pengwei Chen ; Shun Tao ; Xiangning Xiao ; Lu Li  
PDF (1672 KB)
- Toward Distributed/Decentralized DC Optimal Power Flow Implementation in Future Electric Power Systems  
Amin Kargarian ; Javad Mohammadi ; Junyao Guo ; Sambuddha Chakrabarti ; Masoud Barati ; Gabriela Hug ; Soumya Kar ; Ross Baldick  
PDF (1726 KB)
- PEV Fast-Charging Station Siting and Sizing on Coupled Transportation and Power Networks  
Hongcai Zhang ; Scott J. Moura ; Zechun Hu ; Yonghua Song  
PDF (1640 KB)
- Load Control Using Sensitivity Identification by Means of Smart Transformer  
Giovanni De Carne ; Giampaolo Buticchi ; Marco Liserre ; Constantine Vournas  
PDF (1793 KB)
- A New Mileage Payment for EV Aggregators With Varying Delays in Frequency Regulation Service  
Kab Seok Ko ; Sekyung Han ; Dan Keun Sung  
PDF (981 KB)
- Decentralized Coordination of a Building Manager and an Electric Vehicle Aggregator  
Jesus Elmer Contreras-Ocaña ; Mushfiqur R. Sarker ; Miguel A. Ortega-Vazquez  
PDF (1088 KB)
- An Adaptive Auto-Reclosing Scheme to Preserve Transient Stability of Microgrids  
Saeed Teimourzadeh ; Mahdi Davarpanah ; Farrokh Aminifar ; Mohammad Shahidehpour  
PDF (1618 KB)
- Incentivizing Energy Trading for Interconnected Microgrids  
Hao Wang ; Jianwei Huang  
PDF (800 KB)
- Robust Forecasting Aided Power System State Estimation Considering State Correlations  
Junbo Zhao ; Gexiang Zhang ; Zhao Yang Dong ; Massimo La Scala  
PDF (952 KB)
- Generation Adequacy Evaluation Incorporating an Aggregated Probabilistic Model of Active Distribution Network Components and Features  
Arijit Bagchi ; Lalit Goel ; Peng Wang  
PDF (2029 KB)
- Interactive Robust Model for Energy Service Providers Integrating Demand Response Programs in Wholesale Markets  
Esmaeil Mahboubi-Moghaddam ; Majid Nayeripour ; Jamshid Aghaei ; Amin Khodaei ; Eberhard Waffenschmidt  
PDF (1245 KB)
- Two-Scale Stochastic Optimization for Controlling Distributed Storage Devices  
Harsha Gangammanavar ; Suvrajeet Sen  
PDF (933 KB)
- Experimental Validation of a Three-Phase Off-Board Electric Vehicle Charger With New Power Grid Voltage Control  
Jia Ying Yong ; Vigna K. Ramachandaramurthy ; Kang Miao Tan ; Jeyraj Selvaraj  
PDF (2063 KB)
- Efficient Algorithm for Scalable Event-Based Demand Response Management in Microgrids  
Areg Karapetyan ; Majid Khonji ; Chi-Kin Chau ; Khaled Elbassioni ; Hatem H. Zeineldin  
PDF (1312 KB)
- A Novel Distributed Secondary Coordination Control Approach for Islanded Microgrids  
Xiaoqing Lu ; Xinghuo Yu ; Jingang Lai ; Yaonan Wang ; Josep M. Guerrero  
PDF (8769 KB)
- A Novel Framework for Evaluating Maximum PEV Penetration Into Distribution Systems  
Abdullah S. Bin Humayd ; Kankar Bhattacharya  
PDF (2290 KB)
- Interval Estimation for Conditional Failure Rates of Transmission Lines With Limited Samples  
Ming Yang ; Jianhui Wang ; Haoran Diao ; Junjian Qi ; Xueshan Han  
PDF (1855 KB)
- A Distributed, Cooperative Frequency and Voltage Control for Microgrids  
Xiangyu Wu ; Chen Shen ; Reza Iravani  
PDF (2216 KB)
- Phase Identification With Incomplete Data  
Minghao Xu ; Ran Li ; Furong Li  
PDF (1311 KB)
- Power Hardware-in-the-Loop Simulation Study on Frequency Regulation Through Direct Load Control of Thermal and Electrical Energy Storage Resources  
Young-Jin Kim ; Jianhui Wang  
PDF (2110 KB)
- Accurate Energy Use Estimation for Nonintrusive Load Monitoring in Systems of Known Devices  
Jacob A. Mueller ; Jonathan W. Kimball  
PDF (940 KB)
- Fault-Tolerant Supervisory Controller for a Hybrid AC/DC Micro-Grid  
Mehdi Hosseinzadeh ; Farzad Rajaei Salmasi  
PDF (2702 KB)

Wind Turbine Blade Breakage Monitoring With Deep Autoencoders  
Long Wang ; Zijun Zhang ; Jia Xu ; Ruihua Liu  
PDF (1762 KB)

A Novel Identity-Based Key Establishment Method for Advanced Metering Infrastructure in Smart Grid  
Amin Mohammadali ; Mohammad Sayad Haghighi ; Mohammad Hesam Tadayon ; Alireza Mohammadi-Nodooshan  
PDF (1682 KB)

A Distributed Approach for OPF-Based Secondary Control of MTDC Systems  
Catalin Gavriluta ; Raphael Caire ; Antonio Gomez-Exposito ; Nouredine Hadjsaid  
PDF (1154 KB)

Centralized Unbalanced Dispatch of Smart Distribution DC Microgrid Systems  
Tianqi Hong ; Francisco de León  
PDF (1678 KB)

Dynamic Load Altering Attacks Against Power System Stability: Attack Models and Protection Schemes  
Sajjad Amini ; Fabio Pasqualetti ; Hamed Mohsenian-Rad  
PDF (1663 KB)

A Contract Game for Direct Energy Trading in Smart Grid  
Biling Zhang ; Chunxiao Jiang ; Jung-Lang Yu ; Zhu Han  
PDF (813 KB)

Architecture and Experimental Validation of a Low-Latency Phasor Data Concentrator  
Asja Derviškić ; Paolo Romano ; Marco Pignati ; Mario Paolone  
PDF (1156 KB)

Rate-Constrained Energy Services in Electricity  
Matias Negrete-Pincetic ; Ashutosh Nayyar ; Kameshwar Poola ; Florian Salah ; Pravin Varaiya  
PDF (557 KB)

Transmission Grid Secondary Voltage Control Method Using PMU Data  
Heng-Yi Su ; Feng-Ming Kang ; Chih-Wen Liu  
PDF (1849 KB)

A Novel Metric to Quantify and Enable Resilient Distribution System Using Graph Theory and Choquet Integral  
Prabodh Bajpai ; Sayansom Chanda ; Anurag K. Srivastava  
PDF (2034 KB)

Maximum Uncertainty Boundary of Volatile Distributed Generation in Active Distribution Network  
Can Wan ; Jin Lin ; Wanfang Guo ; Yonghua Song  
PDF (1843 KB)

Interactive Energy-Saving Dispatch Considering Generation and Demand Side Uncertainties: A Chinese Study  
Jichun Liu ; Jie Li  
PDF (819 KB)

Secure Sum-Rate-Optimal MIMO Multicasting Over Medium-Voltage NB-PLC Networks  
Ahmed ElSamadouny ; Ahmed El Shafie ; Mohamed Abdallah ; Naofal Al-Dhahir  
PDF (819 KB)

Cooperative Control of Multi-Master–Slave Islanded Microgrid With Power Quality Enhancement Based on Conservative Power Theory  
Ali Mortezaei ; Marcelo Godoy Simões ; Mehdi Savaghebi ; Josep M. Guerrero ; Ahmed Al-Durra  
PDF (2822 KB)

Transient Stability Emergency Control Using Asynchronous Parallel Mixed-Integer Pattern Search  
Zhihao Li ; Guangchao Geng ; Quanyuan Jiang  
PDF (1645 KB)

Hierarchical Control of Thermostatically Controlled Loads for Primary Frequency Support  
Haoran Zhao ; Qiuwei Wu ; Shaojun Huang ; Hengxu Zhang ; Yutian Liu ; Yusheng Xue  
PDF (2261 KB)

Optimization of the Size of UPQC System Based on Data-Driven Control Design  
Jian Ye ; Hoay Beng Gooi ; Fengjiang Wu  
PDF (2152 KB)

Consensus Control for Energy Storage Systems  
Javad Khazaei ; Zhixin Miao  
PDF (2009 KB)

Tunable-Q Wavelet Transform and Dual Multiclass SVM for Online Automatic Detection of Power Quality Disturbances  
Karthik Thirumala ; M. Siva Prasad ; Trapti Jain ; Amod C. Umarikar  
PDF (1817 KB)

Voltage Regulation Support Along a Distribution Line by a Virtual Power Plant Based on a Center of Mass Load Modeling  
Panayiotis Moutis ; Pavlos S. Georgilakis ; Nikos D. Hatzigiorgiou  
PDF (2329 KB)

Microgrid Economic Dispatch With Energy Storage Systems  
Michael Ross ; Chad Abbey ; François Bouffard ; Géza Joós  
PDF (819 KB)

Reliability Assessment for Distribution Optimization Models: A Non-Simulation-Based Linear Programming Approach  
Gregorio Muñoz-Delgado ; Javier Contreras ; José M. Arroyo  
PDF (1021 KB)

Optimal Meeting Scheduling in Smart Commercial Building for Energy Cost Reduction  
Bo Chai ; Alberto Costa ; Selin Damla Ahipasaoglu ; Chau Yuen ; Zaiyue Yang  
PDF (1343 KB)

Distribution Network Protection Using Smart Dual Functional Series Resonance-Based Fault Current and Ferroresonance Overvoltage Limiter  
Hamid Radmanesh  
PDF (3555 KB)

A Hierarchical Hidden Markov Model Framework for Home Appliance Modeling  
Weicong Kong ; Zhao Yang Dong ; David J. Hill ; J. Ma ; J. H. Zhao ; F. J. Luo  
PDF (2008 KB)

Optimal Overcurrent Relay Coordination in Interconnected Networks by Using Fuzzy-Based GA Method  
D. Solati Alkaran ; M. R. Vatani ; M. J. Sanjari ; G. B. Gharehpetian ; M. S. Naderi  
PDF (2018 KB)

A Multi-Step Adaptive Interpolation Approach to Mitigating the Impact of Nonlinearity on Dynamic State Estimation  
Shahrokh Akhlaghi ; Ning Zhou ; Zhenyu Huang  
PDF (1890 KB)

Dynamic Demand Response Using Customer Coupons Considering Multiple Load Aggregators to Simultaneously Achieve Efficiency and Fairness  
Zhechao Li ; Shaorong Wang ; Xuejun Zheng ; Francisco de León ; Tianqi Hong  
PDF (1936 KB)

Variational Mode Decomposition and Decision Tree Based Detection and Classification of Power Quality Disturbances in Grid-Connected Distributed Generation System  
Pankaj D. Achlerkar ; S. R. Samantaray ; M. Sabarimalai Manikandan  
PDF (2108 KB)

Distribution Locational Marginal Pricing by Convexified ACOPF and Hierarchical Dispatch  
Zhao Yuan ; Mohammad Reza Hesamzadeh ; Darryl R. Biggar  
PDF (1600 KB)

A Fair and Budget-Balanced Incentive Mechanism for Energy Management in Buildings  
Tao Wang ; Yunjian Xu ; Chathura Withanage ; Lan Lan ; Selin Damla Ahipaşaoğlu ; Costas A. Courcoubetis  
PDF (1198 KB)

New Problem Formulation for Optimal Demand Side Response in Hybrid AC/DC Systems  
Chen Zhao ; Shufeng Dong ; Chenghong Gu ; Furong Li ; Yonghua Song ; Narayana Prasad Padhy  
PDF (1873 KB)

Identity Based Key Distribution Framework for Link Layer Security of AMI Networks  
Vahe Seferian ; Rouwaida Kanj ; Ali Chehab ; Ayman Kayssi  
PDF (2822 KB)

A Kernel-Based Predictive Model of EV Capacity for Distributed Voltage Control and Demand Response  
Hamed Valizadeh Haghi ; Zhihua Qu  
PDF (1975 KB)

Likelihood Analysis of Cyber Data Attacks to Power Systems With Markov Decision Processes  
Yingshuai Hao ; Meng Wang ; Joe H. Chow  
PDF (2164 KB)

On Stability and Robustness of Demand Response in V2G Mobile Energy Networks  
Weifeng Zhong ; Rong Yu ; Shengli Xie ; Yan Zhang ; David K. Y. Yau  
PDF (781 KB)

Experimental Demonstration of Frequency Regulation by Commercial Buildings—Part I: Modeling and Hierarchical Control Design  
Evangelos Vrettos ; Emre C. Kara ; Jason MacDonald ; Göran Andersson ; Duncan S. Callaway  
PDF (1140 KB)

Experimental Demonstration of Frequency Regulation by Commercial Buildings—Part II: Results and Performance Evaluation  
Evangelos Vrettos ; Emre C. Kara ; Jason MacDonald ; Göran Andersson ; Duncan S. Callaway  
PDF (3204 KB)

Extending Demand Response to Tenants in Cloud Data Centers via Non-Intrusive Workload Flexibility Pricing  
Yong Zhan ; Mahdi Ghamkhari ; Du Xu ; Shaolei Ren ; Hamed Mohsenian-Rad  
PDF (863 KB)

A Multi-Functional Fully Distributed Control Framework for AC Microgrids  
Qobad Shafiee ; Vahidreza Nasirian ; Juan C. Vasquez ; Josep M. Guerrero ; Ali Davoudi  
PDF (3057 KB)

Convolutional Neural Networks for Automatic State-Time Feature Extraction in Reinforcement Learning Applied to Residential Load Control  
Bert J. Claessens ; Peter Vrancx ; Frederik Ruelens  
PDF (1234 KB)

Unit Commitment for Isolated Microgrids Considering Frequency Control  
Mostafa Farrokhbadi ; Claudio A. Cañizares ; Kankar Bhattacharya  
PDF (1978 KB)

Distributed Scalable Autonomous Market-Based Demand Response via Residential Plug-In Electric Vehicles in Smart Grids  
Farshad Rassaei ; Wee-Seng Soh ; Kee-Chaing Chua  
PDF (1140 KB)

A Fast Technique for Smart Home Management: ADP With Temporal Difference Learning  
Chanaka Keerthisinghe ; Gregor Verbič ; Archie C. Chapman  
PDF (1388 KB)

Robust Time-Varying Load Modeling for Conservation Voltage Reduction Assessment  
Junbo Zhao ; Zhaoyu Wang ; Jianhui Wang  
PDF (1229 KB)

Privacy Protection Scheme Based on Remote Anonymous Attestation for Trusted Smart Meters  
Jia Zhao ; Jiqiang Liu ; Zhan Qin ; Kui Ren  
PDF (710 KB)

A New Low Cost Coupling System for Power Line Communication on Medium Voltage Smart Grids  
Giovanni Artale ; Antonio Cataliotti ; Valentina Cosentino ; Dario Di Cara ; Riccardo Fiorelli ; Salvatore Guaiana ; Giovanni Tinè  
PDF (1991 KB)

Optimal Penetration of Home Energy Management Systems in Distribution Networks Considering Transformer Aging  
Daniel J. Olsen ; Mushfiqur R. Sarker ; Miguel A. Ortega-Vazquez  
PDF (1365 KB)

A Short-Term and High-Resolution Distribution System Load Forecasting Approach Using Support Vector Regression With Hybrid Parameters Optimization  
Huaiguang Jiang ; Yingchen Zhang ; Eduard Muljadi ; Jun Jason Zhang ; David Wenzhong Gao  
PDF (1353 KB)

Error-Resilient Masking Approaches for Privacy Preserving Data Aggregation  
Fabian Knirsch ; Günther Eibl ; Dominik Engel  
PDF (929 KB)

An Extensible Approach for Non-Intrusive Load Disaggregation With Smart Meter Data  
Weicong Kong ; Zhao Yang Dong ; Jin Ma ; David J. Hill ; Junhua Zhao ; Fengji Luo  
PDF (1785 KB)

Electrical Distance Approach for Searching Vulnerable Branches During Contingencies  
Shiva Poudel ; Zhen Ni ; Wei Sun  
PDF (1351 KB)

Wide-Area Damping Control Using Multiple DFIG-Based Wind Farms Under Stochastic Data Packet Dropouts  
Amirthagunaraj Yogarathinam ; Nilanjan Ray Chaudhuri  
PDF (2099 KB)

A Decentralized Multi-Agent Approach for Service Restoration in Uncertain Environment  
Anurag Sharma ; Dipti Srinivasan ; Anupam Trivedi  
PDF (2583 KB)

A Decentralized Adaptive Model-Based Real-Time Control for Active Distribution Networks Using Battery Energy Storage Systems  
Maryam Bahramipناه ; Dimitri Torregrossa ; Rachid Cherkaoui ; Mario Paolone  
PDF (2435 KB)

Network Topology Independent Multi-Agent Dynamic Optimal Power Flow for Microgrids With Distributed Energy Storage Systems  
Thomas Morstyn ; Branislav Hredzak ; Vassilios G. Agelidis  
PDF (2580 KB)

Least-Cost Reserve Offer Deliverability in Day-Ahead Generation Scheduling Under Wind Uncertainty and Generation and Network Outages  
Noemi G. Cobos ; José M. Arroyo ; Alexandre Street  
PDF (946 KB)

Economic Advantages of Office Buildings Providing Ancillary Services With Intraday Participation  
Faran A. Qureshi ; Ioannis Lymperopoulos ; Ali Ahmadi Khatir ; Colin N. Jones  
PDF (914 KB)

Making Data Centers Fit for Demand Response: Introducing GreenSDA and GreenSLA Contracts  
Robert Basmadjian ; Juan Felipe Botero ; Giovanni Giuliani ; Xavier Hesselbach ; Sonja Klingert ; Hermann De Meer  
PDF (1060 KB)

Agent-Based Modeling of Retail Electrical Energy Markets With Demand Response  
Kaveh Dehghanpour ; M. Hashem Nehrir ; John W. Sheppard ; Nathan C. Kelly  
PDF (1106 KB)

Considering Thermodynamic Characteristics of a CAES Facility in Self-Scheduling in Energy and Reserve Markets  
Soroush Shafiee ; Hamidreza Zareipour ; Andrew M. Knight  
PDF (1078 KB)

Active Power Quality Improvement Strategy for Grid-Connected Microgrid Based on Hierarchical Control  
Wei Feng ; Kai Sun ; Yajuan Guan ; Josep M. Guerrero ; Xi Xiao  
PDF (3269 KB)

TAI: A Threshold-Based Anonymous Identification Scheme for Demand-Response in Smart Grids  
Zhiyuan Sui ; Michael Niedermeier ; Hermann de Meer  
PDF (984 KB)

A Fully Distributed Cooperative Charging Approach for Plug-In Electric Vehicles  
Javad Mohammadi ; Gabriela Hug ; Soumya Kar  
PDF (1016 KB)

Optimization of Aggregate Capacity of PEVs for Frequency Regulation Service in Day-Ahead Market  
Enxin Yao ; Vincent W. S. Wong ; Robert Schober  
PDF (1085 KB)

Undetectable Timing-Attack on Linear State-Estimation by Using Rank-1 Approximation  
Sergio Barreto ; Marco Pignati ; György Dán ; Jean-Yves Le Boudec ; Mario Paolone  
PDF (2824 KB)

Resilient Distributed DC Optimal Power Flow Against Data Integrity Attack  
Jie Duan ; Wenteng Zeng ; Mo-Yuen Chow  
PDF (1585 KB)

A Decision-Making Auction Algorithm for Demand Response in Microgrids  
Chih-Lun Chang ; Jimmy C. -H. Peng  
PDF (1129 KB)

Optimal Routing and Charging of an Electric Vehicle Fleet for High-Efficiency Dynamic Transit Systems  
Tao Chen ; Bowen Zhang ; Hajir Pourbabak ; Abdollah Kavousi-Fard ; Wencong Su  
PDF (1944 KB)

A Parallelized Contour Integral Rayleigh–Ritz Method for Computing Critical Eigenvalues of Large-Scale Power Systems  
Yongjie Li ; Guangchao Geng ; Quanyuan Jiang  
PDF (1523 KB)

Distributed Control of Battery Energy Storage Systems for Voltage Regulation in Distribution Networks With High PV Penetration  
Mehdi Zeraati ; Mohamad Esmail Hamedani Golshan ; Josep M. Guerrero  
PDF (2303 KB)

A Three-Phase Microgrid Restoration Model Considering Unbalanced Operation of Distributed Generation  
Zeyu Wang ; Jianhui Wang ; Chen Chen  
PDF (1459 KB)

Development of New Predictors Based on the Concept of Center of Power for Transient and Dynamic Instability Detection  
Hussein Suprême ; Louis-A. Dessaint ; Innocent Kamwa ; Annissa Heniche-Oussédik  
PDF (2231 KB)

A Two-Layer Framework for Quantifying Demand Response Flexibility at Bulk Supply Points  
Ke Wang ; Rongxin Yin ; Liangzhong Yao ; Jianguo Yao ; Taiyou Yong ; Nicholas Deforest  
PDF (2439 KB)

Dynamic Minimum Voltage Tracking in Electrochemical Batteries for Power Capability Estimation in Microgrids  
M. García-Plaza ; J. Eloy-García Carrasco ; J. Alonso-Martínez  
PDF (832 KB)

Enhancing Damping Performance of Emerging Distribution Systems by Load Controller  
Sudarshan Dahal ; Nadarajah Mithulananthan ; Tapan Kumar Saha  
PDF (1359 KB)

Multi-UAV Pre-Positioning and Routing for Power Network Damage Assessment  
Gino J. Lim ; Seonjin Kim ; Jaeyoung Cho ; Yibin Gong ; Amin Khodaei  
PDF (1448 KB)

Control Strategies for Microgrids With Distributed Energy Storage Systems: An Overview  
Thomas Morstyn ; Branislav Hredzak ; Vassilios G. Agelidis  
PDF (1050 KB)

Peer-to-Peer Control System for DC Microgrids  
Annette Werth ; Alexis André ; Daisuke Kawamoto ; Tadashi Morita ; Shigeru Tajima ; Mario Tokoro ; Daiki Yanagidaira ; Kenji Tanaka  
PDF (1736 KB)

A Framework for Load Service Restoration Using Dynamic Change in Boundaries of Advanced Microgrids With Synchronous-Machine DGs  
Young-Jin Kim ; Jianhui Wang ; Xiaonan Lu  
PDF (3455 KB)

Three-Phase Optimal Power Flow for Market-Based Control and Optimization of Distributed Generations  
Fanjun Meng ; Badrul Chowdhury ; Manohar Chamanamcha  
PDF (1668 KB)

Incentivizing Energy Reduction for Emergency Demand Response in Multi-Tenant Mixed-Use Buildings  
Nguyen H. Tran ; Chuan Pham ; Minh N. H. Nguyen ; Shaolei Ren ; Choong Seon Hong  
PDF (1328 KB)

Single Point Conducted EMI Sensor With Intelligent Inference for Detecting IT Appliances  
Manoj Gulati ; Shobha Sundar Ram ; Angshul Majumdar ; Amarjeet Singh  
PDF (2147 KB)

SoH-Aware Reconfiguration in Battery Packs  
Liang He ; Zhe Yang ; Yu Gu ; Cong Liu ; Tian He ; Kang G. Shin  
PDF (1498 KB)

Three-Stage Distribution Feeder Control Considering Four-Quadrant EV Chargers  
Mauricio Restrepo ; Claudio A. Cañizares ; Mehrdad Kazerani  
PDF (2158 KB)

Distributed Real-Time Energy Management in Data Center Microgrids  
Liang Yu ; Tao Jiang ; Yulong Zou  
PDF (1180 KB)

EV Dispatch Control for Supplementary Frequency Regulation Considering the Expectation of EV Owners  
Hui Liu ; Junjian Qi ; Jianhui Wang ; Peijie Li ; Canbing Li ; Hua Wei  
PDF (1880 KB)

Optimal Allocation of Smart Substations in a Distribution System Considering Interruption Costs of Customers  
Lei Sun ; Shi You ; Junjie Hu ; Fushuan Wen  
PDF (1442 KB)

High-Impedance Fault Detection Based on Nonlinear Voltage-Current Characteristic Profile Identification  
Bin Wang ; Jianzhao Geng ; Xinzhou Dong  
PDF (1683 KB)

Reinforcement Learning Applied to an Electric Water Heater: From Theory to Practice  
F. Ruelens ; B. J. Claessens ; S. Quaiyum ; B. De Schutter ; R. Babuška ; R. Belmans  
PDF (1297 KB)

Non-Intrusive Energy Use Monitoring for a Group of Electrical Appliances  
Yu Liu ; Guangchao Geng ; Shan Gao ; Wilsun Xu  
PDF (1949 KB)

Reverse Power Flow Control in a ST-Fed Distribution Grid  
Giovanni De Carne ; Giampaolo Buticchi ; Zhixiang Zou ; Marco Liserre  
PDF (2149 KB)

Generalized FDIA-Based Cyber Topology Attack With Application to the Australian Electricity Market Trading Mechanism  
Gaoqi Liang ; Steven R. Weller ; Fengji Luo ; Junhua Zhao ; Zhao Yang Dong  
PDF (1481 KB)

Hybrid AC-DC Microgrid: Systematic Evaluation of Control Strategies  
Ajay Gupta ; Suryanarayana Doolla ; Kishore Chatterjee  
PDF (2135 KB)

Hierarchical Control of Residential HVAC Units for Primary Frequency Regulation  
Xiaoyu Wu ; Jinghan He ; Yin Xu ; Jian Lu ; Ning Lu ; Xiaojun Wang  
PDF (3759 KB)

Modeling the Strategic Behavior of a Distribution Company in Wholesale Energy and Reserve Markets  
Salah Bahramara ; Maziar Yazdani-Damavandi ; Javier Contreras ; Miadreza Shafie-Khah ; João P. S. Catalão  
PDF (2079 KB)

Comprehensive Optimization Model for Sizing and Siting of DG Units, EV Charging Stations, and Energy Storage Systems  
Ozan Erdiñç ; Akin Taşçıkaraoğlu ; Nikolaos G. Paterakis ; İlker Dursun ; Murat Can Sinim ; João P. S. Catalão  
PDF (4711 KB)

A Comprehensive Model to Integrate Emerging Resources From Supply and Demand Sides  
Miadreza Shafie-Khah ; Nadali Mahmoudi ; Pierluigi Siano ; Tapan K. Saha ; João P. S. Catalão  
PDF (2156 KB)

Prediction Based Hierarchical Compensation for Delays in Wide-Area Control Systems  
Fang Zhang ; Lin Cheng ; Wenzhong Gao  
PDF (955 KB)

Towards Proactive Scheduling of Microgrids Against Extreme Floods  
M. H. Amirioun ; F. Aminifar ; H. Lesani  
PDF (611 KB)

Power Flow of Islanded AC Microgrids: Revisited  
Georgios C. Kryonidis ; Eleftherios O. Kontis ; Andreas I. Chrysochos ; Konstantinos O. Oureilidis ; Charis S. Demoulias ; Grigoris K. Papagiannis  
PDF (553 KB)

An Ensemble Forecasting Method for the Aggregated Load With Subprofiles  
Yi Wang ; Qixin Chen ; Mingyang Sun ; Chongqing Kang ; Qing Xia  
PDF (515 KB)

Adaptive Control of Microgrid Security  
Saeed Teimourzadeh ; Farrokh Aminifar ; Mahdi Davarpanah ; Mohammad Shahidehpour  
PDF (461 KB)

Generalized Microgrid Power Flow  
Lingyu Ren ; Peng Zhang  
PDF (689 KB)

A Measurement Source Authentication Methodology for Power System Cyber Security Enhancement  
Yi Cui ; Feifei Bai ; Yong Liu ; Yilu Liu  
PDF (1090 KB)

A Superimposed Current Based Unit Protection Scheme for DC Microgrid  
Rabindra Mohanty ; Ashok Kumar Pradhan  
PDF (664 KB)

A Novel Consensus-Based Economic Dispatch for Microgrids  
Zhiyuan Tang ; David J. Hill ; Tao Liu  
PDF (545 KB)

IEEE Power Engineering Society information for authors  
PDF (71 KB)

Blank page  
PDF (5 KB)