TABLE OF CONTENTS

Impact of Power Control on Capacity of TDM-scheduled Wireless Mesh Networks.......................................................... 1
Parth H. Pathak, Rudra Dutta

Increasing Transmission Power for Higher Based-station Anonymity in Wireless Sensor Networks................................. 7
Yousef Ebrahimi, Mohamed Younis

Prolonging Network Lifetime via Nodal Energy Balancing in Heterogenous Wireless Sensor Networks.......................... 12
Afshin Behzadan, Alagan Anpalagan, Bobby Ma

Minimum-Energy-Cost Algorithm Based on Superframe Adaptation Control.............................................................. 17
Qiang Lin, Jun Tian

Adaptive Sleeping Periods in IEEE 802.15.4 for Efficient Energy Savings: Markov-Based Theoretical Analysis...................... 22
Mounib Khanajer, Mouhcine Guennoun, Hussein T. Mouftah

Benazir Fateh, Manimaran Govindarasu

Jalel Ben-Othman, Lynda Mokdad, Bashir Yahya

Manjunath Doodaventkatappa, Mon Choong Chan

A Cooperative Low Power Mac Protocol for Wireless Sensor Networks............................................................. 45
Ahmed Ben Nacef, Sidi-Mohamed Sensouci, Yacine Ghamri-Doudane, Andre-Luc Beylou

Fei Tong, Wan Tang, Rong Xie, Lei Shu, Young-Chon Kim

Opportunistic Spectrum Access for Cognitive Radio in the Presence of Reactive Primary Users...................................... 56
Yue Ling Che, Rui Zhang, Yi Gong

Spectrum Allocation Framework for Multiuser Cognitive Radio Systems............................................................ 61
Mohammad Iqbal Bin Shahid, Joarder Kamruzzaman

Opportunistic Spectrum Access with Channel Switching Cost for Cognitive Radio Networks....................................... 67
Lin Chen, Stefano Iellamo, Marceau Coupechoux

Exploiting Heterogeneity Wireless Channels for Opportunistic Routing in Dynamic Spectrum Access Networks.................. 72
Yongkang Liu, Lin X. Cai, Xuemin Shen, Jon W. Mark

Opportunistic Spectrum Access Protocol for Cognitive Radio Networks............................................................ 77
Qian Chen, Mehul Motani, Wai-Choong Wong, Ying-Chang Liang

Fine-grained Identification with Real-time Fairness in Mobile Social Networks.......................................................... 83
Xiaohui Liang, Xu Li, Rongxing Lu, Xiaodong Lin, Xuemin Shen

Netshuffle: Improving Traffic Trace Anonymization Through Graph Distortion............................................................ 88
Victor C. Valgenti, Ruma R. Paul, Min Sik Kim

PEKSrand: Providing Predicate Privacy in Public-key Encryption with Keyword Search............................................. 94
Benwen Zhu, Bo Zhu, Kai Ren

Timing Attacks on a Centralized Presence Model........................................................................................................ 100
Ge Zhang

On the Trade-off between Relationship Anonymity and Communication Overhead in Anonymity Networks.......................... 105
Ognjen Vukovic, Gyorgy Dan, Gunnar Karlsson

Identity-based Conditional Proxy Re-encryption........................................................................................................ 111
Jun Shao, Guiyi Wei, Yun Ling, Mande Xie

From Chaos to Secret Key Agreement............................................................................................................................ 116
Megumi Ando

Multi-use Unidirectional Proxy Re-Encryption............................................................................................................. 121
Jun Shao, Peng Liu, Zhenfia Cao, Guiyi Wei

Efficient Non Symmetric Pairing Groups on Ordinary Pairing Friendly Curve of Embedding Degree 1................................. 126
Tetsuya Izuu, Yasuyuki Nogami, Yoshitaka Morikawa

Unidirectional Identity-based Proxy Re-signature........................................................................................................... 131
Jun Shao, Guiyi Wei, Yun Ling, Mande Xie

ISP-Supported Traffic Reduction for Application-level Multicast.................................................................................. 136
Piotr Wydrych, Piotr Cholda
A Case for Multimedia QoS Provisioning in Home Networks.................................................................142
Liang Tang, Jin Zhu, Hong-Sheng Xi

A Comparison of Channel Switching Schemes for IPTV Systems..........................................................148
Daniel A. G. Manzoato, Nelson L. S. Da Fonseca

QoE-driven Sender Bitrate Adaptation Scheme for Video Applications over IP Multimedia Subsystem.................................................................154
Aniya Khan, Ir-Haka Mbwava, Lingfen Sun, Emmanuel Ifeachor

On the Comparison of Real-time Rate Control Schemes for H.264/AVC Video Streams over IP-based Networks using Network Feedbacks .........................................................160
Lampros Dounis, Ilias Politis, Tassos Dagiskias

A Sphere-Packing Analysis of Incremental Redundancy with Feedback .............................................166
Tsang-Yi Chen, Nambi Seshadri, Richard D. Wesel

Turbo Codes Based on Time-Variant Memory-1 Convolutional Codes over $F_q$ ................................171
Gianluigi Liva, Sandro Scalise, Enrico Paolini, Marco Chiani

On Efficient Recovery of Erased Symbols in Generalized Reed-Solomon Codes ................................177
Jaschi Brauchle

Channel Coding over Multiple Coherence Blocks with Queuing Constraints....................................182
Deli Qiao, Mustafa Cenk Gursoy, Senem Velipasalar

The Performance of Short Random Linear Fountain Codes under Maximum Likelihood Decoding 187
Birgit Schotsch, Henning Schepker, Peter Vary

Scheme to Find k Disjoint Paths in Multi-Cost Networks .................................................................192
Ruchaneyaa Leepila, Eiji Oki, Naoto Kishi

Shared Backup Path Protection for Anycast and Unicast Flows Using the Node-Link Notation .............197
Krzysztof Walkowiak, Jacek Rak

Collaborative Resource Allocation for Self-Healing in Self-Organizing Networks ................................203
Kisong Lee, Howon Lee, Dong-Ho Cho

On the Robustness of Optimal Network Designs ..............................................................................208
Arie M. C. A. Koster, Manuel Katschka, Christian Raack

Design and Analysis of Networks with Large Components in Presence of Region-Based Faults ..........213
Sujogya Banerjee, Shahrzad Shirazi, Arunabha Sen

Energy-Conserving Switch Architecture for LANs ..............................................................................219
Candy Yiu, Suresh Singh

Selective Request Round-Robin Scheduling for VOQ Packet Switch Architecture ..............................225
Dong Lin, Ying Jiang, Mountir Hamdi

Bit-Shuffled Trie: IP Lookup with Multi-Level Index Tables ................................................................230
Derek Pao, Ziyun Lu, Yat Hang Poon

Multi-Level Round-Robin Multicast Scheduling with Look-Ahead Mechanism ................................235
Hao Yu, Sarah Ruepp, Michael S. Berger

A Lock-Controlled Session Table Partitioning Scheme with Dynamic Resource Balancing for Multi-Core Architecture ..............................................................240
Wen-Yen Tsai, Nen-Fu Huang, Hsien-Wei Hung

Low Carbon Emission IP over WDM network ......................................................................................245
Xiaowen Dong, Taisir El-Gorashi, Jaafar M. H. Elmarghani

Dynamic Power-Aware Routing and Wavelength Assignment for Green WDM Optical Networks ....251
Angelo Cioiri, Marco Listanti, Alessandro Valentini

Energy-Aware RWA for WDM Networks with Dual Power Sources .....................................................257
Sergio Ricciardi, Davide Careglio, Francesco Palmieri, Ugo Fiore, German Santos-Boada, Josep Sole-Pareta

ONU Buffer Elimination for Power Savings in Passive Optical Networks ........................................263
Ganesh C. Sankaran, Krishna M. Sivalingam

On the Energy Efficiency of Optical Transport with Time Driven Switching .......................................268
Francesco Musumeci, Francesca Vismara, Vida Grkovic, Massimo Tornatore, Achille Pattavina

A Fast Channel Estimation Method for Disorderly Leaving Events in Vectored DSL Systems ........273
Chenguang Lu, Per-Erik Eriksson

Adaptive Dynamic Bandwidth Allocation Scheme for Multiple-Services in 10G-EPON System ........279
Masaki Tanaka, Takashi Nishitani, Hiroaki Mukai, Seiji Kozuki, Hideaki Yamanaka

The SAC OCDMA PON with Super Perfect Difference Code ............................................................284
Shin-Pin Tseng, Jingshown Wu

Cloud-over-WOBAN (CoW): An Offloading-Enabled Access Network Design ..................................288
Abu Reaz, Vishwanath Ramamurthi, Massimo Tornatore

A Two-dimension Opportunistic CSMA/CA Protocol for OFDMA-based In-home PLC Networks ....293
Rongping Dong, Meryem Ozayz, Samir Saoudi
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity DBA Technique for Fairly Handling Various Types of EPON ONU</td>
<td>299</td>
</tr>
<tr>
<td>Daisuke Murayama, Noriaki Oota, Ken-Ichi Suzuki, Naoto Yoshimoto</td>
<td></td>
</tr>
<tr>
<td>Automatic Protection, Restoration, and Survivability of Long-Reach Passive Optical Networks</td>
<td>305</td>
</tr>
<tr>
<td>Elaine Wong, Ki-Lun Lee</td>
<td></td>
</tr>
<tr>
<td>A Development of Network Topology of Wireless Packet Communications for Disaster Situation with Genetic Algorithms or with Dijkstra's</td>
<td>311</td>
</tr>
<tr>
<td>Hiroshi Juzoji, Isao Nakajima</td>
<td></td>
</tr>
<tr>
<td>An Energy-efficient Elderly Tracking Algorithm</td>
<td>316</td>
</tr>
<tr>
<td>Xiaoming Xiao, Albert Kai-San Wang, Kim Tim Woo, Roger Shiu-Kwan Cheng</td>
<td></td>
</tr>
<tr>
<td>Assessment of Speech Discrimination Based on the Event-Related Potentials to the Visual Stimuli</td>
<td>321</td>
</tr>
<tr>
<td>Koji Moritaka, Kazuki Kozuka, Shinobu Adachi</td>
<td></td>
</tr>
<tr>
<td>From Mobile Computers to Mobile Information? - A Case Study of Physicians’ Mobile Information Use</td>
<td>326</td>
</tr>
<tr>
<td>Daniel Ferreira, Sara Rocha, Joao Santos, Susan Hauser</td>
<td></td>
</tr>
<tr>
<td>Raptor Coding for Non-orthogonal Multiple Access Channels</td>
<td>330</td>
</tr>
<tr>
<td>Mohammad Jahbari Haghi, M. Reza Soleymani</td>
<td></td>
</tr>
<tr>
<td>Flexible On-line Construction of IRA Codes for Packet Erasure Correction with Application to Aeronautical Communications</td>
<td>336</td>
</tr>
<tr>
<td>Gianlugi Liva, Paola Pulini, Marco Chiani</td>
<td></td>
</tr>
<tr>
<td>RF Emitter Location Using A Network of Small Unmanned Aerial Vehicles (SUAVs)</td>
<td>342</td>
</tr>
<tr>
<td>Jing Liang, Qilian Liang</td>
<td></td>
</tr>
<tr>
<td>Channel Estimation for Two-Way Relay Networks under Time-Selective Environment</td>
<td>348</td>
</tr>
<tr>
<td>Gongpu Wang, Feifei Gao, Wen Chen, Chintha Tellambura</td>
<td></td>
</tr>
<tr>
<td>Superimposed Training Based Channel Estimation for OFDM Modulated AF Relay Networks</td>
<td>353</td>
</tr>
<tr>
<td>Feifei Gao, Bin Jiang, Xiao Gao, Xian-Da Zhang</td>
<td></td>
</tr>
<tr>
<td>Doubly Selective Cascaded Channel Estimation in Amplify-and-Forward Relay Systems</td>
<td>358</td>
</tr>
<tr>
<td>Lo c Canonne-Velasques, Hung Nguyen-Le, Tho Le-Ngoc</td>
<td></td>
</tr>
<tr>
<td>Distributed Angle Estimation for Wireless Sensor Network Localization with Multipath Fading</td>
<td>363</td>
</tr>
<tr>
<td>Weile Zhang, Qinye Yin, Hongyang Chen, Wenjie Wang, Tomoaki Ohnuki</td>
<td></td>
</tr>
<tr>
<td>Channel Estimation Improvement for MIMO Single-Carrier Block Transmission System</td>
<td>369</td>
</tr>
<tr>
<td>Yafei Hou, Tomohiro Hase</td>
<td></td>
</tr>
<tr>
<td>A Novel Link Error Prediction Model for OFDM Systems with HARQ</td>
<td>375</td>
</tr>
<tr>
<td>Josep Colom Ikano, Christian Mehlfehrer, Markus Rupp</td>
<td></td>
</tr>
<tr>
<td>Capacity Based Adaptive Power Allocation for the OFDM Relay Networks with Limited Feedback</td>
<td>380</td>
</tr>
<tr>
<td>Yong Liu, Wen Chen, Xiaopeng Huang</td>
<td></td>
</tr>
<tr>
<td>A New SNR Prediction Method for MIMO-OFDM Systems with Maximum Likelihood Detector</td>
<td>385</td>
</tr>
<tr>
<td>Jihoon Kim, Sung-Hyun Moon, Chang Kyung Sung, Inkyu Lee</td>
<td></td>
</tr>
<tr>
<td>Efficient OFDM Denial: Pilot Jamming and Pilot Nulling</td>
<td>390</td>
</tr>
<tr>
<td>T. Charles Clancy</td>
<td></td>
</tr>
<tr>
<td>Joint Cyclostationarity-based Detection and Classification of Mobile WiMAX and LTE OFDM Signals</td>
<td>395</td>
</tr>
<tr>
<td>Ala’A Al-Habashna, Octavia A. Dobre, Ramachandra Venkatesan, Dimitrie C. Popescu</td>
<td></td>
</tr>
<tr>
<td>Range of Achievable Diversity Order in Multiple Relay Networks with Multiple Users</td>
<td>401</td>
</tr>
<tr>
<td>Junus Kim, Diomidis S. Michalopoulos, Robert Schober</td>
<td></td>
</tr>
<tr>
<td>Outage Probability and SER of Multi-antenna Fixed Gain Relaying in Cooperative MIMO Networks</td>
<td>407</td>
</tr>
<tr>
<td>Phee Lep Yeh, Maged Elkaslan, Iain B. Collins</td>
<td></td>
</tr>
<tr>
<td>Achieving Space Diversity with Non-coherent AF Relaying</td>
<td>413</td>
</tr>
<tr>
<td>S. H. Song, K. B. Letaiief</td>
<td></td>
</tr>
<tr>
<td>Repetition-Based Noncoherent Multihop Relaying in Block Rayleigh Fading</td>
<td>418</td>
</tr>
<tr>
<td>Yanwen Li, Golnaz Farhadi, Norman C. Beaulieu</td>
<td></td>
</tr>
<tr>
<td>Improving the Diversity-Multiplexing Tradeoff with Repetition-Coded Relaying in Wireless Downlink</td>
<td>424</td>
</tr>
<tr>
<td>Ernest S. Lo</td>
<td></td>
</tr>
<tr>
<td>Cooperative Spectrum Allocation for Cognitive Radio Network: An Evolutionary Approach</td>
<td>430</td>
</tr>
<tr>
<td>Zhengwei Wu, Peng Cheng, Xingbing Wang, Xiaoying Gan, Hui Yu, Hailong Wang</td>
<td></td>
</tr>
<tr>
<td>Opportunistic Cooperation for Distributed Spectrum Sensing in Cognitive Radio</td>
<td>435</td>
</tr>
<tr>
<td>Yang Li, Aria Nosratinia, Wei Zhang</td>
<td></td>
</tr>
<tr>
<td>Power Budget Allocations for Auctions with Multi-bands in Cooperation-based Spectrum Leasing</td>
<td>440</td>
</tr>
<tr>
<td>Hyoung-Jin Lim, Dae-Young Seol, Gi-Hong Im</td>
<td></td>
</tr>
<tr>
<td>On the Capacity of Multiple Cognitive Links through CommonRelay under Spectrum-Sharing Constraints</td>
<td>446</td>
</tr>
<tr>
<td>Yuli Yang, Sonia Aissa</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Linear Precoder Designs for Cognitive Radio Multiuser MIMO Downlink Systems</td>
<td>451</td>
</tr>
<tr>
<td>Kyoung-Jae Lee, Hakyea Sung, Inkyu Lee</td>
<td></td>
</tr>
<tr>
<td>Cooperative Transmission with a Slotted Incremental Decode-and-forward Protocol</td>
<td>456</td>
</tr>
<tr>
<td>Tao Yang, Jinhong Yuan</td>
<td></td>
</tr>
<tr>
<td>Cooperative Two-Way Filter-and-Forward Beamforming for Frequency-Selective Channels</td>
<td>462</td>
</tr>
<tr>
<td>Yang-Wen Liang, Aissa Ikhef, Wolfgang Gerstacker, Robert Schober</td>
<td></td>
</tr>
<tr>
<td>Multipath-Doppler Diversity for Broadband Cooperative Vehicular Communications</td>
<td>468</td>
</tr>
<tr>
<td>Mohamed Fathy Feteisha, Murat Uysal</td>
<td></td>
</tr>
<tr>
<td>A New Rateless Coded Cooperation Scheme for Multiple Access Channels</td>
<td>474</td>
</tr>
<tr>
<td>Wei Chen, Wen Chen</td>
<td></td>
</tr>
<tr>
<td>A Field Trial of Multi-cell Cooperative Transmission over LTE System</td>
<td>479</td>
</tr>
<tr>
<td>Atsushi Nagata, Kenji Hoshino, Manabu Mkami, Teruya Fuji</td>
<td></td>
</tr>
<tr>
<td>A Rao-Blackwellized Markov Chain Monte Carlo Algorithm for Efficient MIMO Detection</td>
<td>484</td>
</tr>
<tr>
<td>Martin Senst, Gerd Ascheid</td>
<td></td>
</tr>
<tr>
<td>An Adaptive Spectrum Sensing Algorithm under Noise Uncertainty</td>
<td>490</td>
</tr>
<tr>
<td>Shibing Zhang, Zhilhua Bao</td>
<td></td>
</tr>
<tr>
<td>Compressed Correlation-Matching for Spectrum Sensing in Sparse Wideband Regimes</td>
<td>495</td>
</tr>
<tr>
<td>Josep Font-Segura, Gregori Vazquez, Jaume Riba</td>
<td></td>
</tr>
<tr>
<td>Efficient SSS Detection for Neighbor Cell Search in 3GPP LTE TDD Systems</td>
<td>500</td>
</tr>
<tr>
<td>Baojin Li, Xin Wang</td>
<td></td>
</tr>
<tr>
<td>Narrow- and Broadband Interference Robustness for OOK/BPPM based Energy Detection</td>
<td>505</td>
</tr>
<tr>
<td>Hanns-Ulrich Dehner, Holger Jakel, Friedrich K. Jondral</td>
<td></td>
</tr>
<tr>
<td>Downlink Transmission of Distributed Antenna Systems in High Building Environments</td>
<td>510</td>
</tr>
<tr>
<td>Hassan Osman, Huiling Zhu, Temitope Alade, Jianzhou Wang</td>
<td></td>
</tr>
<tr>
<td>Achievable Rates of Coordinated Multi-Point Transmission Schemes under Imperfect CSI</td>
<td>515</td>
</tr>
<tr>
<td>Yun Rui, Mingyi Li, Peng Cheng, Yinhui Luo, Anjin Guo</td>
<td></td>
</tr>
<tr>
<td>Optimal Power Routing for End-to-end Outage Restricted Distributed MIMO Multi-hop Networks</td>
<td>521</td>
</tr>
<tr>
<td>Yidong Lang, Dirk Wubben, Armin Dekorsky</td>
<td></td>
</tr>
<tr>
<td>A Bio-Inspired Robust Adaptive Random Search Algorithm for Distributed Beamforming</td>
<td>526</td>
</tr>
<tr>
<td>Cha-Shiang Tseng, Chang-Ching Chen, Che Lin</td>
<td></td>
</tr>
<tr>
<td>Gaussian Integer Sequences with Ideal Periodic Autocorrelation Functions</td>
<td>532</td>
</tr>
<tr>
<td>Wei-Wen Hu, Sen-Hung Wang, Chih-Peng Li</td>
<td></td>
</tr>
<tr>
<td>Determining the Complexity of FH/SS Sequences by Fuzzy Entropy</td>
<td>537</td>
</tr>
<tr>
<td>Xiaojun Chen, Zan Li, Jiangbo Si, Benjian Hao, Baoming Bai</td>
<td></td>
</tr>
<tr>
<td>CS-CDMA/CP with the Chu Sequence: A Bandwidth-Efficient Multi-Access Scheme for Fast Fading Multipath Channels</td>
<td>542</td>
</tr>
<tr>
<td>Li Yue, Chengguo Han, Takeshi Hashimoto</td>
<td></td>
</tr>
<tr>
<td>On the Injection-Level Optimization for Digital Television Transmitter Identification Systems Using Kasami Sequences</td>
<td>547</td>
</tr>
<tr>
<td>Xiaoyu Peng, Hsiao-Chun Wu, Shih Yu Chung</td>
<td></td>
</tr>
<tr>
<td>Optimal Uplink Pilot Time Interval Design for TDD MISO Beamforming Systems with Channel Estimation Error and Delay</td>
<td>552</td>
</tr>
<tr>
<td>Baolong Zhou, Lingye Jiang, Lei Zhang, Chen He, Shengjie Zhao, Kun Zhao</td>
<td></td>
</tr>
<tr>
<td>Improved Generation Efficiency for Key Extracting from Wireless Channels</td>
<td>557</td>
</tr>
<tr>
<td>Xiaojun Sun, Wei Xu, Ming-Jiang, Chuning Zhao</td>
<td></td>
</tr>
<tr>
<td>Deterministic Equivalents for the Performance Analysis of Isometric Random Precoded Systems</td>
<td>563</td>
</tr>
<tr>
<td>Jakob Hoydis, Romain Couillet, Merouane Debbah</td>
<td></td>
</tr>
<tr>
<td>DCF Performance Analysis of Open- and Closed-loop Adaptive IEEE 802.11n Networks</td>
<td>568</td>
</tr>
<tr>
<td>Gabriel Martorell, Felip Riera-Palou, Guillem Femenias</td>
<td></td>
</tr>
<tr>
<td>RFID Tag Filtering Protocol</td>
<td>573</td>
</tr>
<tr>
<td>Manabu Inuma, Akira Otuka, Yasuaki Inatomi, Atsushi Minemura, Tatsuya Takehisa</td>
<td></td>
</tr>
<tr>
<td>An Information-Theoretic Approach to Accelerated Simulation of Hybrid-ARQ Systems</td>
<td>579</td>
</tr>
<tr>
<td>Matthew C. Valenti</td>
<td></td>
</tr>
<tr>
<td>Stochastic Modeling of Microwave Oven Interference in WLANs</td>
<td>585</td>
</tr>
<tr>
<td>Marcel Nasser, Xiantian Eddie Lin, Brian L. Evans</td>
<td></td>
</tr>
<tr>
<td>Two-cell MISO Interfering Broadcast Channel with Limited Feedback: Adaptive Feedback Strategy and Multiplexing Gains</td>
<td>591</td>
</tr>
<tr>
<td>Namyouon Lee, Wonjae Shin, Young-Jun Hong, Bruno Clerckx</td>
<td></td>
</tr>
<tr>
<td>Compressive Sensing for the Capacity of a Rayleigh Fading Channel</td>
<td>596</td>
</tr>
<tr>
<td>Jocelyn T. K. Aulin, Djordje Jeremic</td>
<td></td>
</tr>
<tr>
<td>Parametric Modeling of the Cross-correlation for Large-Scale-Fading of Propagation Channels</td>
<td>602</td>
</tr>
<tr>
<td>Xuefeng Yin, Xi Zhou, Byung-Jae Kwak, Hyun Kyu Chung</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Analysis of a Cross-layer Hybrid-ARQ Scheme: Application to Unequal Packet Protection</td>
<td>607</td>
</tr>
<tr>
<td>Aude Le Duc, Philippe Ciblat, Christophe J. Le Martret</td>
<td></td>
</tr>
<tr>
<td>On Repetition Protocols and Power Control for Multiple Access Block-Fading Channels</td>
<td>612</td>
</tr>
<tr>
<td>Davide Barbieri, Daniela Tuninetti</td>
<td></td>
</tr>
<tr>
<td>Cross-Layer Design for Cognitive MIMO Ad-Hoc Networks</td>
<td>617</td>
</tr>
<tr>
<td>Amiostosh Ghosh, Walaa Hamouda</td>
<td></td>
</tr>
<tr>
<td>Channel Assignment of Cooperative Spectrum Sensing in Multi-channel Cognitive Radio Networks</td>
<td>622</td>
</tr>
<tr>
<td>Weiwei Wang, Bехzaad Kasiri, Jun Cai, Attahiru S. Alfa</td>
<td></td>
</tr>
<tr>
<td>Stopping Rule-Driven Channel Access in Multi-Channel Cognitive Radio Networks</td>
<td>627</td>
</tr>
<tr>
<td>Ho Ting Cheng, Hangguan Shan, Weihua Zhuang</td>
<td></td>
</tr>
<tr>
<td>A Novel Frequency Sense Solution for Cognitive Radio Based on Tracing Localization</td>
<td>633</td>
</tr>
<tr>
<td>Yiming Wang, Liulei Zhou, Rahul Wang</td>
<td></td>
</tr>
<tr>
<td>Link-layer Resource Allocation for Voice Users in Cognitive Radio Networks</td>
<td>638</td>
</tr>
<tr>
<td>Khaled Ali, Weihua Zhuang</td>
<td></td>
</tr>
<tr>
<td>Tussle between APs in a Pricing Game: A Location-dependent Multi-AP Reverse Auction</td>
<td>643</td>
</tr>
<tr>
<td>Pei Li, Kai Xing, Hui Wang, Pingyi Fan</td>
<td></td>
</tr>
<tr>
<td>Game Theoretic Modeling and Evolution of Trust in Autonomous Multi-Hop Networks - Application to Network Security and Privacy</td>
<td>648</td>
</tr>
<tr>
<td>Charles A. Kamhoua, Niki Pissinou, Kia Makki</td>
<td></td>
</tr>
<tr>
<td>Stochastic Models of Coalition Games for Spectrum Sharing in Large Scale Interference Channels</td>
<td>654</td>
</tr>
<tr>
<td>Ebrahim Karami, Savo Glisic</td>
<td></td>
</tr>
<tr>
<td>A Game Theory Approach for Inter-Cell Interference Management in OFDM Networks</td>
<td>660</td>
</tr>
<tr>
<td>Ali Y. Al-Zahrani, F. Richard Yu</td>
<td></td>
</tr>
<tr>
<td>Distributed Coalition Formation of Relay and Friendly Jammers for Secure Cooperative Networks</td>
<td>665</td>
</tr>
<tr>
<td>Rongqing Zhang, Lingyang Song, Zhu Han, Bingli Jiao</td>
<td></td>
</tr>
<tr>
<td>Fast and Slow Hopping MAC Protocol for Single-hop Ad Hoc Wireless Networks</td>
<td>671</td>
</tr>
<tr>
<td>Khaled Hatem Almotairi, Xiaomin Shen</td>
<td></td>
</tr>
<tr>
<td>A Distributed OFDMA Medium Access Control for Underwater Acoustic Sensors Networks</td>
<td>676</td>
</tr>
<tr>
<td>Fatima Bouabdallah, Raouf Boutaba</td>
<td></td>
</tr>
<tr>
<td>On the Flow Classification Thresholds of FD-MAC Protocol</td>
<td>681</td>
</tr>
<tr>
<td>Hai Wang, Liangjing Cui, Yu Weibo, Chao Dong, Xia Renhui</td>
<td></td>
</tr>
<tr>
<td>Enhancements of IEEE 802.11p Protocol for Access Control on a VANET Control Channel</td>
<td>686</td>
</tr>
<tr>
<td>Razvan Stanica, Emmanuel Chapat, Andre-Luc Beylot</td>
<td></td>
</tr>
<tr>
<td>Multi-User Operation in mmWave Wireless Networks</td>
<td>691</td>
</tr>
<tr>
<td>Michelle X. Gong, Dmitry Akhmetov, Roy Want, Shiwenn Mao</td>
<td></td>
</tr>
<tr>
<td>Scheduling Sinks in Wireless Sensor Networks: Theoretic Analysis and An Optimal Algorithm</td>
<td>697</td>
</tr>
<tr>
<td>Yu Gu, Yusheng Ji, Jie Li, Hongyan Chen, Baohua Zhao, Athanasios V. Vasilakos</td>
<td></td>
</tr>
<tr>
<td>On Alleviating Starvation in Wireless Sensor Networks</td>
<td>703</td>
</tr>
<tr>
<td>Navdeep Kaur Kapoor, Shikharesh Majumdar, Biswajit Nandy</td>
<td></td>
</tr>
<tr>
<td>Scheduling on Wireless Sensor Networks Hosting Multiple Applications</td>
<td>708</td>
</tr>
<tr>
<td>End-to-End Delay Constrained Routing and Scheduling for Wireless Sensor Networks</td>
<td>714</td>
</tr>
<tr>
<td>Qing Wang, Pingyi Fan, Dalpeng Oliver Wu, Khaled Ben Letaief</td>
<td></td>
</tr>
<tr>
<td>Distributed Saturation Degree Based TDMA Scheduling Algorithm for Target Tracking</td>
<td>719</td>
</tr>
<tr>
<td>Fan Zhang, Peng Cheng, Jingmin Chen, Youxian Sun, Xiaomin Shen</td>
<td></td>
</tr>
<tr>
<td>Energy Efficient Sequential Sensing for Wideband Multi-channel Cognitive Network</td>
<td>724</td>
</tr>
<tr>
<td>Miao Xu, He Li, Xiaoying Gan</td>
<td></td>
</tr>
<tr>
<td>Analysis of Scaled Largest Eigenvalue Based Detection for Spectrum Sensing</td>
<td>729</td>
</tr>
<tr>
<td>Lu Wei, Olav Tirkkonen</td>
<td></td>
</tr>
<tr>
<td>Spectrum Sensing Algorithms via Finite Random Matrix Theory</td>
<td>734</td>
</tr>
<tr>
<td>Giuseppe Thadeu Freitas De Abreu, Wensheng Zhang, Yukitosh Sanada</td>
<td></td>
</tr>
<tr>
<td>Efficient Spectrum Sensing via Multiple Primary Users Cooperation in Cognitive Radio Networks</td>
<td>739</td>
</tr>
<tr>
<td>Tingting Jin, Zhiqiang Wang, Tao Jiang</td>
<td></td>
</tr>
<tr>
<td>Spectrum Sensing for Cognitive Radios over Frequency Selective Channels in White Noise</td>
<td>744</td>
</tr>
<tr>
<td>Jitendra K. Tugnait</td>
<td></td>
</tr>
<tr>
<td>Lightweight Attacks against Channel Assignment Protocols in MIMIC Wireless Networks</td>
<td>749</td>
</tr>
<tr>
<td>Qijian Gu, Meng Yu, Wanyu Zhang, Peng Liu</td>
<td></td>
</tr>
<tr>
<td>Perumalrajra Rengaraju, Chung-Horng Lung, Anand Srinivasan</td>
<td></td>
</tr>
<tr>
<td>RISE: Receipt-Free Cooperation Incentive Scheme for Multihop Wireless Networks</td>
<td>760</td>
</tr>
<tr>
<td>Mohamed Elsalih Mahmoud, Xiaomin Shen</td>
<td></td>
</tr>
</tbody>
</table>
muDog: Smart Monitoring Mechanism for Wireless Sensor Networks based on IEEE 802.15.4 MAC ........................................ 765
Abderrezak Rachedi, Hend Baklouti

A One-Pass Key Establishment Protocol for Anonymous Wireless Roaming with PFS ........................................ 771
Yuan Wang, Duncan S. Wong, Liusheng Huang

Least Squares Disclosure Attack in Mobile Ad Hoc Networks ........................................ 776
Yang Qin, Dijiang Huang

Jamming-Resilient Dynamic Spectrum Access for Cognitive Radio Networks ........................................ 781
Hai Su, Qin Wang, Kai Ren, Kai Xing

EVSE: An Efficient Vehicle Social Evaluation Scheme with Location Privacy Preservation for Vehicular Communications ........................................ 786
Abdulrahman Alganem, Xiaodong Lin, Ali Grami

EDJam: Effective Dynamic Jamming Against IEEE 802.15.4-Compliant Wireless Personal Area Networks ........................................ 791
Guohui Liu, Jiaqing Luo, Qingjun Xiao, Bin Xiao

Certificateless Secure Upload for Drive-thru Internet ........................................ 796
Jun Song, Yanjun Zhuang, Jianping Pan, Lin Cai

A Novel Scheme for a Fast Channel Change in Multicast IPTV System ........................................ 802
Mounir Sarni, Benoit Hilt, Pascal Lorenz

Heterogeneous QoS Video Broadcasting with Optimal Joint Layered Video and Digital Fountain Coding ........................................ 808
Wen Ji, Zha Li

Design and Evaluation of Application-Cooperative Bandwidth On-Demand Network with Dynamic Reconfiguration for Gbps-class HDTV Transmission ........................................ 814
Yoshihiro Nakajima, Tetsuo Kawano, Mitsuhiro Maruyama, Akeo Masuday, Akinori Isogai, Kohei Shiomoto

Controlling Retransmission Rate For Mitigating SIP Overload ........................................ 820
Yang Hong, Changcheng Huang, James Yan

Low-Density Generator Matrix Codes for IP Packet Video Streaming with Backward Compatibility ........................................ 825
Yoshihide Tomonuma, Daisuke Shirai, Masahiko Kitamura, Takayuki Nakachi, Tatsuya Fujii, Hitoshi Kiyama

Location-aided Routing Using Image Representation for Wireless Sensor Networks ........................................ 830
Marc Glig, Pascal Lorenz, Joel Rodrigues

Performance of the File Delivery Protocols over Mobile TV Interactive Channels ........................................ 835
Hsin-Ts Chiao, Kuan-Ming Li

A Smart Information Sharing Architecture in a Multi-Access Network, Multi-Service Environment ........................................ 841
N. Blum, J. Tamada, A. Fukayama, T. Magedanz, N. Uchida

Towards Unbiased Sampling of Online Social Networks ........................................ 847
Dong Wang, Zhenyu Li, Gaogang Xie

QoS-aware Service Redeployment in Cloud ........................................ 852
Kun You, Zhichong Qian, Song Guo, Sanglu Lu, Daocou Chen

Impact of Scheduling and Dropping Policies on the Performance of Vehicular Delay-Tolerant Networks ........................................ 857
Joao A. Dias, Joao N. Isento, Vasco N. G. J. Soares, Joel J. P. C. Rodrigues

Cross-layer Design for Video Replication Strategy over Multihop Wireless Networks ........................................ 862
Nguyen-Son Vo, Trung Q. Duong, Lei Shu, Xu Du, Hans-Jurgen Zepernick, Wenqing Cheng

Capacity Achieving Modulation for Fixed Constellations with Average Power Constraint ........................................ 868
Georg Bocherer, Fabian Altenbach, Rudolf Mathar

Constellation Shaping for Bit-Interleaved Coded APSK ........................................ 873
Matthew C. Valenti, Xingyu Xiang

On the Performance of BICM with Trivial Interleavers in Nonfading Channels ........................................ 878
Alex Alvarado, Leszek Szczecinski, Erik Agrell

MDS Code Based Signal Space Diversity Techniques With Fast Decoding ........................................ 884
Yue Shang, Dong Wang, Xiang-Gen Xia

The E8 Lattice and Error Correction in Multi-Level Flash Memory ........................................ 889
Brian M. Karkoski

Power Allocation in Wireless Systems Subject to Long-Term and Short-Term Power Constraints ........................................ 894
Moshtafa Khoshnevisan, J. Nicholas Laneman

Multicast Achievable Rate Region of Deterministic Broadcast Channel ........................................ 899
Mohammad A. Khajastepour, Ali reza Keshavarz-Haddad

Coordinated Max-Min SIR Optimization in Multicell Downlink - Duality and Algorithm ........................................ 905
Desmond W. H. Cai, Tony Q. S. Quek, Chee Wei Tan

Dual-Diversity Square-Law Combining with Deterministic Weights in Correlated Rayleigh Fading ........................................ 911
Ranjan K. Mallik, Jack H. Winters
Throughput Analysis of Buffer-Constrained Wireless Systems in the Finite Blocklength Regime ........................................................................................................... 916
Mastufa Cenk Gursoy

Effective Capacity Analysis for Multi-Rate Relay Channels Exploiting Adaptive Cooperative Diversity ........................................................................................................ 921
Jalil Seifzadeh Harsini, Michele Zorzi

Max-Min Greedy Interference Alignment on Linear Deterministic K-User Interference Channels ........................................................................................................... 927
Henning Maier, Rudolf Mathar

Throughput-Optimal Half-Duplex Cooperative Scheme with Partial Decode-Forward Relaying ........................................................................................................... 932
Ahmad Abu Al Hajja, Mai Vu

On the Accuracy of the Wyner Model in Downlink Cellular Networks ............................................................................................................................... 938
Jianming Xu, Jun Zhang, Jeffrey G. Andrews

Low Complexity MIMO Precoding Codebooks from Orthogonal Packings ................................................................................................................................. 943
Renaud-Alexandre Pitaval, Olav Tirkkonen, Steven D. Blostein

On the Diversity and Multiplexing Tradeoff in MIMO Fading Channels With Two-way Training and Power Control ........................................................................................................... 948
Xiao Juan Zhang, Yi Gong

Non-memoryless Analog Network Coding in Two-Way Relay Channel ................................................................................................................................. 953
Shengli Zhang, Soung-Chang Liew, Qingfeng Zhou, Lu Lu, Hui Wang

Optimal Packet Scheduling in a Broadcast Channel with an Energy Harvesting Transmitter ........................................................................................................... 959
Jing Yang, Omur Ozel, Sennur Ulukus

Clustered Multicell Joint Decoding under Cochannel Interference ................................................................................................................................. 964
Symeon Chatzinotas, Bjorn Ottersten

Analysis of Network Throughput Dynamics with Viscoelastic Material Model ................................................................................................................................. 969
Hiroshi Yoshida, Kosuke Nogami, Kozo Satoda

Enhancing Computing Power by Exploiting Underutilized Resources in the Community Cloud ........................................................................................................... 975
Boonyarith Saopakaphirun, Michael Devetsikiotis

Algorithm with Linear Computational Complexity for Batch Scheduling in OBS Networks ........................................................................................................... 981
Gustavo B. Figueiredo, Nelson L. S. Da Fonseca

Context-Aware Resource Allocation to Improve the Quality of Service of Heterogeneous Traffic ........................................................................................................... 987
Magnus Proebster, Matthias Kaschub, Stefan Valentin

Decentralized Scheduling of Bursty Workload on Computing Grids ................................................................................................................................. 993
Juanmin Zhang, Ningfang Mi, Jianzhe Tai, Waleed Meleis

Worst-Case Fair Bin Sort Queuing (WBSQ): An O(1) Worst-Case Fair Scheduler ........................................................................................................... 998
Zyad A. Dwekat, George N. Rouskas

Optimization of OSPF Link Weight to Minimize Worst-Case Network Congestion Against Single-Link Failure ........................................................................................................... 1003
Islam Mohammad Kamrul, Eiji Oki

Cooperative Regenerating Codes for Distributed Storage Systems ................................................................................................................................. 1008
Kenneth W. Shum

Poor, Good Enough or Even Better? Bridging the Gap between Acceptability and QoE of Mobile Broadband Data Services ........................................................................................................... 1013
Raimund Schatz, Sebastian Egger, Alexander Platez

A Virtual Queue Approach to Loss Estimation .................................................................................................................................................................................... 1019
Guoqiang Hu, Yuming Jiang, Anne Nevin

Competition Analysis of Adaptive Incentive Protocols for P2P Networks ................................................................................................................................. 1024
Zheng Wang, Shian-Shyong Tseng, Xin Wang

Heuristics for Joint Optimization of Monitor Location and Network Anomaly Detection ........................................................................................................... 1030
Emna Salhi, Samer Lahoud, Bernard Cousin

Avoiding Speedup from Bandwidth Overhead in a Practical Output-Queued Packet Switch ........................................................................................................... 1035
Lin Cai, Roberto Rojas-Cessa, Taweesak Kikjanikanarat

SNMP Management in a Distributed Software Router Architecture .................................................................................................................................................................................... 1040
Andrea Bianco, Robert Birke, Fikru Getachew Debele, Luca Giraudo

D-LQF: An Efficient Distributed Scheduling Algorithm for Input-Queued Switches .................................................................................................................................................................................... 1045
Chunzi He, Kwan L. Yeung

Multiroot: Towards Memory-Efficient Router Virtualization .................................................................................................................................................................................... 1050
Thilan Ganegedara, Weirong Jiang, Viktor Prasanna

A Container-based I/O for Virtual Routers: Experimental and Analytical Evaluations ........................................................................................................... 1055
Manel Bourgiba, Kamel Haddadou, Ines El Korbi, Guy Pujolle

Routing and Spectrum Allocation in Spectrum-sliced Elastic Optical Path Networks .................................................................................................................................................................................... 1061
Yang Wang, Xiaojun Cao, Qian Hu
Cost-Optimized Planning for Supporting 100 Gb/s and 40 Gb/s Services over Channel Count-Limited Optical Transport Networks .......................................................... 1066
Joao Santos, Joao Pedro, Paulo Monteiro, Joao Pires

Design of p-Cycles under a Wavelength Continuity Assumption .................................................. 1072
Hai Anh Hoang, Brigitte Jaumard

Design of p-Cycles for full node protection in WDM Mesh Networks ............................................ 1077
Brigitte Jaumard, Hongli Li

SRLG-Aware Topology Aggregation for Survivable Multi-Domain Optical Networks .................. 1082
Chengyi Guo, Yi Zhu, Jason P. Jue

Adaptive Call Admission and Bandwidth Control in DVB-RCS Systems ..................................... 1087
Mario Marchese, Maurizio Mongelli

Performance Enhancements for Asynchronous Random Access Protocols over Satellite .............. 1092
Christian Kissing

Two Step based QoS Scheduler for DVB-S2 Satellite System .......................................................... 1098
Mauro Tropea, Fiore Veltri, Floriano De Rango, Amicale-Francesco Santamarina, Loris Belcastro

SatERN: a PEP-less Solution for Satellite Communications .......................................................... 1103
Tuan Tran Thai, Dino Martin Lopez Pacheco, Emmanuel Lochtin, Fabrice Arnal

Design of Circular Orbit Satellite Link for Maximum Data Transfer ............................................. 1108
Zoltan Katona, Matteo Bierioli

Analysis of Smoothing Techniques for Subspace Estimation with Application to Channel Estimation .................................................. 1114
Niels Lovmand Pedersen, Morten Lonholt Jakobsen, Christian Rom, Bernard Henri Fleury

Excessively Long Channel Estimation for CDD OFDM Systems Using Superimposed Pilots ........ 1120
Weikun Hou, Xianbin Wang

Order–Extended Sparse RLS Algorithm for Doubly–Selective MIMO Channel Estimation ............ 1125
Toshiaki Koike-Akino, Andreas F. Molisch, Man-On Pun, Ramesh Annavajjala, Philip Orlik

Joint Channel Estimation and Multi-user Detection for SDMA OFDM Based on Dual Repeated Weighted Boosting Search .................................................. 1131
Jiankang Zhang, Sheng Chen, Xiaomin Ma, Lajos Hanzo

High Resolution OFDM Channel Estimation with Low Speed ADC using Compressive Sensing .................................................. 1136
Jia Meng, Yingying Li, Nam Nguyen, Wotao Yin, Zhu Han

Analysis of LMS Based Dual Hop MIMO Systems with Beamforming ........................................ 1142
Yamuna Dhungana, Nandana Rajatheva

Efficient MIMO Detection Based on Eigenspace Search with Complexity Analysis .................... 1148
Ronald T. Chang, Wei-Ho Chang, Cheng-Yu Hung

Near-Optimal Large-MIMO Detection Using Randomized MCMC and Randomized Search Algorithms .................................................. 1153
Ashok Kumar, Suresh Chandrasekar, A. Chockalingam, B. Sundar Rajan

OSTBC Transmission in MIMO AF Relay Systems with Keyhole and Spatial Correlation Effects .................................................. 1158
Trung Q. Duong, Himadri S. Saravese, Theodoros A. Tsiftsis, Hans-Jurgen Zepersick, A. Nallanathan

Low Complexity Turbo Detection of Coded Under-Determined MIMO Systems ....................... 1164
Michael L. Walker, Jun Tao, Jingxian Wu, Yahong Rosa Zheng

Linear Precoding for Relay Networks with Finite-alphabet Constraints ........................................ 1169
Weiliang Zeng, Chengshan Xiao, Mingyi Wang, Jianhua Lu

Hop-by-Hop Beamforming for Dual-hop MIMO AF Relay Networks ............................................. 1174
Gayan Amarasuriya, Chiththa Tellambura, Masoud Ardakani

New Performance Approximations for Multi-Hop Fixed-gain AF Relay Networks ....................... 1179
Gayan Amarasuriya, Chiththa Tellambura, Masoud Ardakani

Power Allocation for Decode-and-Forward Cellular Relay Network with Channel Uncertainty .... 1184
Shankhananda Mallick, Kundan Kandhway, Mohammad M. Rashid, Vijay K. Bhargava

Amplify-and-Forward Relay Networks Under Received Power Constraint with Imperfect CSI ........ 1189
Allreza S. Behbahani, Ahmed M. Eltawil

Power and Discrete Rate Adaptation for Energy Harvesting Wireless Nodes .................................. 1195
Parag S. Khairnar, Neelesh B. Mehta

Energy Efficient Resource Allocation in SC-FDMA Uplink with Synchronous HARQ Constraints .... 1200
Dan J. Decheve, Abdallah Shami

Energy aware evaluation of LTE Hybrid-ARQ and Modulation/Coding Schemes ......................... 1205
Jan Dohl, Gerhard Fettweis

Energy-Efficient Scheduling and Bandwidth–Energy Efficiency Trade-Off with Low Load ............ 1210
Stefan Videv, Harald Haas

On Optimal Relay Placement and Sleep Control to Improve Energy Efficiency in Cellular Networks .................................................. 1215
Sheng Zhou, Andrea J. Goldsmith, Zhisheng Niu
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined User Pairing and Spectrum Allocation for Multiuser SC-FDMA Transmission</td>
<td>1221</td>
</tr>
<tr>
<td>QoS-Aware Load Balancing in 3GPP Long Term Evolution Multi-Cell Networks</td>
<td>1227</td>
</tr>
<tr>
<td>QoS Guaranteed Resource Allocation in Cooperative Cellular Network With MIMO-Based Relays</td>
<td>1244</td>
</tr>
<tr>
<td>Opportunistic Spectrum Access to 3G Wireless CDMA Networks for Cognitive Radio</td>
<td>1250</td>
</tr>
<tr>
<td>Minimum-Latency Aggregation Scheduling in Underwater Wireless Sensor Networks</td>
<td>1255</td>
</tr>
<tr>
<td>Delay Optimal Scheduling for Cognitive Radio Networks with Cooperative Beamforming</td>
<td>1260</td>
</tr>
<tr>
<td>Asynchronous Power Control Game with Channel Outage Constraints in Cognitive Radio Networks</td>
<td>1265</td>
</tr>
<tr>
<td>Performance Analysis of Cognitive Radio Spectrum Access with Prioritized Traffic</td>
<td>1270</td>
</tr>
<tr>
<td>A Novel Scheme for Packet Scheduling and Bandwidth Allocation in WiMAX Networks</td>
<td>1275</td>
</tr>
<tr>
<td>Opportunistic Cross-layer Uplink Scheduler for the IEEE 802.16 standard</td>
<td>1280</td>
</tr>
<tr>
<td>Impact of Interference On The System Performance of Wimax Relay 802.16j with Sectoring</td>
<td>1285</td>
</tr>
<tr>
<td>Cross-Layer Channel-Quality-Fair Scheduling for Video Uplink of Camera Networks over WiMAX</td>
<td>1290</td>
</tr>
<tr>
<td>Individual vs. Global Radio Resource Management in a Hybrid Broadband Network</td>
<td>1295</td>
</tr>
<tr>
<td>Max-min Fair Scheduling in OFDMA-Based Multi-hop WiMAX Mesh Networks</td>
<td>1301</td>
</tr>
<tr>
<td>Experimental Analysis of Backpressure Scheduling in IEEE 802.11 Wireless Mesh Networks</td>
<td>1306</td>
</tr>
<tr>
<td>Context-aware Scheduling in Wireless Networks with Successive Interference Cancellation</td>
<td>1311</td>
</tr>
<tr>
<td>Optimal Scheduling for Roadside WLANs with Pre-Downloaded Messages</td>
<td>1316</td>
</tr>
<tr>
<td>SecDCF: An Optimized Cross-layer Scheduling Scheme Based on Physical Layer Security</td>
<td>1322</td>
</tr>
<tr>
<td>Energy Efficient and Fault Tolerant Routing Protocol for Mobile Sensor Network</td>
<td>1327</td>
</tr>
<tr>
<td>A Distributed Algorithm for Multi-constrained Anypath Routing in Wireless Mesh Networks</td>
<td>1332</td>
</tr>
<tr>
<td>An Efficient Data-Driven Routing Protocol for Wireless Sensor Networks with Mobile Sinks</td>
<td>1337</td>
</tr>
<tr>
<td>Optimal Joint Multi-path Routing and Sampling Rates Assignment for Real-Time Wireless Sensor Networks</td>
<td>1342</td>
</tr>
<tr>
<td>Distributed Coverage-Preserving Routing Algorithm for Wireless Sensor Networks</td>
<td>1347</td>
</tr>
<tr>
<td>An SINR Balancing based Beamforming Technique for Cognitive Radio Networks With Mixed Quality of Service Requirements</td>
<td>1352</td>
</tr>
<tr>
<td>Per-subcarrier Antenna Selection for OFDMA-based Cognitive Radio Systems</td>
<td>1362</td>
</tr>
<tr>
<td>Hardware and Physical Layer Adaptation for a Power Constrained MIMO OFDM System</td>
<td>1367</td>
</tr>
<tr>
<td>Cooperative Beamforming Aided Incremental Relaying in Cognitive Radios</td>
<td>1373</td>
</tr>
</tbody>
</table>
The BVID Allocation Problem in 802.1Qay Provider Backbone Bridged Traffic Engineered Networks
Deval Bhamare, Ashutosh Upadhyaya, Saurabh Mehta, Ashwin Kshirasagar, Ashwin Gunasekara

A Branch, Price and Cut Approach for Optimal Traffic Grooming in WDM Optical Networks
Q. Rahman, S. Bandyopadhyay, Y. P. Aneja

Survivable Impairment-aware Traffic Grooming and Regenerator Placement with Dedicated Connection Level Protection
Chengyi Gao, Itkki C. Cankaya, Ankikumar N. Patel, Jason P. Joe, Xi Wang, Qiong Zhang, Paparao Palacharla, Motoyoshi Sekiya

Mutual Impact of Traffic Correlation and Regenerator Concentration in Translucent WDM Networks
Elias A. Downum, Sawsan Al Zahr, Maurice Gagnaire

Optimization of Satellite Optical Transmission Subject to Log-Square-Hoyt Fading
Xian Liu

Multi-Gigabit Free-Space Laser Communications Using Compact Optical Terminal with Bidirectional Beacon Tracking
Y. Arimoto

Evaluation of Cooperative Techniques for Hybrid/Integrated Satellite Systems
Sooyoung Kim

Subcarrier Suppressed Transmission for OFDMA in Satellite/Terrestrial Integrated Mobile Communication System
Jun Mashino, Takatoshi Sugiyama

Golden Codes for Dual Polarized MIMO-OFDM Transmissions in Hybrid Satellite/Terrestrial Mobile Systems
Bhavani Shankar, Mysore Rama Rao, Pantelis-Daniel Arapoglou, Bjorn Ottersten

Blind Timing and Carrier Synchronization in Decode and Forward Cooperative Systems
Ali A. Naeir, Salman Durranri, Rodney A. Kennedy

A Novel Preamble Design for OFDM Transmission Parameter Signalling
Lifeng He, Zhaocheng Wang, Fang Yang, Sheng Chen, Lajos Hanzo

Sliding-Trellis based Frame Synchronization
Usman Ali, Michel Kieffer, Pierre Duhamel

Closed-Form Expressions for the Exact Cramér-Rao Bounds of Timing Recovery Estimators from BPSK and Square-QAM Transmissions
Ahmed Masmoudi, Faouzi Bellili, Sofiene Affes, Alex Stephonne

Distributed Target Tracking Algorithm for Wireless Sensor Networks
Hongyang Chen, Kaoru Sezaki

Multiple-Symbol Detection Aided Differential Spatial Division Multiple Access
Li Wang, Lajos Hanzo

Space-Time Pre-equalization for Time Reversal MIMO UWB System in Strong ISI
Taotao Wang, Tiejun Lv

Fast Kalman Equalization for Cooperative Relay Networks with Both Time and Frequency Offsets
Hui-Ming Wang, Qin Ye Yin, Xiang-Gen Xia

Statistical Precoding and Detection Ordering in MIMO Multiple-Access Channels with Decision Feedback Equalization
Simon Jarmyr, Bjorn Ottersten, Eduard Jorswieck

Genetic Algorithm based Frequency Domain Equalization for DS-UWB Systems without Guard Interval
Nazmat Sarajuudeen-Bakinde, Xia Zhu, Jingbo Gao, Asoke K. Nandi, Hai Lin

Analysis of UE Outage Probability and Macrocellular Traffic Offloading for WCDMA Macro Network with Femto Overlay under Closed and Open Access
Sayandev Mukherjee

Outage Probability Analysis for Collocated Spectrum-sharing Macrocell and Femtocells
Xiaoli Chu, Joyce Yuhua Wu, Haibo Wang

Cognitive Interference Management in Heterogeneous Femto-Macro Cell Networks
Sunil Kaimalattu, Rajeev Krishnan, Sheetal Kalyani, Nadeem Akhtar, Bhaskar Ramamurthi

Downlink Femtocell Networks: Open or Closed?
Han-Shin Jo, Ping Xia, Jeffrey G. Andrews

Analysis of Uplink Inter-Carrier-Interference Observed at Femtocell Networks
Alphan Sahin, Ismail Gultekin, Huseyin Arslan
Game-Theoretic CDMA Power Control for Code Acquisition during Network Association .................................................. 1674
Giacomo Bacci, Marco Luise

Fair and Efficient Resource Sharing for Selfish Cooperative Communication Networks Using Cooperative Game Theory ............................................................................................................................... 1679
Guopeng Zhang, Li Cong, Enjie Ding, Kun Yang, Xiaodong Yang

Feedback Control Game for Channel State Information in Wireless Networks ................................................................. 1684
Lingyang Song, Zhu Han, Qihao Li

Evolution Game Theoretic Optimization of Realistic Cooperative Networks using Power Control with Imperfect Feedback ............................................................................................................................ 1689
Wei Guo, Jan J. Wassell, Bolando Currasco

Stackelberg Game on the Boundary of Coexistence ........................................................................................................ 1694
Kandasamy Ilanaka, Alagan Anpalagan, Dimitri Androutsos

Near-Capacity Irregular Convolutional Coded Cooperative Differential Linear Dispersion Codes Using Multiple-Symbol Differential Decoding Aided Non-coherent Detection ................................................................. 1700
Chao Xu, Soon Xin Ng, Lajos Hanzo

On the Concatenation of Non-Binary Random Linear Fountain Codes with Maximum Distance Separable Codes ............................................................................................................................... 1705
Francisco Lazaro Blasco, Gianluigi Liva

Closed-loop Space Time Block Coding for High Data Rate with Angle Feedback ............................................................... 1710
Joosuk Kim, Sirikitak Kei Ayavasitakul, Nambi Seshadri

Design of Distributed Multi-Edge Type LDPC Codes for Two-Way Relay Channels ............................................................. 1715
Marwan H. Azmi, Jun Li, Jinhong Yuan, Robert Malaney

Ant-Colony Based Near-ML Block Decoder in Asynchronous Cooperative MIMO Systems using a Linear Dispersion Structure ........................................................................................................ 1720
Chong Xu, Hamid Gharavi

Performance Analysis of the Binary Exponential Backoff Algorithm for IEEE 802.11 Based Mobile Ad Hoc Networks ........................................................................................................................................ 1725
Yi-Hua Zhu, Xian-Zhong Tian, Jun Zheng

Analysis of Jamming effects on IEEE 802.11 Wireless Networks .......................................................................................... 1731
Abderahim Benslimane, Abdelouahid El Yakoubi, Mohammed Bouhorma

Channel Assignment and User Association Game in Dense 802.11 Wireless Networks .................................................. 1736
Wenchao Xu, Canqing Hua, Aiping Huang

Throughput and Delay Analysis of Half-Duplex IEEE 802.11 Mesh Networks ................................................................................ 1741
Camillo Gentile, David Griffith, Michael Souryal, Nada Golmie

Wi-Fi-Based Indoor Positioning Using Human-Centric Collaborative Feedback .................................................................. 1747
Yan Luo, Yuanzhu Peter Chen, Orland Hoeber

Evaluating Uplink Schedulers in LTE in Mixed Traffic Environments .................................................................................. 1753
Mohamed Salah, Najah Abu Ali, Abul-Faham Taha, Hosam Hassanain

Uplink Component Carrier Selection for LTE-Advanced Systems with Carrier Aggregation .................................................. 1758
Hua Wang, Claudio Rosa, Klaus Pedersen

Proportional Fair Resource Partition for LTE-Advanced Networks with Type I Relay Nodes .................................................. 1763
Zhangchao Ma, Wei Yang, Hang Long, Wenbo Wang

Cost-efficient Deployment of Relays for LTE-Advanced Cellular Networks ........................................................................ 1768
Yijie Wang, Gang Feng, Yide Zhang

Joint Uplink Scheduling and Interference Mitigation in Multicell LTE Networks .................................................................... 1773
Elias Yaacoub, Zahir Dawy

Small World Based Cooperative Routing Protocol for Large Scale Wireless Ad Hoc Networks .................................................. 1778
Min Sheng, Jiandong Li, Hongyan Li, Yan Shi

Geo-assisted Multicast Inter-Domain Routing (GMIDR) Protocol for MANETs .......................................................................... 1783
Konglin Zhu, Biao Zhou, Xiaoming Fu, Mario Gerla

Cluster Mesh Based Multicast Routing in MANET: An Analytical Study ............................................................................. 1788
Mohamed Younis, Osama Farrag, Sookyoung Lee

Robust Forwarding for Reactive Routing Protocols in Wireless Ad Hoc Networks with Unreliable Links .................................................. 1794
Long Cheng, Sajal K. Das, Canfeng Chen, Jian Ma, Wendong Wang

An Application-Centric Inter-Vehicle Routing Protocol for Video Streaming over Multi-Hop Urban VANETs ....................... 1800
Mahdi Asefi, Jon W. Mark, Xuejin Shen

Lifetime Analysis of a Slotted ALOHA-based Wireless Sensor Network using a Cross-layer Frame Rate Adaptation Scheme ............................................................ 1805
Lucas D. P. Mendes, Joel J. P. C. Rodrigues, Athanasios V. Vasilakis, Liang Zhou
<table>
<thead>
<tr>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure Mutual Authentication Protocols for Mobile Multi-hop Relay WiMAX Networks against Rogue Base/Relay Stations</td>
<td>1966</td>
</tr>
<tr>
<td>An Approach of Covert Communication Based on the Adaptive Steganography</td>
<td>1971</td>
</tr>
<tr>
<td>Scheme on Voice over IP</td>
<td>1976</td>
</tr>
<tr>
<td>An Enhanced Geometric Hashing</td>
<td>1981</td>
</tr>
<tr>
<td>Combating Peer-To-Peer Botnets by Exploiting Vulnerabilities of Routing Scheme</td>
<td>1986</td>
</tr>
<tr>
<td>Information Flow Control for Intrusion Detection Derived from MAC Policy</td>
<td>1992</td>
</tr>
<tr>
<td>Fusion of Finger-Knuckle-Print and Palmprint for an Efficient Multi-biometric System of Person Recognition</td>
<td>1997</td>
</tr>
<tr>
<td>Information Dissemination Network for Dynamic Target Location Pursuit</td>
<td>2015</td>
</tr>
<tr>
<td>Embedding Software Requirements in Grid Scheduling</td>
<td>2021</td>
</tr>
<tr>
<td>0 to 10k in 20 seconds: Bootstrapping Large-scale DHT networks</td>
<td>2037</td>
</tr>
<tr>
<td>Leveraging Caching for Internet-scale Content-based Publish /Subscribe Networks</td>
<td>2042</td>
</tr>
<tr>
<td>Comparison between Analog Joint Source-Channel Coded and Digital BICM Systems</td>
<td>2048</td>
</tr>
<tr>
<td>Expected Distortion with Fading Channel and Side Information Quality</td>
<td>2053</td>
</tr>
<tr>
<td>Sending Gaussian Source on Bandwidth-Mismatched Gaussian Channel With Improved Robustness</td>
<td>2058</td>
</tr>
<tr>
<td>Lattice-Based Source–Channel Coding</td>
<td>2063</td>
</tr>
<tr>
<td>Improved Interference Alignment Precoding for the MIMO X Channel</td>
<td>2068</td>
</tr>
<tr>
<td>Multituser Zero-Forcing Beamforming with Limited Feedback in Wireless Ad Hoc Networks</td>
<td>2073</td>
</tr>
<tr>
<td>Downlink Beamforming with Transmit-side Channel Correlation: A Large System Analysis</td>
<td>2078</td>
</tr>
<tr>
<td>Achievable Rate Region Characterization of the MIMO Broadcast Channel with Channel Distribution Information</td>
<td>2084</td>
</tr>
<tr>
<td>Deterministic Equivalent for the SINR of Regularized Zero-forcing Precoding in Correlated MISO Broadcast Channels with Imperfect CSIT</td>
<td>2089</td>
</tr>
<tr>
<td>Self-Prioritization of Audio and Video Traffic</td>
<td>2095</td>
</tr>
<tr>
<td>QoE-based Cross-layer Optimization of Wireless Video with Unperceivable Temporal Video Quality Fluctuation</td>
<td>2100</td>
</tr>
<tr>
<td>Understanding Cross-Layer Effects on Quality of Experience for Video over NGMN</td>
<td>2105</td>
</tr>
<tr>
<td>Parity Stream Construction Method Based on Estimated Utility for Multi-Server Video Streaming System</td>
<td>2110</td>
</tr>
<tr>
<td>Push or Pull?: Toward Optimal Content Delivery</td>
<td>2115</td>
</tr>
<tr>
<td>Fault Propagation Model for Ad Hoc Networks</td>
<td>2120</td>
</tr>
</tbody>
</table>
Combined PA/NPA CFO Recovery for FBMC Transmissions over Doubly-selective Fading Channels ................................................................. 2254
Giulio Dainelli, Vincenzo Lottici, Marco Moretti, Ruggero Reggiannini

Optimal Threshold Design for FFR Schemes in Multi-Cell OFDMA Networks .................................................................................................................. 2259
Zhikan Xu, Geoffrey Ye Li, Chenyang Yang

Reduced-Rate OFDM Transmission with Statistics-based ICI Mitigation ........................................................................................................ 2264
Jun Ma, Philip Ottik, Jinyun Zhang, Geoffrey Ye Li

Packet Transmission Experiments of STBC-based Multi-hop Cooperative Relaying ................................................................................... 2269
Tomohiko Mimura, Akihito Kawabara, Hidekazu Murata, Koji Yamamoto, Susumu Yoshida

Fixed Gain Amplify-and-Foward Relaying with Co-Channel Interference ................................................................................................. 2274
Himal A. Sarwate, Diamantis S. Michalopoulos, Robert Schober, George K. Karagiannidis, Arumugam Nallanathan

Throughput Analysis in Asymmetric Two-way Relay Channel with Random Access .......................................................................................... 2280
G. Cocco, D. Gunduz, C. Ibars

RBG Matching based Optimal Relay Selection and Subchannel Allocation .................................................................................................. 2286
Bo Bai, Wei Chen, Khaled Ben Letaief, Zhigang Cao

Coordinated Transmissions to Direct and Relayed Users in Wireless Cellular Systems .................................................................................. 2291
Chan Dui Truyen Thai, Petar Popovski, Megumi Kaneko, Elisabeth De Carvalho

Multi-Frequency GLRT Spectrum Sensing for Wideband Cognitive Radio ...................................................................................................... 2296
Josep Font-Segura, Gregori Vazquez, Jaume Riba

Precoder Optimization in Cognitive Radio with Interference Constraints ............................................................................................... 2301
Ranga Prasad, A. Chockalingam

Autonomous Dynamic Frequency Selection for WLANs Operating in the TV White Space ......................................................................... 2307
Chunyi Song, Zhou Lan, Junyi Wang, Tuncer Baykas, Hiroshi Harada

Spectrum Sensing via Energy Detector in Low SNR ................................................................................................................................. 2313
Samman Atapattu, Chintha Tellambura, Hai Jiang

Cross-Layer Interference Mitigation for Cognitive Radio MIMO Systems ......................................................................................................... 2318
Zengmao Chen, Cheng-Xiang Wang, Xueqin Hong, John Thompson, Sergiy A. Vorobyov, Dongfeng Yuan

Outage Rate and Outage Duration of Decode-and-Forward Cooperative Diversity Systems ................................................................................. 2324
Nikola Zlatanov, Zoran Hadzi-Velkov, George K. Karagiannidis, Robert Schober

Cooperative Communication for Spatial Frequency Reuse Multihop Wireless Networks under Slow Rayleigh Fading .................................................. 2330
Liping Wang, Viktoria Fodor, Mikael Skoglund

Maximum-Likelihood Detectors for Full-Rate Cooperative Communication Systems ..................................................................................... 2336
Hala Mostafa, Mohamed Marey, Mohamed Ahmed, Octavia Dobre

Cooperative Interference Control for Spectrum Sharing in OFDMA Cellular Systems ..................................................................................... 2341
Bin Da, Rui Zhang

Smart Cooperation through Orthogonal Signaling and Optimal Power Allocation ............................................................................................ 2346
Junsong Wang, Ke Deng, Qiuye Yin

Performance Study of Hybrid MAC using Soft Reservation for Wireless Networks ............................................................................................... 2351
Ruonan Zhang, Liu Cai, Jianping Pan

A Distributed Resource Allocation Algorithm in Heterogeneous Wireless Access Medium .................................................................................. 2356
Muhammad Ishaq, Weihsia Zhang

Temporal Starvation in CSMA Wireless Networks ................................................................................................................................. 2362
Cai Hong Kai, Songh Chang Liew

Dynamic Optimal Random Access for Vehicle-to-Roadside Communications ............................................................................................. 2368
Man Hon Cheung, Fan Hou, Vincent W. S. Wong, Jianwei Huang

Cooperative Retransmissions Through Collisions ................................................................................................................................. 2374
Jalaluddin Qureshi, Jianfei Cai, Chuan Heng Foh

FCRA: Femtocell Cluster-based Resource Allocation Scheme for OFDMA Networks ...................................................................................... 2379
Abbas Hatoum, Nadjib Aitsaadi, Rami Langar, Rafa Bouteia, Guy Pujolle

An Efficient Method for Performance Evaluation of Femto-Macro Overlay Systems ..................................................................................... 2385
Yue-Cai Huang, King-Tin Ko, Qian Huang, Villy Back Iversen, Moshe Zukerman

Optimal Pricing and Spectrum Allocation for Wireless Service Provider on Femtocell Deployment .............................................................. 2391
Yanjiao Chen, Jin Zhang, Peng Lin, Qian Zhang

Dynamic Inter-Cell Interference Avoidance in Self-Organizing Femtocell Networks ....................................................................................... 2396
Sangkyu Park, Saewoong Bahk

Game Theoretical Model and Existence of Win-Win Situation for Femtocell Networks .................................................................................. 2401
Jia-Shi Lin, Kai-Ten Feng

A Novel Multicast Gateway Based Multi-hop Routing for Wireless Mesh Networks ........................................................................................ 2406
Ahmed Y. Al-Dubai, Liang Zhao, Alberi Zomaya, Geyong Min

Hierarchical Agent-Based Secure Multicast for Wireless Mesh Networks .......................................................................................................... 2411
Yinan Li, Ing-Ray Chen
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scalable and Energy-Efficient Broadcasting in Multi-hop Cluster-Based Wireless Sensor Networks</td>
<td>2417</td>
</tr>
<tr>
<td>Degree Distribution in Interference-limited Heterogeneous Wireless Networks and Its Generalizations</td>
<td>2422</td>
</tr>
<tr>
<td>Connectivity of Wireless CSMA Multi-hop Networks</td>
<td>2433</td>
</tr>
<tr>
<td>On The k-hop Partial Connectivity in Finite Wireless Multi-hop Networks</td>
<td>2438</td>
</tr>
<tr>
<td>Improving the Connectivity of Heterogeneous Multi-Hop Wireless Networks</td>
<td>2443</td>
</tr>
<tr>
<td>Connectivity Restorability of Mobile Ad hoc Networks Based on K-hop Neighbor Information</td>
<td>2449</td>
</tr>
<tr>
<td>On the User-centric Connection Availability of Mobile Wireless Networks</td>
<td>2454</td>
</tr>
<tr>
<td>Evolution Framework for Resource Allocation with Local Interaction: An Infection Approach</td>
<td>2460</td>
</tr>
<tr>
<td>Channel Aggregation in Cognitive Radio Networks with Practical Considerations</td>
<td>2465</td>
</tr>
<tr>
<td>Power Allocation for Cognitive Radio Networks Under Channel Uncertainty</td>
<td>2470</td>
</tr>
<tr>
<td>Multi-channel Opportunistic Access Based on Primary ARQ Messages Overhearing</td>
<td>2476</td>
</tr>
<tr>
<td>On the Value of Prediction in Opportunistic Radio Systems</td>
<td>2481</td>
</tr>
<tr>
<td>Secret Sharing in the Encrypted Domain</td>
<td>2487</td>
</tr>
<tr>
<td>A Covert Timing Channel via Algorithmic Complexity Attacks: Design and Analysis</td>
<td>2492</td>
</tr>
<tr>
<td>Trust Based Access Control in Infrastructure-centric Environment</td>
<td>2497</td>
</tr>
<tr>
<td>Security Risk Management via Dynamic Games with Learning</td>
<td>2502</td>
</tr>
<tr>
<td>Side Channel Monitoring: Packet Drop Attack Detection in Wireless Ad Hoc Networks</td>
<td>2508</td>
</tr>
<tr>
<td>LocalTree: An Efficient Algorithm for Mobile Peer-to-Peer Live Streaming</td>
<td>2513</td>
</tr>
<tr>
<td>Content-based Image Compressed for Arbitrary-resolution Display Devices</td>
<td>2518</td>
</tr>
<tr>
<td>The Effect of Redundancy on Video Broadcasting in Vehicular Networks</td>
<td>2523</td>
</tr>
<tr>
<td>Bulldozer: A Cooperative P2P-based Distribution Platform for User-Centric Content Dissemination</td>
<td>2528</td>
</tr>
<tr>
<td>Hinky: Defending Against Text-based Message Spam on Smartphones</td>
<td>2533</td>
</tr>
<tr>
<td>Controlling LDPC Absorbing Sets via the Null Space of the Cycle Consistency Matrix</td>
<td>2538</td>
</tr>
<tr>
<td>Comparison of the Detrimental Effects of Trapping Sets in LDPC Codes</td>
<td>2544</td>
</tr>
<tr>
<td>Partially Quasi-Cyclic Protograph-Based LDPC Codes</td>
<td>2549</td>
</tr>
<tr>
<td>Analysis of Error Floors of Non-Binary LDPC Codes over MBIOS Channel</td>
<td>2554</td>
</tr>
<tr>
<td>Iterative Decoding of LDPC-Coded BDPSK with New LLR Metric over the Noncoherent Channel</td>
<td>2559</td>
</tr>
<tr>
<td>A New Way of Computing Rate in Cellular Networks</td>
<td>2564</td>
</tr>
<tr>
<td>Interference Strength Alignment and Uplink Channel Allocation in Linear Cellular Networks</td>
<td>2569</td>
</tr>
<tr>
<td>Cooperative Wireless Multicell OFDMA Network with Backhaul Capacity Constraints</td>
<td>2574</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Distributed Beam Scheduling in Multi-cell Networks via Auction over Competitive Markets</td>
<td>2580</td>
</tr>
<tr>
<td>Kai Yang, Dorus Calin, Chan-Byoung Chae, Simon Yiu</td>
<td></td>
</tr>
<tr>
<td>Impact of Delayed Limited Feedback on the Sum-Rate of Intercell Interference Nulling</td>
<td>2586</td>
</tr>
<tr>
<td>Ramya Bhagavatula, Robert W. Heath</td>
<td></td>
</tr>
<tr>
<td>Measurements and Analysis of an Unconstrained User Generated Content System</td>
<td>2591</td>
</tr>
<tr>
<td>Tianlong Yu, Chen Tian, Hongbo Jiang, Wenyu Liu</td>
<td></td>
</tr>
<tr>
<td>Internet Traffic Classification Using LPC Cepstrum</td>
<td>2596</td>
</tr>
<tr>
<td>Masatsugu Ichino, Hiroaki Maeda, Kentaro Hoshi, Naohisa Komatsu, Kei Takeshita, Masayuki Tsuchino</td>
<td></td>
</tr>
<tr>
<td>A Batched Poisson Multirate Loss Model Supporting Elastic Traffic Under the Bandwidth</td>
<td>2602</td>
</tr>
<tr>
<td>Reservation Policy</td>
<td></td>
</tr>
<tr>
<td>I. D. Moscholios, J. S. Vardakas, M. D. Logothetis, A. C. Boucouvalas</td>
<td></td>
</tr>
<tr>
<td>10-Gbps IP Network Measurement System Based on Application-generated Packets Using Hardware</td>
<td>2608</td>
</tr>
<tr>
<td>Assistance and Off-the-shelf PC</td>
<td></td>
</tr>
<tr>
<td>Kenji Shimizu, Katsuhiro Sebayashi, Seiki Kawaihara, Mitsuru Maruyama</td>
<td></td>
</tr>
<tr>
<td>An Internet Traffic Classification Method Based on Semi-Supervised Support Vector Machine</td>
<td>2614</td>
</tr>
<tr>
<td>Xiang Li, Feng Qi, Dan Xu, Xue-Song Qiu</td>
<td></td>
</tr>
<tr>
<td>On the Optimal Request Routing Strategy in CDN Live Streaming Application</td>
<td>2619</td>
</tr>
<tr>
<td>Jianxiong Wan, Chuang Lin, Xin Chen, Kun Meng</td>
<td></td>
</tr>
<tr>
<td>An Overlay Architecture of Global Inter-Data Center Networking for Fast Content Delivery</td>
<td>2624</td>
</tr>
<tr>
<td>Yasshihiro Miyao</td>
<td></td>
</tr>
<tr>
<td>Optimal Caching with Content Broadcast in Cache-and-Forward Networks</td>
<td>2630</td>
</tr>
<tr>
<td>Lijun Dong, Dan Zhang, Yangyu Zhang, Dipankar Raychaudhuri</td>
<td></td>
</tr>
<tr>
<td>Modeling and Analysis of Sharing Ratio Enforcement in Private Bittorrent Communities</td>
<td>2635</td>
</tr>
<tr>
<td>Adele L. Jia, Lucia D’Acunto, Michel Meuelpolder, Johan A. Pouwelse</td>
<td></td>
</tr>
<tr>
<td>Experimental Evaluation of Memory Management in Content-Centric Networking</td>
<td>2640</td>
</tr>
<tr>
<td>Giovanna Carofelgio, Ynicius Gehlen, Diego Perino</td>
<td></td>
</tr>
<tr>
<td>Effects of Atmosphere Dominated Phase Fluctuation and Intensity Scintillation to DPSK System</td>
<td>2646</td>
</tr>
<tr>
<td>Guodong Xie, Anhong Dang, Hong Guo</td>
<td></td>
</tr>
<tr>
<td>An ML-based Detector for Optical Communication in the Presence of Nonlinear Phase Noise</td>
<td>2652</td>
</tr>
<tr>
<td>A. Serdar Tan, Henk Wymeersch, Pontus Johannisson, Erik Agrell, Peter Andrekson, Magnus Karlsson</td>
<td></td>
</tr>
<tr>
<td>Analysis of Polarization Dependent Loss Impact on Optically Amplified Multi-Span Dual-Polarization Systems</td>
<td>2657</td>
</tr>
<tr>
<td>Liang Dou, Zhengmin Tao, Takeshi Hoshida, Jens C. Rasmussen</td>
<td></td>
</tr>
<tr>
<td>Reach Optimized Architecture for Multi-rate Transport System (ROAMTS) - The Case for Non-UTILT Compliant Optics</td>
<td>2663</td>
</tr>
<tr>
<td>Ashwine Gumaste</td>
<td></td>
</tr>
<tr>
<td>A Discrete-Time Polynomial Model of Single Channel Long-Haul Fiber-Optic Communication Systems</td>
<td>2669</td>
</tr>
<tr>
<td>Houbing Song, Maite Brandt-Pearce</td>
<td></td>
</tr>
<tr>
<td>A 400-Gb/s and Low-power Physical-layer Architecture for Next-generation Ethernet</td>
<td>2675</td>
</tr>
<tr>
<td>Masashi Kono, Akihiro Kanbe, Hidehiro Toyoda</td>
<td></td>
</tr>
<tr>
<td>A TCP Prediction Scheme For Enhancing Performance In OBS Networks</td>
<td>2681</td>
</tr>
<tr>
<td>Kostas Ramantas, Kyriskos Vlachos</td>
<td></td>
</tr>
<tr>
<td>Double-sided Signal Clipping in ACO-OFDM Wireless Communication Systems</td>
<td>2687</td>
</tr>
<tr>
<td>Svenil Dimitrov, Sinan Sinanovic, Harald Haas</td>
<td></td>
</tr>
<tr>
<td>Regenerator Placement and Waveband Routing in Optical Networks with Impairment Constraints</td>
<td>2692</td>
</tr>
<tr>
<td>Saket Varma, Jason P. Jue</td>
<td></td>
</tr>
<tr>
<td>All-Optical Monitoring Path Computation Based on Lower Bounds of Required Number of Paths</td>
<td>2697</td>
</tr>
<tr>
<td>Nagao Ogino, Hajime Nakamura</td>
<td></td>
</tr>
<tr>
<td>Cube-based Intra-Datacenter Networks with LOBS-HC</td>
<td>2703</td>
</tr>
<tr>
<td>Li-Mei Peng, Chunming Qiao, Wan Tang, Chan-Hyun Youn</td>
<td></td>
</tr>
<tr>
<td>Outage Behavior of a MISO Wireless Optical Link with Pointing and Tracking Errors</td>
<td>2709</td>
</tr>
<tr>
<td>Xian Liu</td>
<td></td>
</tr>
<tr>
<td>Fault Localization in All-Optical Networks with User and Supervisory Lightpaths</td>
<td>2714</td>
</tr>
<tr>
<td>Sava Stanic, Suresh Subramaniam</td>
<td></td>
</tr>
<tr>
<td>Super Monitor Design for Fast Link Failure Localization in All-Optical Networks</td>
<td>2720</td>
</tr>
<tr>
<td>Minjing Mao, Kwan L. Yeung</td>
<td></td>
</tr>
<tr>
<td>Research on Body Sensor Networks in Cold Region</td>
<td>2725</td>
</tr>
<tr>
<td>Kai Lin, Chin-Feng Lai, Min Chen</td>
<td></td>
</tr>
<tr>
<td>Information-based Energy Efficient Sensor Selection in Wireless Body Area Networks</td>
<td>2730</td>
</tr>
<tr>
<td>Hui Wang, Hyeok-Soo Choi, Nazim Agoulmine, M. Jamal Deen, James Won-Ki Hong</td>
<td></td>
</tr>
</tbody>
</table>
An Integrated Biometric-based Security Framework Using Wavelet-Domain HMM in Wireless Body Area Networks (WBAN) ........................................................................................................................................................................... 2736

Honggang Wang, Hua Fang, Luidong Xing, Min Chen

PDhms: Pulse Diagnosis via Wearable Healthcare Sensor Network ............................................................................................................................................................................................................................................................... 2741

Jibing Gong, Shilong Lu, Rui Wang

Media-Aware Distributed Scheduling over Wireless Body Sensor Networks .................................................................................................................................................................................................................................................. 2746

Liang Zhou, Baoyu Zheng, Jingwu Cui, Benoit Geller

Opportunistic Beamforming with Single Beamforming Matrix for Virtual Antenna Arrays .................................................................................................................................................................................................................................. 2751

Jinho Choi

Worst-Case SINR Constrained Robust Coordinated Beamforming for Multicell Wireless Systems .................................................................................................................................................................................................................................. 2756

Chao Shen, Kun-Yu Wang, Tsung-Hui Chang, Zhengding Qiu, Chong-Yang Chi

Is Transmit Beamforming Robust? .................................................................................................................................................................................................................................................................................................................. 2761

Jiaheng Wang, Miquel Payaro

Joint Source Power Control And Relay Beamforming in Amplify-and-Forward Cognitive Networks with Multiple Source-Destination Pairs .................................................................................................................................................................................................................................................................................................. 2766

Keyvan Zarifi, Sofiene Affes, Ali Ghrayeb

Beamforming for Space Division Duplexing ................................................................................................................................................................................................................................................................................................................. 2772

Damith Senaratne, Chinthu Tellambura

Blind Decision-Directed Parameter Estimation for Energy Detection of PAM Signals ................................................................................................................................................................................................................................................. 2777

Antti Anttonen, Adrian Kotella, Aarne Mammela

A Dirty Paper Scheme for Hierarchical OFDM ................................................................................................................................................................................................................................................................................................................. 2782

Michele Scaglione, Fernando Perez-Gonzalez, Pietro Guccione

Probability Distributions of Products of Rayleigh and Nakagami-m Variables Using Mellin Transform .................................................................................................................................................................................................................................................................................................. 2787

Sohail Ahmed, Lie-Liang Yang, Lajos Hanzo

Linear Dispersion Codes for Asynchronous Cooperative MIMO Systems .................................................................................................................................................................................................................................................................................................. 2792

Nan Wu, Hamid Gharavi

Impact of Arbitrary Co-channel MIMO Modes on Alamouti Coding Under Path-Loss and Rayleigh Fading .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2797

Yongzhao Li, Lu Zhang, Leonard J. Cimini, Hailin Zhang

LTE Physical Layer Identity Detection: Frequency vs Time Domain Schemes .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2803

Hendra Setaway, Masayuki Kurasaki, Hiroshi Ochi

Optimal Recursive Spatial Multiplexing Strategies for Slowly Time-Varying MIMO Channels .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2808

T. Edlich, T. Hunziker, I. A. Shah, D. Dahlhaus

Super-resolution Blind Channel Modeling .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2813

Man-On Pun, Andreas F. Molisch, Philip Orlik, Akihiro Okazaki

On Signal Phase Based Modulation Classification .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2818

Qinghua Shi, Y. Kargasawa

Performance Analysis of Amplify and Forward Cooperation over Peak-Power Limited Channels .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2823

Koji Ishihashi, Hideki Ochiai

Cooperative Diversity in Coded CDMA Systems over Frequency-Selective Fading Channels .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2828

Amr Eid, Walaa Hamouda, Iyad Dayoub

Joint Training and Beamforming Design for Performance Discrimination Using Artificial Noise .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2833

Tsung-Hui Chang, Wei-Cheng Chiang, Y.-W. Peter Hong, Chong-Yang Chi

Downlink Performance of a Multi-Carrier MIMO System in a Bursty Traffic Cellular Network .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2838

Hung Tuan Nguyen, Istvan Z. Kovacs, Yuanye Wang, Klaus I. Pedersen

Low-Complexity Signal Detection by Multi-Dimensional Search for Correlated MIMO Channels .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2844

Liming Zheng, Kazuhiro Fukawa, Hiroshi Suzuki, Satoshi Suyama

Transceiver Design for MIMO Systems with Imperfect CSI at Transmitter and Receiver .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2849

Boon Sim Thian, Sheng Zhou, Andrea Goldsmith

MIMO Zero-Forcing Detection Performance for Correlated and Estimated Rician Fading with Lognormal Azimuth Spread and K-Factor .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2855

Constantin Siriteanu, Xiaonian Shi, Yoshikazu Miyanaga

Iterative MMSE Detection and Interference Cancellation for Uplink SC-FDMA MIMO using HARQ .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2860

Suguru Okuyama, Kazuki Takeda, Fumiyuki Adachi

N Plus Normalized Threshold Opportunistic Relay Selection with Outdated Channel State Information .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2865

Moyuan Chen, Ted C.-K. Liu, Xiaodai Dong

Performance Analysis of a Multi-Hop Communication System with Decode-and-Forward Relaying .................................................................................................................................................................................................................................................................................................................................................................................................................................. 2871

Kalpana Dhaka, Ranjan K. Mallik, Robert Schober
BER Analysis of Constellation Rearrangement for Cooperative Relaying Networks over Nakagami-m Fading Channel .......................................................... 2877
Hyeon-Seok Ryu, Jun-Seok Lee, Chung G. Kang

Joint Relay and Jammer Selection for Secure Two-Way Relay Networks ..................................................... 2882
Jingchao Chen, Rongqing Zhang, Lingyang Song, Zhu Han, Bingli Jiao

Performance Analysis of Dual-Hop AF Systems in Nakagami-m Fading Channels in the Presence of Interference ................................................................. 2887
Fawaz S-Al-Qahtani, Caiyun Zhong, Khalid A. Qaraqe, Hussein Alnuweiri, Tharm Ratnarajah

Queuing on Energy-Efficient Wireless Transmissions with Adaptive Modulation and Coding ........................... 2892
Jie Gong, Sheng Zhou, Zhisheng Niu

Energy- and Spectral-Efficiency Tradeoff in Downlink OFDMA Networks .................................................... 2897
Cong Xiong, Geoffrey Ye Li, Shuangming Zhang, Yan Chen, Shuqong Xu

Energy-efficient Multicasting Over the Erasure Channel................................................................................ 2902
Anna Pantelidou, Kalle Lahtakangas, Matti Latva-Aho

Energy-efficient Link Adaptation on a Rayleigh Fading Channel with Receiver CSI ........................................ 2907
Christian Isheden, Gerhard Fettweis

Resource Minimization for Hybrid ARQ System with Real-Time Traffic in Time-Correlated Rayleigh Fading Channels ................................................................. 2917
Su Min Kim, Hu Jin, Wan Choi, Dan Keun Sung

Uplink Resource Allocation for Frequency Selective Channels and Fractional Power Control in LTE ................ 2923
Ritesh Madan, Siddarth Ray

Cooperative Strategies and Fairness-Aware Resource Allocation in Selection-Based OFDM Networks ........................ 2928
Kianous Hosseini, Raviraj Adve

Simple Prediction-Based Power Control for the on-Body Area Communications Channel .................................. 2934
David B. Smith, Tharaka Lamahewa, Leif W. Hanlen, Dino Miniutti

Resource Allocation Algorithm for GSM-OFC Cellular Systems ............................................................... 2939
D. Molteni, M. Nicoli, M. Silly

DSA: Distributed Semi-Asynchronous Sleep Scheduling Protocol for Mobile Wireless Networks ........................ 2945
Bong Jun Choi, Xiaemin Shen

Distributed Throughput-optimal Scheduling in Ad Hoc Wireless Networks .................................................... 2950
Qiao Li, Rohit Negi

Scheduling in Wireless Networks under Uncertainties: A Greedy Primal-Dual Approach .............................. 2955
Qiao Li, Rohit Negi

Predictive Scheduling in Drive-thru Networks with Flow-Level Dynamics and Deadlines .............................. 2960
Shiqiang Wang, Chai Kiat Yeo, Bu Sung Lee

Efficient Discovery of Spectrum Opportunities Via Adaptive Collaborative Spectrum Sensing in Cognitive Radio Networks ........................................................................ 2965
Zhiquang Wang, Daoming Qu, Tao Jiang, Tingting Jin

Scalable Video Coding with Compressive Sensing for Wireless Videocast .................................................. 2970
Siyuan Xiang, Lin Cai

Layered Video Transmission using Wireless Path Diversity based on GRE Relational Analysis ........................ 2975
Abdul Razaqaq, Ahmed Mehaoua

A Seamless Quality-Driven Multi-Hop Data Delivery Scheme for Video Streaming in Urban VANET Scenarios ...................................................................................... 2981
Mahdi Asefi, Sandra Cespedes, Xiaomin Shen, Jon W. Mark

Utility-Based Resource Allocation for Layer-Encoded IPTV Multicast Service in Wireless Relay Networks ........ 2986
Shi-Sheng Sun, Yi-Chun Chen, Wanqian Liao

QoC-based Context Data Caching for Disaster Area Scenarios ....................................................................... 2991
Mario Fanelli, Luca Foschini, Antonio Corradi, Azzedine Boukerche

Analysis and Design of Energy Harvesting Wireless Sensor Networks with Linear Topology ....................... 2996
Shengqu Zhang, Alireza Seyedi

Jingxian Wu, Guoqing Zhou

A MOS-based Routing Approach for Wireless Mesh Networks ........................................................................ 3006
F. Serpano, G. Campobello, A. Leonardi, S. Palazzo

Orion Routing Protocol for Delay-Tolerant Networks .................................................................................... 3012
Samir Medjah, Toutfik Ahmed
High-Throughput Routing with Superposition Coding and Successive Interference Cancellation ................................................................. 3018
Xueyuan Su, Sammy Chan

Energy Efficient Architecture for Green Handsets in Next Generation IP-based Wireless Networks .............................................................. 3024
Eng Hwee Ong, Kaushik Mahata, Junil Y. Khan

How Contact Probing Affects the Transmission Capacity and Energy Consumption in DTNs ................................................................. 3030
Shuang Qin, Gang Feng, Yide Zhang

A Tag Count Estimation Algorithm for Dynamic Framed ALOHA Based RFID MAC Protocols ................................................................. 3035
Zhe Wang, Mahbib Hassan

Network Coded Repetition: A Method to Recover Lost Packets in Vehicular Communications ................................................................. 3040
Iker Onat, Ali Mirt

Enhancing Throughput in Wireless Multi-Hop Network with Multiple Packet Reception ................................................................. 3046
Jia-Liang Lu, Pauline Vandenbroucke, Wei Shu, Min-You Wu

Correlated Data Gathering on Dynamic Network Coding Policy and Opportunistic Routing in Wireless Sensor Network ................................................................. 3051
Chong Tan, Juuni Zou, Min Wang, Hongkai Xiong

An On-Demand Data Collection Scheme for Wireless Sensor Networks with Mobile Elements ................................................................. 3056
Liang He, Jianping Pan, Jingdong Xu

Hybrid In-network Query Processing Framework for Wireless Sensor Networks ................................................................. 3061
Shaila Pervin, Jourder Kamranuzzaman, Gour Karmakar, A. K. M. Azad

Distributed Compressive Sensing Reconstruction Via Common Support Discovery ................................................................. 3067
Wei Chen, Miguel R. D. Rodrigues, Ian J. Wassell

Power Efficient Adaptive Network Coding in Wireless Sensor Networks ................................................................. 3072
Hnin Yu Shwe, Fumiyuki Adachi

Mobile-Assisted Localization by Stitching in Wireless Sensor Networks ................................................................. 3077
Han Wang, Wangdong Qi, Kun Wang, Peng Liu, Li Wei, Yasong Zhu

MDS-based Localization Algorithm for RFID Systems ................................................................. 3082
Wenbo Shi, Vincent W. S. Wong

Surface Based Anchor-Free Localization Algorithm for Underwater Sensor Networks ................................................................. 3088
Lloyd Emokpae, Mohamed Yousif

Yuanfang Chen, Lei Shu, Qixing Li, Qizi Fan, Lei Wang, Takahiro Hara

Multiple Objects Device-Free Passive Tracking Using Wireless Sensor Networks ................................................................. 3099
Xuefei Mao, Shaowei Tang, Xiang-Yang Li

Distributed ‘ring-around’ Sequential Spectrum Sensing for Cognitive Radio Networks ................................................................. 3104
Sithamparanathan Kandesapan, Andrea Giorgetti, Marco Chiani

Carrier Sensing with Self-cancelation of Inter-Carrier Emission in Cognitive OFDMA System ................................................................. 3110
Lu Ye, Zhiyang Zhang, Jiamin Zhang, Huazhi Zhang

Blind Spectrum Sensing using Bayesian Sequential Testing with Dynamic Update ................................................................. 3116
Alan J. Coulson

Spectrum Sensing Based on Asymptotic Behavior of Random Vandermonde Matrices ................................................................. 3122
Lei Wang, Baoyu Zheng, Weiping Zhu

SNR Wall for Energy Detection with Noise Power Estimation ................................................................. 3127
Andrea Mariani, Andrea Giorgetti, Marco Chiani

Efficient Group Key Management and Authentication for Body Sensor Networks ................................................................. 3133
Sye Loong Koh

Designing Securely Connected Wireless Sensor Networks In The Presence Of Unreliable Links ................................................................. 3139
Osman Yagan, Armand M. Makowski

A Secure Key Management Scheme in Wireless Mesh Networks ................................................................. 3144
Farah Kandah, Weiye Zhang, Xiaojing Du, Yashaswi Singh

Siba K. Udgata, Alefiah Mubeen, Samrat L. Sabat

Novel Remotely Keyed Encryption Schemes for Smart Card Applications ................................................................. 3154
E. M. Mohamed, Y. M. Y. Hasan, Hiroshi Furukawa

Polygon Simplification for Location-Based Services Using Population Density ................................................................. 3159
Wonsang Song, Jae Woo Lee, Henning Schulzrinne

MRD: A Mashup Resource Discovery Approach Applying Semantics Indexing ................................................................. 3165
Changbao Li, Bo Cheng, Junliang Chen, Pingli Gu, Na Deng, Desheng Li

Adaptation of BitTorrent for Heterogeneous Networks and Isps’ Constraints ................................................................. 3171
Bertrand Mathieu, Abdoulaye Diallo

Service Protocol Replaceability Assessment in Mediated Service Interactions ................................................................. 3176
Zhangbing Zhou, Feng Gao, Lei Shu
Peer-Assisted Time-shifted Streaming Systems: Design and Promises ................................................................. 3181
Yanling Liu, Gwendal Simon

Near Optimum Majority-Logic Based Decoding of Low-Density Parity-Check Codes ........................................ 3186
T. M. N. Ngatche, Attahiru S. Alfa, Jun Cai

Multiple Phased-Burst Correcting Superposition Product LDPC Codes ................................................................. 3191
Wai Hon Fong, Qin Huang, Shih-Chun Chang, Shu Lin

Improved Decoding of Binary and Non-Binary LDPC Codes by Probabilistic Shuffled Belief Propagation ................................................................. 3196
Morie Beermann, Laurent Schmalen, Peter Vary

An Iterative Joint Linear-Programming Decoding of LDPC Codes and Finite-State Channels .................................. 3201
Byung-Hak Kim, Henry D. Pfister

Architecture-Aware Construction of Raptor Codes ................................................................................................. 3207
Hady Zeineiddeine, Mohammad M. Mansour

A Location-based MAC Scheme for Random Wireless Network ................................................................................. 3213
Xincheng Zhang, Martin Haenggi

Spatial Multiplexing with MMSE Receivers in Ad Hoc Networks ............................................................................ 3218
Raymond H. Y. Louie, Matthew R. McKay, Nihar Jindal, Iain B. Collings

Temporal Correlation of the Interference in Mobile Random Networks ....................................................................... 3223
Zhenhua Gong, Martin Haenggi

Analysis of the Capture Probability in Wireless Systems with Multi-Packet Reception Capabilities and Successive Interference Cancellation ........................................................................................................... 3228
Andrea Zanella, Michele Zorzi

On the Spectral Efficiency of Links with Multi-antenna Receivers in Non-homogenous Wireless Networks ................................................................. 3234
Siddharth Govindasamy, Daniel Bliss

Propagation Study and Performance Evaluation of a Mobile WiMAX System at 3.5 GHz ............................................. 3240
Nektarios Moraitis, Demosthenes Voyoukouas, Philip Constantinou

Bi-criteria Optimization of Radio Resources for Radio-Over-Fiber Access Networks .......................................... 3245
Pedro Henrique Gomes, Nelson L. S. Da Fonseca, Omar C. Branquinho

Modelling QoS Performance of IEEE 802.11 DCF under Practical Channel Fading Conditions................................. 3251
Ren Ping Liu, Gordon J. Satton, Xun Yang, Iain B. Collings

Distributed Optimal Relay Selection for Improving TCP Throughput over Cognitive Radio Networks: A Cross-Layer Design Approach .................................................................................................................. 3257
Dan Chen, Hong JI, Victor C. M. Leung

Analytical Model for Broadcast Packet Reception Rates in Two-Dimensional MANETs ........................................... 3262
Xiaomin Ma, Hazem H. Refai

Unveiling the Content-Centric Features of TCP ............................................................................................................. 3267
Saman Srinivasan, Moritz Steiner, Ivaro Rimac, Henning Schulzrinne, Volker Hilt

Function Block Design for the Reconfigurable Protocol Stack in Networked Control Systems ................................ 3272
Chunjie Zhou, Hai Chen, Naixue Xiong, Athanasios V. Vasilakos

XCP vs. CUBIC with Quick-Start: Observations on Implicit vs. Explicit Feedback for Congestion Control ................................................................................. 3277
Armin Abfalterer, Michael Welzl, Stein Gjessing

ZNP: A Network Layer Protocol Based on ID/Locator Split Considering Practical Operation .................................... 3283
Sho Kanemaru, Fumio Teraoka

Rate based feedback: Some Experimental Evaluation with NetFPGA ........................................................................ 3289
Nizar Malangadan, Gaurav Raina

Time-Shifted TV in Content Centric Networks: The Case for Cooperative In-Network Caching .................................. 3295
Zhe Li, Gwendal Simon

An Epidemic Model of Bit Torrent with Control ........................................................................................................... 3301
C. Griffin, G. Kesidis, P. Antoniadis, S. Fdida

Minimizing Retrieval Cost of Multi-layer Content Distribution Systems ................................................................. 3307
Mathias Bjorkqvist, Lydia Y. Chen, Xi Zhang

SCAN: Scalable Content Routing for Content-Aware Networking ............................................................................. 3313
Munyoung Lee, Kideok Cho, Kunwoo Park, Ted Kwon, Yanghee Choi

Utilizing Social Influence in Content Distribution Networks ....................................................................................... 3318
Hossam Sharara, Cedric Westphal, Svetlana Radosavac, Ulas C. Kozat

Optical Packet Switch with Recursive Parametric Wavelength Conversions ............................................................... 3324
Nattapong Kitsuiwan, Hung Nguyen Tan, Motoharu Matsuura, Naoto Kishi, Eiji Oki

The Algorithm for Rearrangements in the Log_2(N,0,p) Fabrics with Odd Number of Stages ................................... 3329
Wojciech Kabacinski, Marek Michalski
Survivable Optical Grid Dimensioning: Anycast Routing with Server and Network Failure Protection
Chris Develder, Jens Buyse, Ali Shaikh, Brigitte Jaumard, Marc De Leenheer, Bart Dhoadt

Load-Aware Anycast Routing in IP-over-WDM Networks
Balaangadhar G. Babhula, Vinod M. Vokkarane, Caroline P. Lai, Keren Bergman

Dynamic Anycast Routing and Wavelength Assignment in WDM Networks Using Ant Colony Optimization (ACO)
Kavitha Bhaskaran, Jin Trax, Vinod M. Vokkarane

A High-Performance 8-Tap FIR Filter Using Logarithmic Number System
Yan Son, Min Sik Kim

Low Bit-rate High-quality Audio Encoding and Low Complexity Bandwidth Extension Technologies for ITU-T G.718/G.718-SWB
Tomofumi Yamanashi, Masahiro Oshikiri, Hiroshi Ebara

Scalable Block-based Parallel Lattice Reduction Algorithm for an SDR Baseband Processor
Ubaid Ahmad, Amir Amin, Min Li, Sofie Pollin, Liesbet Van Der Perre, Franky Catthoor

Overview of A Software Defined Downlink Inner Receiver for Category E LTE-Advanced UE
Min Li, Raf Appelants, Amir Amin, Rodolfo Torrea, Hans Cappelle, Mattias Hartmann, Hidekuni Yomo, Kiyotaka Kobayashi, Antoine Dejonghe, Liesbet Van Der Perre

Automatic Joint Optimization of Iterative MIMO-OFDM Receiver Algorithms on a Meta Level
Andreas Ibing, Holger Boche

Robust Multimode Selection in the Downlink Multiuser MIMO Channels with Delayed CSIT
Jie Xu, Ling Qiu

Interference Alignment by Opportunistic User Selection in 3-User MIMO Interference Channels
Jung Hoon Lee, Wan Choi

Parallel QRD-M Encoder for Decentralized Multi-user MIMO Systems
Manar Mohaisen, Abdelaziz Mohaisen, Yanhua Li, Pengkui Luo

Limited Feedback Scheme Using Constant Amplitude Codebook for Tomlinson-Harashima Precoding in Multi-user MIMO Systems
Chunlin Yan, Hitoshi Kayama

K-user MIMO X Network System with Perfect Interference Alignment
Seong-Ho Park, Young-Chai Ko

Network Code Design from Unequal Error Protection Coding: Channel-Aware Receiver Design and Diversity Analysis
Michela Iezzi, Marco Di Renzo, Fabio Grazioni

Full Diversity Achieving Analog Network Coding for Asynchronous Two-Way Relay Networks with Linear Receivers
Zhenzhen Gao, Yu-Han Yang, K. J. Ray Liu

Eavesdropping-Resistant Space-Time Network Coding for Cooperative Communications
Qiang Li, See Ho Ting, Chin Keong Ho

On the Available Receiver Side Information in Wireless Network Coding
Qimin You, Zhuo Chen, Yonghui Li, Branka Vucetic

Multi-hop Bi-directional Relay Transmission Schemes Using Amplify-and-Forward and Analog Network Coding
Qimin You, Zhuo Chen, Yonghui Li, Branka Vucetic

How Much Training is Needed Against Smart Jamming?
Xiangyun Zhou, Dusit Niyato, Are Hjorungnes

Improved Blind Interference Alignment in a Cellular Environment using Power Allocation and Cell-Based Clusters
Chenwei Wang, Haralabos C. Papadopoulos, Sean A. Ramprashad, Giuseppe Caire

Achieving Spectral Efficient Cooperative Diversity with Network Interference Cancellation
Wei Chen, Keith D. B. Letaief, Zhigang Cao

The Effect of Interference Cancellation on Spectrum-Sharing Transmission Capacity
Jemin Lee, Jeffrey G. Andrews, Daesik Hong

MIMO Inter-Cell Interference Management Through Base Station Cooperation
Wibowo Hardjawana, Branka Vucetic, Yonghui Li

Non-orthogonal Transmission in Multi-user Systems with Grassmannian Beamforming
Minghua Xia, Yik-Chung Wu, Sonia Aissa

A Joint Codebook Design for Beamforming Systems with Transmit Antenna Selection
Yi-Chi Chen, Shang-Ho Tsai, Gene C. H. Chuang

Receive Beamforming Design Based on a Multiple-state Interference Model
Jinhong Yang, Emil Bjornson, Mats Bengtsson

Generalized MMSE Beamforming for Downlink MIMO Systems
Hyungjoo Lee, Ilwoo Sohn, Donghyun Kim, Kwang Bok Lee
Beamforming Design Based on Virtual SINR Maximization for Interference Networks................................................. 3477
Seek-Hwan Park, Haewook Park, Inkyu Lee

Heterogeneous Multi-Hop Transmission of Compressed ECG Data from Wireless Body Area Network ........................................ 3482
Wei Song

An Energy Efficient Prediction-based Technique for Tracking Moving Objects in WSNs........................................... 3487
Samer Samarah, Muhammad Al-Hajri, Azeddine Boukerche

Fused-Schedule-Buffer based Data Preparation Mechanism for Generating Target Association Rules...................... 3492
Samer Samarah, Azeddine Boukerche, Alexander Shama Habaybulma

Toplogy Analysis of Wireless Sensor Networks for Sandstorm Monitoring ................................................................. 3497
P. Wang, Z. Sun, M. C. Veran, M. A. Al-Rodhaan, A. M. Al-Dheelaan, I. F. Akyildiz

Bruno Da Silva Campos, Joel J. P. C. Rodrigues, Lucas D. P. Mendes, Eduardo F. Nakamura, Carlos Mauricio S. Figueiredo

OPRA: Optimal Relay Assignment for Capacity Maximization in Cooperative Networks .................................... 3507
Dejun Yang, Xi Fang, Guoliang Xue

Performance Bounds of Multi-relay Decode-and-forward Cooperative Networks over Nakagami-m fading channels............................................................................................................... 3513
Sheng-Qiang Huang, Hsiao-Hwa Chen, Meng-Ying Lee

Achievable Rate Analysis in Network-Coded Cooperative Communications with Multiple Relay Nodes.......................... 3518
Sushant Sharma, Yi Shi, Y. Thomas Hou, Sastry Kompella

A Joint Design for Topology and Security in MANETs with Cooperative Communications..................................... 3523
Quansheng Guan, F. Richard Yu, Shengming Jiang, Victor C. M. Leung

(m, n)-relaying as an Alternative to Base Station Cooperation for Cellular OFDMA Networks......................... 3529
Tommaso Balercia, Thomas Kuerner, Markus Mueck

On Optimal Relay Placement for Urban Vehicular Networks.................................................................................. 3534
Youchen Bao, Yanmin Zhu

Set-Cover Approximation Algorithms for Load-aware Readers Placement in RFID Networks................................. 3539
Kashif Ali, Walid A. Atsalakis, Hosam Hassanein

Opportunistic Virtual Backbone Construction in Intermittently Connected Mobile Ad Hoc Networks....................... 3545
Yaozhong Ma, Abbas Jamalipour

Self-Deployment Algorithms for Field Coverage in a Network of Nonidentical Mobile Sensors......................... 3550
Hamid Mahdoubi, Kaveh Moezzi, Amir G. Aghdam, Kamran Sayrafian-Pour

Finding Optimal Action Point for Multi-stage Spectrum Access in Cognitive Radio Networks........................... 3556
Bowen Li, Panlong Yang, Jialong Wang, Qihai Wu, Xiang-Yang Li

Mitigating the Effects of Position-Based Routing Attacks in Vehicular Ad Hoc Networks........................................... 3561
Nizar Alsharif, Albert Wasef, Xiaomin Shen

BAMBi: Blackhole Attacks Mitigation with Multiple Base Stations in Wireless Sensor Networks.......................... 3566
Satyajayant Misra, Kabi Bhattacharai, Guoliang Xue

Defending Sensor Worm Attack using Software Diversity Approach ........................................................................ 3571
Yang Liu, Weiyi Zhang, Shi Bai, Chonggang Wang

Reuse-Attack Mitigation in Wireless Sensor Networks.......................................................................................... 3576
H. Shafiei, Ahmad Khonsari, B. Mirzasoleimian, Mohamed Ould-Khouna

A Computationally Efficient Method for Joint Authentication and Intrusion Detection in Mobile Ad-hoc Networks........ 3581
Shengrong Bu, F. Richard Yu, Peter X. Liu, Helen Tang

A Censoring Cooperative Spectrum Sensing Scheme Based on Stochastic Resonance in Cognitive Radio................. 3586
Yingpei Lin, Chen He, Lingge Jiang, Di He

Optimal Non-Identical Sensing Setting for Multi-Channel Cooperative Sensing.................................................. 3591
Wenjie Zhang, Chai Kiat Yeo

Optimal Cooperative Sensing and Its Robustness to Decoding Errors.................................................................. 3596
Yonghong Zeng, Ying-Chang Liang, Shoukang Zheng, Edward C. Y. Peh

Cooperative Spectrum Sensing Approach Based on Stochastic Resonance Energy Detectors Fusion......................... 3601
Di He, Lingge Jiang

Cooperative Sensing Scheduling for Energy-Aware Cognitive Radio Networks.................................................... 3606
Tengyi Zhang, Danny H. K. Tsang

Efficient Authentication Mechanism for PEV Charging Infrastructure....................................................................... 3612
Binod Vaidya, Dimitrios Makrakis, Husein T. Mouftah

Distributed Data Mining with Differential Privacy............................................................................................. 3617
Ning Zhang, Ming Li, Wenjing Lou

Ahmed Elmokashfi, Amund Kvalbein, Tarik Cicic

Sybil Detection via Distributed Sparse Cut Monitoring ................................................................................................................................. 3628

Aditya Kurve, George Kesidis

Trust-Based and Energy-Aware Incentive Routing Protocol for Multi-hop Wireless Networks ................................................................. 3634

Mohamed Elsalih Mahmoud, Xiaomin Shen

User Dependent Scheme for Multi-view Video Transmission ......................................................................................................................... 3639

Ziyuan Pan, Yoshitaka Hata, Masaki Bandai, Takashi Watanabe

Distributed Source Coding for WWAN Multiview Video Multicast with Cooperative Peer-to-peer Repair ................................................................. 3644

Zhi Liu, Gene Chung, Yusheng Ji

On Network Utilization of Peer-to-Peer Video Live Streaming on the Internet ........................................................................................................ 3650

Xiangyang Zhang, Hossam Hassanein

Employing QoS Driven Neighbor Selection for Heterogeneous Peer-to-Peer Streaming ................................................................. 3655

Laizhong Cui, Yong Jiang, Jianping Wu

A Cross-Layer Architecture for Motion-Adaptive Video Transmission over MIMO Channels ......................................................................................................................... 3661

Maryam Hafeez, Sobia Jangsher, Syed Ali Khayam

Optimality of Separate Network-Channel Coding ......................................................................................................................................................... 3666

Peng Hui Tan, Chin Keong Ho, Samei Sun

Design of Distributed Network-Channel Codes for Wireless Sensor Networks ......................................................................................... 3672

Kun Pang, Zhihua Lin, Yonghui Li, Branka Vucetic

Compressive Forwarding for Jointly Sparse Signals in Amplify-and-Forward Gaussian Relay Networks ........................................................................................................................................................................................................................................................................................................................................................................... 3677

Steven Corroy, Rudolf Mathar

High Throughput Random Access via Codes on Graphs: Coded Slotted ALOHA ........................................................................................................ 3682

Enrico Paolini, Gianluigi Liva, Marco Chiani

A Note on the Multiple Unicast Capacity of Directed Acyclic Networks ......................................................................................................................... 3688

Shuru Huang, Aditya Ramamoorthy

Asymptotically-Optimal, Fast-Decodable, Full-Diversity STBCs ......................................................................................................................... 3694

Lakshmi Prasad Natarajan, B. Sundar Rajan

Fast-Group-Decodable STBCs via codes over GF(4): Further Results ......................................................................................................................... 3700

Lakshmi Prasad Natarajan, B. Sundar Rajan

On Robust Weighted-Sum Rate Maximization in MIMO Interference Networks ........................................................................................................ 3706

Jubin Jose, Naranayam Prasad, Mohammad Khojastepour, Sampath Rangarajan

MIMO Broadcast Channel Rate Region with Linear Filtering at High SNR: Full Multiplexing ........................................................................................................ 3712

Paul De Kerret, Raphael Hunger, Michael Joham, Wolfgang Utschick, Rudolf Mathar

The Feedback-Capacity Tradeoff for Opportunistic Beamforming ......................................................................................................................... 3718

Tharaka Samaratunge, Hazer Inaltekin, Jamie Evans

A Group-based Protocol for Improving Energy Distribution in Smart Grids ........................................................................................................ 3724

Jaimé Lloret, Marc Gilg, Miguel Garcia, Pascal Lorenz

An Optimal Estimation of Origin-Destination Traffic in Large-Scale Backbone Network ........................................................................................................ 3730

Dingde Jiang, Xingwei Wang, Zhengzheng Xu, Zhenhua Chen, Hongwei Xu

TCP Window-size Delegation for TXOP Exchange in Wireless Access Networks ........................................................................................................ 3735

Takayuki Nishio, Ryoichi Shinkuma, Tatsuro Takahashi, Go Hasegawa

TCPMoon: Monitoring the Diffusion of TCP Congestion Control Variants in the Internet ........................................................................................................ 3740

Gianni Casagrande, Fabrizio Granelli, Daniele Miorandi

Performance Evaluation of Routing Schemes for Energy-Constrained Delay Tolerant Networks ........................................................................................................ 3746

Yong Li, Pan Hui, Depeng Jin, Li Su, Lieguang Zeng

Cost-driven Peer Rating Algorithm ......................................................................................................................................................... 3751

Zbigniew Dulinski

Reducing the Overhead of View-Upload Decoupling in Peer-to-Peer Video On-Demand Systems ........................................................................................................ 3757

Le Chang, Jianping Pan

Knowledge Dissemination for Autonomic Network ......................................................................................................................................................... 3762

Sami Souihi, Abdelhamid Mellouk

Modeling and Performance Analysis of P2P Live Streaming Systems under Flash Crowds ........................................................................................................ 3767

Yishuai Chen, Baocian Zhang, Changjia Chen

Exploiting Communities for Enhancing Lookup Performance in Structured P2P Systems ........................................................................................................ 3772

H. M. N. Dilum Bandara, Anura P. Jayasumana

A Comprehensive Long-Term Evaluation on BGP Performance ......................................................................................................................................................... 3778

Ying Zhang, Mallik Tattipamula

On Update Rate-Limiting in BGP ......................................................................................................................................................... 3784

Ahmed Elmokashfi, Amand Kvalbein, Tarik Cicic
Internet Flattening: Monitoring and Analysis of Inter-Domain Routing ................................................................. 3790
Yang Xiang, Xia Yin, Zhiliang Wang, Jianping Wu

A Distributed Local-optimum Distance Vector Algorithm for the Metarouting Approach ........................................... 3796
Seweryn Dynierowicz, Jean-Noel Collin, Laurent Schumacher

Inter-domain Traffic Engineering using an AS-Level Multipath Routing Architecture ................................................ 3802
Pedro Amaral, Edgar Silva, Luis Bernardo, Paulo Pinto

Recovery Time Analysis for the Shared Backup Router Resources (SBRR) Architecture .................................................. 3808
Eleni Palkopoulou, Dominik A. Schupke, Thomas Bauschert

Impairment-constrained Multi-rate Multicast Flow Aggregation in IP over Optical Networks .................................. 3814
Yi Zhu, Jason F. Jue

Allocating Bandwidth in Resilient Packet Ring Networks by Proportional Controller .................................................... 3819
Fabh Albarbi, Nirwan Ansari

Impact and Handling of Demand Uncertainty in Multiperiod Planned Networks ............................................................. 3824
Clara Kronberger, Thilo Schondienst, Dominic A. Schupke

Optimized Channel and Delay Selection for Contention Resolution in Optical Networks ............................................. 3830
W. Rogiest, K. De Turck, K. Laevers, D. Fiems, H. Brunel, S. Wittevrongel

Best-Effort Interference Alignment in OFDM Systems with Finite SNR ................................................................. 3835
Meng Chen, Chunming Zhao, Xiao Liang, Zhi Ding

Compressive Sensing Recovery of Nonlinearly Distorted OFDM Signals ................................................................. 3841
Mohammad Mohammadnia-Arvval, Abolfazl Ghassemi, Lutz Lampe

Investigation of Blanking Nonlinearity in OFDM Systems .......................................................................................... 3846
Ulrich Eggeli, Kamel Shibli, Michael Schnell

Receiver DSP for OFDM Systems Impaired by Transmitter and Receiver Phase Noise ............................................. 3851
Ville Syrjala, Mikko Valkama

Design and Performance Evaluation of Filtered Multitone (FMT) in Doubly Dispersive Channels ............................. 3857
Pooyan Amini, Behrouz Farhang-Boroujeny

Measurement Aided Model Design for WCDMA Link Error Statistics .................................................................. 3862
Markus Laner, Philipp Svoboda, Markus Rupp

Effect of Bandwidth on the Number of Multipath Components in Realistic Wireless Indoor Channels ....................... 3867
Wesley M. Gifford, William Wei-Ian Li, Ying Jun, Moe Z. Win

Auto-regressive Modeling of the Shadowing for RSS Mobile Tracking ............................................................... 3873
Hadi Noureddine, Nicolas Gresset, Damien Castelain, Ramesh Pyndiah

Estimating the Nakagami-m Fading Parameter by the Generalized Method of Moments ...................................... 3878
Ning Wang, Julian Cheng

Semi-Markov Modeling for Body Area Networks ................................................................................................. 3883
Vasanath G. Chaganti, Leif W. Hanlen, Tharaka A. Lamehewa

A Near Optimal Amplify and Forward Relaying in Two-Way Relay Networks ....................................................... 3888
Shuang Tian, Yonghui Li, Branka Vucetic

Relay Selection for Bi-directional Amplify-and-Forward Wireless Networks ........................................................... 3893
Lingyang Song

Relay Selection with Outdated Channel Estimates in Nakagami-m Fading .......................................................... 3898
Diodimdis S. Michalopoulos, Nestor D. Chatzidiamantis, Robert Schober, George K. Karagiannidis

On the Optimization of Decode-and-Forward Schemes for Two-Way Asymmetric Relaying ................................... 3904
Zhiyong Chen, Hui Liu, Wenbo Wang

Network-Coded Interference Alignment in K-Pair Bidirectional Relaying Channels .................................................... 3909
Toshiaki Koike-Akino, Man-On Pun, Philip Orlik

Novel Adaptive Receivers with Low Complexity for Multi-user UWB ................................................................. 3914
Bo Zhao, Yunfei Chen, Roger J. Green

Noncoherent Multiple Symbol Detection for MIMO Ultra-Wideband Systems ....................................................... 3919
Taotao Wang, Tiejun Lv, Hui Gao

Ziv-Zakai Lower Bound for Impulse Radio Ultra-WideBand Ranging Error Correlation Matrix .............................. 3924
Hai Zhan, Jean-Yves Le Boudec, John Farserotu

Low Complexity Tri-level Sampling Receiver Design for UWB Time-of-Arrival Estimation ...................................... 3929
Kaikai Liu, Huarui Yin, Weidong Chen

Hua Shao, Norman C. Beaulieu

Dynamic Resource Allocation in OFDMA Systems with Full-Duplex and Hybrid Relaying ...................................... 3940
Derrick Wing Kwan Ng, Robert Schober

Energy Efficient Subcarrier-Power Allocation and Relay Selection Scheme for OFDMA-based Cooperative Relay Networks ........................................................................................................... 3946
Chieh Yuan Ho, Ching-Yao Huang
Multilayer Resource Allocation and LDPC-based Adaptive Modulation and Coding for OFDMA Downlink ................................................................. 3952
Matteo Mazzotti, Simone Moretti, Marco Chiani

Resource Allocation for Multilayer OFDMA-based Amplify-and-Forward Relay Networks with Selective Relaying .................................................. 3958
Ziaad Hasan, Ekram Hossain, Vijay K. Bhargava

Adaptive Resource Allocation in OFDMA Relay Networks with Network Coding ................................................................. 3964
Hanhua Zhao, Jacek Boy

Max-flow Protection using Network Coding ................................................................. 3969
Osameh M. Al-Kofahi, Ahmed E. Kamal

CoRET: A Network Coding Based Multicast Retransmission Scheme for Mobile Communication Networks ................................................................. 3974
Hao Wu, Jun Zheng

On Relay Selection in Wireless Relay Networks with Cooperative Network Coding ...................................................................... 3979
Chih-Hsiang Tang, Hsiao-Chen Lu, Wanjuan Liao

Statistical Modeling of the Physical-Layer Network Coding in Time-Varying Two-Way Relay Channels ................................................................. 3984
Eugene David Ngangue Ndih, Soumaya Cherkoua

Shuai Wang, Athanasios Vasilakos, Hongbo Jiang, Xiaoqiang Ma, Wenyu Liu, Kai Peng, Bo Liu, Yan Dong

Optimization of ARQ Protocols in Interference Networks with QoS Constraints ................................................................. 3994
Marco Levrato, Daniel O'Neill, Andrea Goldsmith, Urbashi Mitra

Capacity Optimization of MIMO Links with Interference ................................................................................................. 4000
Peng Wang, John Metzias, Michael Medley

Maximizing Sample Rate for Distributed Source Coding over Multiple Access Channels .................................................. 4006
Tianqi Wang, Wendi Heinzelman, Ali Reza Seyedi, Azadeh Vosoughi

An Optimized Resource Allocation Scheme Based on a Multidimensional Multiple-choice Approach with Reduced Complexity .................................................................................. 4011
Giulio Bartoli, Andrea Tassi, Dania Marabissi, Daniele Tarchi, Romano Fantacci

Optimal Data Transmission and Channel Code Rate Allocation in Multi-path Wireless Networks .................................................. 4017
Keivan Ronahi, Amir-Hamed Mohsenian-Rad, Vincent W. S. Wong, Sathi S. Gopalakrishnan

Potential of RFID Systems to Detect Object Orientation ................................................................................................. 4023
Rasmus Krigslund, Petar Popovski, Gert F. Pedersen, Kristian Bank

High Performance Tag Singulation for Memory-less RFID Systems ................................................................................................. 4028
Keyvan Kashkoul Nejad, Xiao Hong Jiang, Michiha Kameyama

Optimizing Sensor Communication Exposure in Target Detection Applications ................................................................................................. 4034
Zhengzheng Xu, Jia-Liang Lu, Min-You Wu, Charles-Francois Curis, Wei Shu

Anonymity Analysis on Social Spot based Pseudonym Changing for Location Privacy in VANETs ................................................................................................. 4039
Rongxing Lu, Xiaohai Lin, Lin Tom H. Luan, Xiaohai Liang, Xuejuan Shen

A Simple Probabilistic Relay Selection Protocol for Asynchronous Multi-Relay Networks Employing Rateless Codes .................................................................................. 4044
Xijun Wang, Wei Chen, Zhiqiang Cao

On Securing HWMP using IBC ................................................................................................. 4049
Jalel Ben-Othman, Yesica I. Saavedra Benitez

Mobile Assisted Key Distribution in Wireless Sensor Networks ................................................................................................. 4054
Baris Tas, Ali Saman Tosun

Effective Data-Centric Reputation Systems for MANETs: A Novel Evaluation Framework ................................................................................................. 4060
Jerzy Konorski

A Service Negotiation Model for Selfish Nodes in the Mobile Ad hoc Networks ................................................................................................. 4066
Yang Yang, Shuo-Yong Guo, Xue-Song Qiu, Luo-Ming Meng

A Study on Certificate Revocation in Mobile Ad Hoc Networks ................................................................................................. 4071
Wei Liu, Hiroki Nishiyama, Nirwan Ansari, Nei Kato

Topology Control and Coverage Enhancement of Dynamic Networks Based on The Controllable Movement of Mobile Agents ................................................................................................. 4076
Zhengjiang Mi, Yang Yang

Capacity-Optimized Topology Control for MANETs with Cooperative Communications ................................................................................................. 4081
Quansheng Guan, F. Richard Yu, Shengming Jiang

QoS Swarm Bee Routing Protocol for Vehicular Ad Hoc Networks ................................................................................................. 4086
Salim Bitam, Abdelhamid Mellouk

A New Phase for Screening Redundant Broadcast Nodes in Source-Independent Broadcasting Protocols ................................................................................................. 4091
Wilson Woon, Kwan L. Yeung
Interplanetary Overlay Network (ION) for Long-delay Communications with Asymmetric Channel Rates .......................................................... 4096
Ruhaib Wang, Vivek Dave, Bin Re, Ramakrishna Bhavanthula, Qinyu Zhang, Jia Hou, Liulei Zhou
Analysis of the Impact of Physical Environment on a Wireless Sensor Network .............................................................. 4101
Siarhei Smolian, Ronald Beaulieu
Event Aggregation with Different Latency Constraints and Aggregation Functions in Wireless Sensor Networks .......................................................... 4106
Weiping Zhu, Jianmeng Cao, Yi Xu, Vaikar Raychaudhury
Minimizing Energy Consumption for Lossless Data Gathering Wireless Sensor Networks .......................................................... 4111
Volkan Dedeglu, Sylvie Perreau, Alex Grant
Analysis for Heterogeneous Coverage Problem in Multimedia Sensor Networks .......................................................... 4116
Dong Zhao, Huadong Ma, Liang Liu
Cooperative Information Aggregation based Distributed Sequential Estimation in Wireless Sensor Networks .......................................................... 4121
Cheng-Ju Chang, Yuh-Ren Tsai
Evaluating the Information Efficiency of Multi-Hop Networks with Carrier Sensing Capability .......................................................... 4126
Mariai Kaynia, Pedro H. J. Nardelli, Matti Latva-Aho
Uplink Channel Assignment in Cognitive Radio WMNs Using Physical Layer Network Coding .......................................................... 4131
Sharabeel H. Alnabei, Ahmed E. Kamal, Tasneem H. Jawadwala
Robust Clustering of Ad-hoc Cognitive Radio Networks under Opportunistic Spectrum Access .......................................................... 4136
Di Li, James Gross
S. M. Kamruzzaman, Eunhee Kim, Dong Geun Jeong
Cognitive Radio Relay Networks with Multiple Primary and Secondary Users: Distributed Stable Matching Algorithms for Spectrum Access .......................................................... 4142
Siaavash Bayat, Raymond H. Y. Louie, Yonghui Li, Branka Vucetic
On the Effect of Cooperative Relaying on the Performance of Video Streaming Applications in Cognitive Radio Networks .......................................................... 4147
Zhangyu Guan, Lei Ding, Tommaso Melodia, Dongfeng Yuan
Robust Power Control in Cognitive Radio Networks: A Distributed Way .......................................................... 4153
Shangjiao Sun, Weiming Ni, Yu Zhu
Robust Power Control in Cognitive Radio Networks, based on Incumbent Outage Information .......................................................... 4159
Olasunkanmi Durowoju, Kamran Arshad, Klaus Moessner
Transmit Power Control for Secondary Use in Environments with Correlated Shadowing .......................................................... 4165
Jad Nasreddine, Janne Riihijarvi, Petri Mahonen
Power Control in Opportunistic Spectrum Access Cognitive Radio with Sensing Information at Transmitter .......................................................... 4170
Edward C. Y. Peh, Ying-Chang Liang, Yong Liang Guan, Yonghong Zeng
Optimal Joint Transmission Time and Power Allocation for Heterogenous Cognitive Radio Networks .......................................................... 4176
Renchao Xie, Hong Ji, Pengbo Si
Sequential Multichannel Joint Detection Framework With Non-Uniform Channel Sensing Durations .......................................................... 4181
Pedram Paysari-Hoseini, Norman C. Beaulieu
Performance Analysis of Adaptive Modulation for Cognitive Radios With Opportunistic Access .......................................................... 4186
Yanfei Chen, Mohamed-Slim Alouini, Liang Tang
Resource Allocation for OFDMA-based Cognitive Radio Systems with Primary User Activity Consideration .......................................................... 4192
Li Li, Changqing Xu, Jian He
Closed-form Approximations for Cooperative LLR-based Energy Detection in Cognitive Radios .......................................................... 4202
Ibrahim Khalife, Baltasar Beferull-Lozano
Optimal Power Allocation for PNC Relay based Communications in Cognitive Radio .......................................................... 4207
L. K. Saliya Jayasinghe, N. Rajatheva, M. Latva-Aho
Energy Efficient Joint Source and Channel Sensing in Cognitive Radio Sensor Networks .......................................................... 4212
Huazi Zhang, Zhaoyang Zhang, Xiaoming Chen, Rui Yin
Opportunistic Channel Sharing based on Primary User Transition Probabilities in Dual Mode Cognitive Radio Networks .......................................................... 4218
S. Senthuran, A. Anpalagan, O. Das, H-Y. Kong
Throughput-Sensing Tradeoff of Cognitive Radio Networks Based on Quickest Sensing .......................................................... 4224
Sepideh Zarrin, Teng Joon Lim
Cross-Channel Estimation Using Supervised Probing and Sensing in Cognitive Radio Networks .......................................................... 4229
Ian Bajaj, Yi Gong
Game Theoretic Channel Selection for Opportunistic Spectrum Access with Unknown Prior
Yuhua Xu, Qihui Wu, Jinlou Wang ........................................ 4234

Performance Evaluation of IEEE 802.19.1 Coexistence System
Stanislav Filin, Tuncer Baykas, M. Azizur Rahman, Hiroshi Harada ........................................ 4239

SAMA: Serverless Anonymous Mutual Authentication for Low-Cost RFID Tags
Sonmya Myneni, Satyajayant Mitra, Guoliang Xue ........................................ 4245

A Robust Collaborative Filtering Algorithm Using Ordered Logistic Regression
Shanshan Zheng, Tao Jiang, John S. Baras ........................................ 4250

Believe Yourself: A User-centric Misbehavior Detection Scheme for Secure Collaborative Spectrum Sensing
Shuai Li, Haojin Zhu, Bo Yang, Caillan Chen, Xingping Guan ........................................ 4256

A Novel Attack Tree Based Risk Assessment Approach for Location Privacy Preservation in the VANETs
Dandan Ren, Suguoo Du, Haojin Zhu ........................................ 4261

Ontology-based Risk Evaluation in User-centric Identity Management
Gail-Joon Ahn, Pradeep Sekar ........................................ 4266

Harnessing Interference with an Out-of-Band Relay: An Approximate Capacity Result
Ye Tian, Aylin Tener ........................................ 4271

Lattice Coding over the Relay Channel
Matthew Nokley, Behnaam Aazhang ........................................ 4276

Signal Space Alignment for an Encryption Message and Successive Network Code Decoding on the MIMO K-way Relay Channel
Namyoon Lee, Joohwan Chun ........................................ 4281

On a Mutual Information and a Capacity Bound Gap of Pilot-Aided MIMO Channels
Adriano Pastore, Michael Joham, Javier Rodriguez Fonollosa ........................................ 4286

Semi-Blind Key-Agreement over MIMO Fading Channels
Francesco Renna, Matthieu Bloch, Nicola Laurenti ........................................ 4292

Analysis of the Level Crossing Rates for Ordered Random Processes
Prathapasinghe Dharmawansa, Matthew R. McKay, Peter J. Smith ........................................ 4298

Extreme Eigenvalue Distributions of Gamma-Wishart Random Matrices
Prathapasinghe Dharmawansa, Matthew R. McKay ........................................ 4303

Approximate Condition Number Distribution of Complex Non-central Correlated Wishart Matrices
Lu Wei, Olav Tirkkonen ........................................ 4309

Effective Capacity of Correlated MISO Channels
Caijun Zhong, Tharm Ratnarajah, Kai-Kit Wong, Mohamed-Slim Alouini ........................................ 4314

Expected Density of Progress for Wireless Ad Hoc Networks with Nakagami-m Fading
Changhai Chen, Changchuan Yin, Di Li, Guangxin Yue ........................................ 4319

Adaptive Load Balancing based on IP Fast Reroute to Avoid Congestion Hot-spots
Masaki Hara, Takuya Yoshihiro ........................................ 4324

Resilient Traffic Engineering in a Transit-Edge Separated Internet Routing
Stefano Secchi, Kunpeng Liu, Gururupasad K. Rao, Bijan Jabbari ........................................ 4329

A Delay-Guiding Source Selection Method in Network Topology Discovery
Mingming Chen, Meng Xu, Ke Xu ........................................ 4335

Dispersing Hotspot Traffic in Backup Topology for IP Fast Reroute
Ryota Takahashi, Simon Tembo, Ken-Ichi Yukimatsu, Shohi Kamamura, Takashi Miyamura ........................................ 4341

The Tragedy of the Internet Routing Commons
Andra Lutu, Marcelo Bagnulo ........................................ 4346

Traffic Engineering Using Overlay Network
Ryoichi Kawahara, Shigeaki Harada, Noriaki Kiyamaya, Tatsuya Mori, Haruhisa Hasegawa, Akihiro Nakao ........................................ 4351

VNE-AC: Virtual Network Embedding Algorithm based on Ant Colony Metaheuristic
Ilhem Fajjari, Nadjib Aitsaadi, Guy Pujolle, Hubert Zimmermann ........................................ 4357

FELL: A Flexible Virtual Network Embedding Algorithm with Guaranteed Load Balancing
Sheng Zhang, Zhichao Qian, Song Guo, Sanglu Lu ........................................ 4363

XNetMon: A Network Monitor for Securing Virtual Networks
Natalia Castro Fernandes, Otto Carlos, Muniz Bandeira Duarte ........................................ 4368

AMPHIBIA: A Cognitive Virtualization Platform for End-to-End Slicing
Kiyohide Nakashiki, Kentaro Ishizu, Homare Murakami, Akihiro Nakao, Hiroshi Harada ........................................ 4373

A Generic Application-Oriented Networking (GAON) Simulation Framework for Next-Generation Internet
Xiaohua Tian, Yu Cheng, Bin Liu ........................................ 4378
Non-Coherent Detection for Two-way Cooperative Communications in a Fast Rayleigh Fading Environment ................................................................. 4532
Jian Tian, Qi Zhang, Fengqi Yu

ARQ Based Joint Relay Selection and Cooperative Protocol Switch Cooperative Scheme ................................................................. 4537
Yuanquan Xu, Zhiquan Bai, Dongfeng Tian, Kyungsup Kwak

Static Clustering for Cooperative Multi-Point (CoMP) in Mobile Communications ................................................................. 4542
Patrick Marsch, Gerhard Fettweis

A Performance Evaluation of Cooperative Schemes for On-Body Area Networks based on Measured Time-variant Channels ................................................................. 4548
Raffaele D’Errico, Ramona Rosini, Mickael Maman

Base Station Cooperation in MIMO-Aided Multi-User Multi-Cell Systems Employing Distributed Probabilistic Data Association Based Soft Reception ................................................................. 4553
Shaoshi Yang, Tiejun Lv, Lajos Hanzo

Cost Analysis of Mobility Management Entities of SINEMO ................................................................................................................................. 4558
Md. Shohrab Hossain, Mohammed Atiquzzaman, William Ivancic

Joint Handoff and Energy Management for a Wireless Mesh Network ................................................................. 4563
Yang Yang, Dongmei Zhao

Resolving RACH Congestion for High Speed Moving Group in Wireless Networks ................................................................. 4568
Hongxia Zhao, Rongsheng Huang, Yuguang Fang

Handover Measurement in Mobile Cellular Networks: Analysis and Applications to LTE ................................................................. 4574
Van Minh Nguyen, Chong Shue Chen, Laurent Thomas

Characterizing Data Services in a 3G Network: Usage, Mobility and Access Issues ................................................................. 4580
Zhichao Zha, Guohong Cao, Ram Keralapura, Antonio Nucci

Distributed Power Control for Ad-hoc Communications via Stochastic Nonconvex Utility Optimization ................................................................. 4586
Lei Yang, Yailin E. Saghaey, Junshan Zhang, Jason H. Li

Power Allocation and Scheduling for Broadband Wireless Networks Considering Mutual Interference ................................................................. 4591
Bojiang Ma, Zhe Yang, Lin Cai, T. Aaron Gulliver

Self-Organizing Fractional Power Control for Interference Coordination in OFDMA Networks ................................................................. 4596
Richard Combes, Zvi Altman, Eitan Altman

Low-Weight Channel Coding for Interference Mitigation in Electromagnetic Nanonetworks in the Terahertz Band ................................................................. 4601
Josep Miquel Jornet, Ian F. Akyildiz

Integrated Interference Coordination for Relay-aided Cellular OFDMA System ................................................................. 4607
Luang Liang, Gung Fong, Yide Zhang

Practical Provably Secure Communication for Half-Duplex Radios ................................................................. 4612
Ahmed Elmorsy, Mohamed Yasser, Mohamed Elsabagh, Moustafa Youssef

Modulation Techniques for Communication via Diffusion in Nanonetworks ................................................................. 4617
M. S. Karan, H. B. Yilmaz, T. Ates, I. F. Akyildiz

3D Location Estimation in Urban Cellular Systems Using the Overhearing Model ................................................................. 4622
Nejla Ghaboosi, Abbas Jamalipour

Impact of Region-Based Faults on the Connectivity of Wireless Networks in Log-normal Shadow Fading Model ................................................................. 4627
Sujayoga Banerjee, Arunabha Sen

Filling Gap between Discrete and Continuous Space Flow Models in Dense Wireless Networks ................................................................. 4633
Sina Z. Anaraki, Mehdi Kalantari

A Hidden Markov Model for Localization Using Low-End GSM Cell Phones ................................................................. 4639
Mohamed Ibrahim, Moustafa Youssef

A New Architecture of Wireless Mesh Networks Based IEEE 802.11s Directional Antennas ................................................................. 4644
Jalel Ben-Othman, Lynda Mokdad, Mohamed Ould Cheikh

An Analytical Model for IEEE 802.15.4 with Sleep Mode Based on Time-varying Queue ................................................................. 4649
Zhuxiao Xiao, Chen He, Liangge Jiang

Maximizing Capacity in the SINR model in Wireless Networks with Successive Interference Cancellation ................................................................. 4654
Shaohoe Lv, Weihua Zhuang, Xiaodong Wang, Chi Liu, Xingming Zhou

The Speed Bounds on Event Reporting in Mobile Sensor Networks with Energy Constraints ................................................................. 4660
Yi Xu, Wenyue Wang

Delay and Capacity in Ad Hoc Mobile Networks with f-cast Relay Algorithms ................................................................. 4665
Jiajia Liu, Xiaohong Jiang, Hiroki Nishiyama, Nei Kato

Optimal Power Allocation in Multi-Hop Wireless Networks with Finite Buffers ................................................................. 4670
Dongyue Xue, Eylem Ekipci
3DQS: Distributed Data Access in 3D Wireless Sensor Networks ................................................................. 4675
Jun Luo, Feng Li, Ying He

Double Cross: A Double-Blind Data Discovery Scheme for Large-Scale Wireless Sensor Networks .......... 4680
Gaotao Shi, Jun Zheng, Jinfeng Yang, Zenghua Zhao

XCP-Winf and RCP-Winf: Congestion Control Techniques For Wireless Mesh Networks ......................... 4686
Luis Barreto, Susana Sargento

A Framework for Packet-Dropers Mitigation in OLSR Wireless Community Networks .......................... 4692
Francesco Saverio Presto, Andrea Detti, Claudio Pisa, Giuseppe Bianchi

Richard W. Puzzi, Dipu Zhang, Azzedine Boukerche, Lynda Mokdad

Is Channel Fragmentation/Bonding in IEEE 802.22 Networks Secure? .................................................. 4703
S. Anand, K. Hong, S. Sengupta, R. Chandramouli

Ferran Adelantado, Christos Verikoukis

Delay Analysis of Spatio-Temporal Channel Access for Cognitive Networks ................................................ 4713
Chia-Han Lee, Martin Haenggi

Access Point Selection for WLANs with Cognitive Radio: A Restless Bandit Approach ............................... 4718
Wendong Ge, Hong Ji, Victor C. M. Leung, Pengbo Si

Adaptive Pre-Compensation of Transmitter Phase Noise for User Coexistence in Cognitive Radios .......... 4723
Arash Zahedi-Ghasabeh, Alineza Tarighat, Babak Daneshvar

On the Capacity of Cognitive Radio Under Limited Channel State Information over Fading Channels ...... 4729
Zouheir Rezki, Mohamed-Slim Alouini

Service-outage Capacity Maximization in Cognitive Radio ........................................................................ 4734
Athipat Limmanee, Subhrakant Dey, Jamie S. Evans

Transmission Capacity of Two Co-existing Wireless Ad hoc Networks with Multiple Antennas ............... 4740
Jianho Ji, Wen Chen

Sum-rate Results in Point-to-multipoint Cognitive Networks: Effect of Path Loss ....................................... 4746
N. Jamal, P. Mitran

Throughput Scaling in Cognitive Multiple Access Networks with Power and Interference Constraints .... 4752
Ehsan Nekouei, Hazer Inaltekin, Subhrakant Dey

iCAPTCHA: The Next Generation of CAPTCHA Designed to Defend Against 3rd Party Human Attacks ................................................................. 4758
Huy D. Truong, Christopher F. Turner, Cliff C. Zou

HASVC: An Efficient Hybrid Authentication Scheme for Vehicular Communication ............................. 4764
Huaqun Guo, Fan Yu, Zonghua Zhang, Wai-Chooong Wong, Maode Ma, Yongdong Wu

A Measurement Study of Attacks on BitTorrent Seeds ................................................................................. 4769
Prithula Dhungel, Xiaojun Hei, Di Wu, Keith W. Ross

Towards Efficient Analysis for Malware in the Wild ..................................................................................... 4774
Makoto Iwamura, Mitsutaka Itah, Yoichi Muraoka

In-Execution Malware Detection using Task Structures of Linux Processes .............................................. 4780
Farrukh Shahzad, Sohail Bhatti, Muhammad Shahzad, Muddassar Farooq

On Code Parameters and Coding Vector Representation for Practical RLC ............................................. 4786
Janas Heide, Morten V. Pedersen, Frank H. P. Fitzek, Muriel Medard

Singularity Probability Analysis for Sparse Random Linear Network Coding ........................................... 4791
Xiaolin Li, Wai Ho Mow, Fai-Lung Tsang

Optimal Decoding Algorithm for Asynchronous Physical-Layer Network Coding ..................................... 4796
Lu Lu, Songchung Liew, Shengli Zhang

r-Regular P2P Broadcast Networks: Optimal Delay and Throughput Using Network Coding ................. 4802
Amy Fu, Parastoo Sadeghi

Wireless Inter-Session Network Coding – An Approach Using Virtual Multicasts ..................................... 4807
Michael Heindlmaier, Desmond S. Lun, Danail Traskov, Muriel Medard

Cyclic Feature based Wideband Spectrum Sensing using Compressive Sampling ....................................... 4812
Zhi Tian

Performance of Eigenvalue-based Signal Detectors with Known and Unknown Noise Level ................... 4817
Boaz Nadler, Federico Penna, Roberto Garello

On the Capacity of a Class of Cognitive Z-Interference Channels ........................................................... 4822
Jinhua Jiang, Ivanu Marie, Andrea Goldsmith, Shlomo Shamai, Shuguang Cui

On the Capacity of Multiple-Access-Z-Interference Channels .................................................................. 4828
Fangfang Zhu, Xiaohui Shang, Biao Chen, H. Vincent Poor
Near-far Resistant MIMO Iterative Receiver for Uplink LTE................................................................. 4994
Lukasz Krzymien, Christian Schlegel

Training Sequence-aided QRMD-MLD Block Signal Detection for Single-carrier MIMO Spatial
Multiplexing ......................................................................................................................................... 4999
Tetsuya Yamamoto, Kazuki Takeda, Fumiaki Adachi

On the Performance of Receive ZF MIMO Broadcast Systems with Channel Estimation Errors 5004
Cha-Jung Yeh, Li-Chun Wang, Jwo-Yah Wu

A Near-Capacity GDFE-like Precoder with Reduced Feedback Overhead for MIMO Broadcast
Channel............................................................................................................................................. 5009

Two-Way Training Design for Discriminatory Channel Estimation in Wireless MIMO systems 5015
Chao-Wei Huang, Xiangyun Zhou, Tsung-Hui Chang, Y. W. Peter Hong

Asymptotic Analysis for Nakagami-m Fading Channels with Relay Selection ............................ 5020
Caijun Zhong, Kai-Kit Wong, Shi Jin, Mohamed-Slim Alouini, Tharm Ratnarajah

Pseudo Exclusive-OR for LDPC Coded Two-Way Relay Block Fading Channels ........................... 5025
Jianquan Liu, Meixia Tao, Youyun Xu

Maximum Likelihood Receiver for MMSE Relaying ........................................................................ 5030
Petra Wettenhammer, Guido Dietl

Using Distributed Rotations for a Low-Complexity Dynamic Decode-and-Forward Relay Protocol 5035
Charlotte Hucher, ParastooSadeghi

Error Exponents for Multi-Source Multi-Relay Parallel Relay Networks with Limited Backhaul
Capacity ............................................................................................................................................. 5040
Erhan Yilmaz, Raymond Knopp, David Gesbert

Doped LT Decoding with Application to Wireless Broadcast Service .............................................. 5045
Guosen Yue, Momin Uppal, Xiaodong Wang

Decoding the ‘Nature Encoded’ Messages for Distributed Energy Generation Control in Microgrid 5050
Shuping Gong, Husheng Li, Lifeng Lai, Robert C. Qiu

Error Estimating Codes with Constant Overhead: A Random Walk Approach ............................ 5055
Hongyi Yao, Tracey Ho

Sphere Decoding for Spatial Modulation ............................................................................................. 5060
AbdelhamidYounis, Marco Di Renzo, Raed Mesleh, HaraldHaus

Precoding Performance with Codebook Feedback in a MIMO-OFDM System ............................. 5066
Min Zhang, Mansoor Shafi, Peter J. Smith, Pawel A. Dmochowski

Adaptive Localized Resource Allocation with Access Point Coordination in Cellular Networks ... 5072
Bijan Golkar, Elvino Sousa

Joint Subcarrier Pairing, Relay Selection and Power Allocation in OFDM Relay Systems ............ 5077
Wanda Sun, Lihua Li, Wei Yang, Lei Song

Practical Resource Allocation for the Broadcast Phase of Three-Step Bidirectional Relaying ......... 5082
Jawad Manssour

An Energy-Efficient Distributed Relay Selection and Power Allocation Optimization Scheme over
Wireless Cooperative Networks ........................................................................................................ 5088
Dan Chen, Hong Ji, Xi Li

A Design Criterion of Error Correcting Codes for Spectrum-Overlapped Resource Managements 5093
Jungo Goto, Hiroki Takahashi, Osamu Nakamura, Kazunari Yokomakura, Yasuhiro Hamaguchi, Shinsuke Ibi,
Seiichi Sampei

Search Space Design for Cross-Carrier Scheduling in Carrier Aggregation of LTE-Advanced System 5098
Anxin Li, Kazuki Takeda, Nobuhiko Miki, Yuan Yan, Hideaki Yamaguchi

Optimal Packet Scheduling in a Multiple Access Channel with Rechargeable Nodes ..................... 5103
Jing Yang, Sennur Ulukus

Coordinated User Scheduling with Transmit Beamforming in the Presence of Inter-Femtocell
Interference ......................................................................................................................................... 5108
Heui-Chang Lee, Dong-Chan Oh, Yong-Hwan Lee

User Scheduling for the Broadcast Channel Using a Sum-Rate Threshold .................................... 5113
Malcom Egan, lain B. Collings, Wei Ni, Chang Kyung Sung

Throughput Maximizing Multiuser Scheduling with Adjustable Fairness ....................................... 5119
Stefan Schwarz, Christian Mehlfuhrer, Markus Rupp

A Channel-Aware, Fast Sub-Channel to User Assignment Algorithm in OFDMA Systems ............ 5124
A. Karthik, Neelesh B. Mehta

An Analysis of TDOA Effect for OFDMA-based Wireless Mesh Networks .................................... 5130
Chang Hwan Park, Hyun Il Yoo, Yeong Jun Kim, Dong Seung Kwon, Yong Soo Cho
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement of the Error Characteristics of an N-Continuous OFDM System with Low Data</td>
<td>5134</td>
</tr>
<tr>
<td>Channels by SLM</td>
<td></td>
</tr>
<tr>
<td>Masaya Ohta, Atsuwo Iwase, Katsumi Yamashita</td>
<td></td>
</tr>
<tr>
<td>Spectral Efficiency Degradation of Multicarrier CDMA due to Carrier Frequency Offset</td>
<td>5139</td>
</tr>
<tr>
<td>Junaid Ahmed, Khairi Ashour Hamdi</td>
<td></td>
</tr>
<tr>
<td>Average SNR and Ergodic Capacity of Reactive DF Relaying System with Outdated Channel State Information</td>
<td>5144</td>
</tr>
<tr>
<td>Seokjung Kim, Sungsoo Park, Hyoung-Ok Min, Daesik Hong</td>
<td></td>
</tr>
<tr>
<td>Spectrum Sharing between Cooperative Relay and Ad-hoc Networks: Dynamic Transmissions under Computation and Signaling Limitations</td>
<td>5149</td>
</tr>
<tr>
<td>Yin Sun, Xiaofeng Zhong, Yunzhou Li, Shidong Zhou, Xibin Xu</td>
<td></td>
</tr>
<tr>
<td>Effective Cooperative ARQ Protocols with the Opportunistic Selective AF Relaying: The Perspectives of Outage versus Packet Error Probabilities</td>
<td>5154</td>
</tr>
<tr>
<td>Chau-Kai Tseng, Sau-Hsuan Wu</td>
<td></td>
</tr>
<tr>
<td>Optimal Space-Time Power Allocation in MIMO Rician fading channels with Ideal Channel State Information</td>
<td>5159</td>
</tr>
<tr>
<td>Mohammed Zafar Ali Khan, Uday B. Desai</td>
<td></td>
</tr>
<tr>
<td>System Performance of Clustered DFT-S-OFDM Considering Maximum Allowable Transmit Power</td>
<td>5164</td>
</tr>
<tr>
<td>Takashi Iwai, Atsushi Matsumoto, Shin-yaoka Takaoka, Yoshihiko Ogawa, Akihiko Nishio, Daichi Imamura</td>
<td></td>
</tr>
<tr>
<td>Optimal Resource Pricing Coercing Social Behavior in Wireless Networks</td>
<td>5169</td>
</tr>
<tr>
<td>Hanna Bogucka</td>
<td></td>
</tr>
<tr>
<td>Power and Subcarrier Allocation for Physical-Layer Security in OFDMA Networks</td>
<td>5174</td>
</tr>
<tr>
<td>Xiaowei Wang, Meixia Tao, Jianhua Mo, Youyun Xu</td>
<td></td>
</tr>
<tr>
<td>An Advanced CSMA/CA System for Wide Area Broadband Wireless Access</td>
<td>5179</td>
</tr>
<tr>
<td>Kaoru Sano, Hiroshi Kobayashi, Osamu Moriya</td>
<td></td>
</tr>
<tr>
<td>HARQ Feedback for Carrier Aggregation in LTE-A TDD</td>
<td>5185</td>
</tr>
<tr>
<td>Li Zhang, Peng Chen, Peter Skow</td>
<td></td>
</tr>
<tr>
<td>BAN Communication Quality Assessments Using an Arm-Waving Dynamic Phantom Replicating the Walking Motion of a Human</td>
<td>5191</td>
</tr>
<tr>
<td>N. Yamamoto, N. Shirakata, D. Kobayashi, K. Ogawa</td>
<td></td>
</tr>
<tr>
<td>Blind and Semiblind Channel Estimation for Single-Carrier Block Transmission Systems Using Few Received Blocks</td>
<td>5197</td>
</tr>
<tr>
<td>Wen-Jan Zeng, Xinlin Li, En Cheng</td>
<td></td>
</tr>
<tr>
<td>Magneto-Inductive Underground Communications in a District Heating System</td>
<td>5202</td>
</tr>
<tr>
<td>Saroush Afkhami Meybodi, Jens Nielsen, Jan Bendtson, Mischa Dohler</td>
<td></td>
</tr>
<tr>
<td>Joint TX/RX Analog Linear Transformation for Maximizing the Capacity at 60 GHz</td>
<td>5207</td>
</tr>
<tr>
<td>J. Nsenga, A. Bourdoux, W. Van Thillo, V. Ramon, F. Horlin</td>
<td></td>
</tr>
<tr>
<td>Choosing Optimum Noise Figure and Data Rate in Wireless Sensor Network Radio Transceivers</td>
<td>5212</td>
</tr>
<tr>
<td>R. Dutta, R. V. O. Zee, M. J. Bentum, A. B. J. Kokkeler</td>
<td></td>
</tr>
<tr>
<td>Experimental Evaluation of Analog Joint Source-Channel Coding in Indoor Environments</td>
<td>5217</td>
</tr>
<tr>
<td>J. A. Garcia-Naya, O. Fresnedo, F. J. Vasquez-Arauju, M. Gonzalez-Lopez, L. Casteo, J. Garcia-Frias</td>
<td></td>
</tr>
<tr>
<td>Throughput Enhancement of a Random Access WLAN by Combination of Digital and Analog Network Coding</td>
<td>5222</td>
</tr>
<tr>
<td>Farzaneh Farhadi, Farid Ashitani</td>
<td></td>
</tr>
<tr>
<td>Successive Refinement Relaying Strategies in Coded Wireless Multicasts</td>
<td>5227</td>
</tr>
<tr>
<td>James Ho, James She, Pin-Han Ho</td>
<td></td>
</tr>
<tr>
<td>Opportunistic Multicast Scheduling With Resource Fairness Constraints in Cellular Networks</td>
<td>5233</td>
</tr>
<tr>
<td>Wei Liu, Liqi Chen Zhu, Xinbing Wang, Hui Yu, Mohsen Guizani</td>
<td></td>
</tr>
<tr>
<td>Optimizing Multicast Delay with Switched Beamforming in Wireless Networks</td>
<td>5238</td>
</tr>
<tr>
<td>Yuannxi Jiang, Honghai Zhang, Baohua Zhao, Sampath Rangarajan</td>
<td></td>
</tr>
<tr>
<td>On Maximizing the Throughput of Opportunistic Multicast in Wireless Cellular Networks with Erasure Codes</td>
<td>5244</td>
</tr>
<tr>
<td>Wen Huang, Kwan L. Yeung</td>
<td></td>
</tr>
<tr>
<td>Resource Allocation for Layered Multicast Streaming in Wireless OFDMA Networks</td>
<td>5249</td>
</tr>
<tr>
<td>Hui Deng, Xiaoming Tao, Mengfei Xing, Jianhua Lu</td>
<td></td>
</tr>
<tr>
<td>Performance Analysis for End-to-End Channel System with Lossy Communication of Multi-hop Wireless Networks</td>
<td>5254</td>
</tr>
<tr>
<td>Guofeng Yan, Jianxin Wang, Xi Zhang</td>
<td></td>
</tr>
<tr>
<td>Capacity of Cooperative Ad Hoc Networks with Heterogeneous Traffic Patterns</td>
<td>5259</td>
</tr>
<tr>
<td>Hui Liu, Xinbing Wang</td>
<td></td>
</tr>
<tr>
<td>Performance Analysis of Time-Critical Peer-to-Peer Communications in IEEE 802.15.4 Networks</td>
<td>5264</td>
</tr>
<tr>
<td>Baohua Wang, John S. Baras</td>
<td></td>
</tr>
</tbody>
</table>
Radio Capacity Improvement with HSPA+ Dual-Cell .................................................. 5270
T. Bonald, S. E. Elayoubi, A. El Falou, J. B. Landre

Stable Queue Management for Supporting TCP Flows over Wireless Networks .............................................. 5276
Hiroaki Makuaidani, Lin Cai, Xuemin Shen

An Energy-Efficient Communication Scheme in Wireless Cable Sensor Networks ........................................... 5282
Xiao Chen, Neil C. Rose

Distributed Optimisation of MRF–Based Sensor Networks via Dual Decomposition ........................................... 5287
Andrea Pollok, Sylvie Perruex

Directional Virtual Coordinate Systems for Wireless Sensor Networks ........................................................... 5292
Dulanjalle C. Dhanapala, Anura P. Jayasumana

Fastest Distributed Consensus on Star-Mesh Hybrid Sensor Networks ......................................................... 5298
Saber Jafarizadeh, Abbas Jamalipour

Exploiting Heterogeneity to Prolong the Lifetime of Large-Scale Wireless Sensor Networks ............................... 5303
Chul-Ho Lee, Do Young Eun

Energy-Efficient Physical Layer Design for Wireless Sensor Network Links .................................................... 5308
Felipe M. Costa, Hideki Ochiai

RESENSE: An Innovative, Reconfigurable, Powerful and Energy Efficient WSN Node ....................................... 5313
Andreas Brokalakis, Georgios-Grigorios Mplemenos, Konstantinos Papadopoulos, Ioannis Papaefstathiou

Multi-sensor Signal Fusion based Modulation Classification by using Wireless Sensor Networks .................... 5318
Y. Zhang, N. Ansari, W. Su

Distributed Transmit Beamforming Based on Frequency Scanning ................................................................. 5323
Chen Wang, Qinye Yin, Bichan Shi, Hongyang Chen, Qiyue Zou

UKF Based Iterative Joint Channel Estimation for Uplink Two Dimensional Block Spread Wireless Networks .......... 5328
Xi Chen, Cheng Li, Weixiao Meng, Zhongzhao Zhang

Spectrum Leasing via Cooperation for Enhanced Physical-Layer Secrecy ......................................................... 5333
Keonkook Lee, Osvaldo Simeone, Chan-Byoung Chae, Joohyuk Kang

Spectrum Stealing via Sybil Attacks in DSA Networks: Implementation and Defense ......................................... 5338
Yi Tan, Kai Hong, Shamilk Sengupta, K. P. Subbalakshmi

Transmission Throughput of Decentralized Overlaid Networks with Outage Constraints .................................. 5343
Chengzhi Li, Huaiyun Dai

On the Dissemination Latency of Cognitive Radio Networks Under General Node Mobility .............................. 5348
Lei Sun, Wenyue Wang

On the Gain of Vertical Cooperation in Cognitive Radio Networks ................................................................. 5353
Liping Wang, Viktoria Fodor

Husheng Li, Chien-Fei Chen, Lifeng Lai

Cognitive Multi-Channel MAC Protocols with Perfect and Imperfect Sensing .................................................. 5364
David Tung-Cheng Wong, Shoukang Zheng, Ying-Chang Liang

Dynamic Spectrum Auction Based on Coexistent Matrix ...................................................................................... 5369
Bochao Shen, Chongnian Long, Cailian Chen, Xingping Guan, Quan Zhang

IEEE 802.11ac: Dynamic Bandwidth Channel Access ......................................................................................... 5374
Minyoung Park

Statistical Prediction of Spectrum Occupancy Perception in Dynamic Spectrum Access Networks ................... 5379
Miguel Lopez-Benitez, Fernando Casadevall

Secure Communication Through Nakagami-m Fading MISO Channel ............................................................. 5385
Md. Zahurul I. Sarkar, Tharmalingam Ratnarajah

An Efficient Caching Mechanism for Network-based URL Filtering by Multi-level Counting Bloom Filters .................. 5390
Yi-Hsuan Feng, Nen-Fu Huang, Chia-Hsiang Chen

Identity Theft Detection Based on Neural Network Non-linearity Identification in OFDM System ....................... 5396
Filippo Meucci, Laura Pierucci, Neeli Prasad

SNEED: Enhancing Network Security Services Using Network Coding and Joint Capacity ............................. 5401
Salah A. Aly, Nirwan Ansari, H. Vincent Poor

Secure MAC-Layer Protocol for Captive Portals in Wireless Hotspots ............................................................ 5406
Jihyuk Choi, Sang-Yoon Chang, Diko Ko, Yih-Chun Hu

A Novel Comprehensive Network Security Assessment Approach ................................................................. 5411
Chunlu Wang, Yancheng Wang, Yingfei Dong, Tianle Zhang

MI: Cross-layer Malleable Identity ...................................................................................................................... 5417
Soon Hin Khor, Akhiroy Nakao
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative Jamming and Power Allocation for Wireless Relay Networks in Presence of Eavesdropper</td>
<td>5423</td>
</tr>
<tr>
<td>An Approach for Unifying Rule Based Deep Packet Inspection</td>
<td>5428</td>
</tr>
<tr>
<td>Quantifying Information Leakage in Finite Order Deterministic Programs</td>
<td>5433</td>
</tr>
<tr>
<td>Source Optimization in MISO Relaying with Channel Mean Feedback: A Stochastic Ordering Approach</td>
<td>5439</td>
</tr>
<tr>
<td>A Relay-Coding Matrix for Multi-user Cooperative Communications</td>
<td>5444</td>
</tr>
<tr>
<td>Non-cooperative Resource Allocation in Relay-assisted MIMO MAC Systems with Partial CSI: A Game-Theoretic Approach</td>
<td>5449</td>
</tr>
<tr>
<td>Adaptive Distributed Network-Channel Coding For Cooperative Multiple Access Channel</td>
<td>5454</td>
</tr>
<tr>
<td>Efficient Multiple Access Protocols for Coded Multi-Source Multi-Relay Networks</td>
<td>5464</td>
</tr>
<tr>
<td>Fitting Noisy Data to A Circle: A Simple Iterative Maximum Likelihood Approach</td>
<td>5470</td>
</tr>
<tr>
<td>Equalization Algorithms for MIMO Communication Systems based on Factor Graphs</td>
<td>5475</td>
</tr>
<tr>
<td>Asymptotic BER Analysis for MIMO-BICM with MMSE Detection and Channel Estimation</td>
<td>5480</td>
</tr>
<tr>
<td>Belief Condensation Filter for Navigation in Harsh Environments</td>
<td>5485</td>
</tr>
<tr>
<td>Power Consumption in Spatial Cognitive Scenarios</td>
<td>5491</td>
</tr>
<tr>
<td>Saturation Throughput in a Heterogeneous Multi-channel Cognitive Radio Network</td>
<td>5496</td>
</tr>
<tr>
<td>On the Flow-Level Delay of a Spatial Multiplexing MIMO Wireless Channel</td>
<td>5501</td>
</tr>
<tr>
<td>Efficient Streaming Delivery in eMBMS with HARQ and Raptor</td>
<td>5507</td>
</tr>
<tr>
<td>Cognitive Rate Adaptation in Wireless LANs</td>
<td>5512</td>
</tr>
<tr>
<td>Content-based Detection and Prevention of Spam over IP Telephony - System Design, Prototype and First Results</td>
<td>5517</td>
</tr>
<tr>
<td>Understanding User Generated Content Characteristics : A Hot-Event Perspective</td>
<td>5522</td>
</tr>
<tr>
<td>Limitations On The Effectiveness Of Ecentralized Incentive Mechanisms</td>
<td>5527</td>
</tr>
<tr>
<td>Modeling BitTorrent-Based P2P Video Streaming Systems in the Presence of NAT Devices</td>
<td>5532</td>
</tr>
<tr>
<td>Content Routers: Fetching Data on Network Path</td>
<td>5537</td>
</tr>
<tr>
<td>Optimal Sensing and Power Allocation Strategy for an Efficient Cognitive Radio System</td>
<td>5543</td>
</tr>
<tr>
<td>Adaptive Rate Allocation Scheme for Uplink TH-UWB Networks</td>
<td>5548</td>
</tr>
<tr>
<td>The Achievable Rate of the Training-Based MIMO Systems over Time-Varying Fading Channels: A BCRB Perspective on Channel Tracking</td>
<td>5554</td>
</tr>
<tr>
<td>Optimal Power Allocation Over a Fading Mac with Varying Observation SNRs in Resource</td>
<td>5559</td>
</tr>
</tbody>
</table>
Multicast Secrecy Rate Maximization for MISO Channels with Multiple Multi-antenna Eavesdroppers
Qi Li, Wing-Kin Ma

Adaptive Codebook Based Channel Prediction and Interpolation for Multiuser MIMO-OFDM Systems
Jiang Chang, I-Tai Lu, Yingxue Li

User Selection for Multiuser MIMO Systems Based on Block Diagonalization in Wide-Range SNR Environment
Reichi Kudo, Yassaki Takatori, Tomoki Murakami, Masato Mizoguchi

Rate Balancing Based Linear Transceiver Design for Multiuser MIMO System With Multiple Linear Transmit Covariance Constraints
K. Cumanan, J. Tang, S. Lambotharan

Hybrid Single/Multi-User MIMO Transmission Based on Implicit Channel Feedback
Katsutoshi Kusume, Karim Khashaba, Guido Diel, Wolfgang Utschick

Hybrid Diversity Maximization Precoding for the Multiuser MIMO Downlink
Farhan Khalid, Joachim Speidel

Binary Field Network Coding Design for Multiple-Source Multiple-Relay Networks
Jun Li, JinHong Yuan, Rayan Malaney, Ming Xiao

Feasibility Conditions of Signal Space Alignment for Network Coding on K-user MIMO Y channels
Kwangwon Lee, Namyoon Lee, Inkyu Lee

Dual XOR In the Air: A Network Coding Based Retransmission Scheme for Wireless Broadcasting
Zhang Zhang, Tiejun Lv, Xin Su, Hui Gao

Non–Coherent Grassmann TCM Design for Physical–Layer Network Coding in Bidirectional MIMO Relaying Systems
Toshiaki Koike-Akino, Philip Orkik

Completion Delay Minimization for Instantly Decodable Network Coding with Limited Feedback
Sameh Sorour, Shahrokhi Valae

Diversity Gain Analysis of Best Terminal Selection for Single-Input Multiple-Output WPAN Systems
Kyeong Jin Kim, Kyung Sup Kwak, H. Vincent Poor

ARQ with Packet-Error-Outage-Probability QoS Measure
Mingwei Wu, Pooi-Yuen Kam

Comparison of Antenna Arrays in a 3-D Multiuser Multicell Network
Xiaoqin Lu, Anton Tolli, Olli Piirainen, Markku Juntti, Wei Li

A Decision Feedback CP-Assisted CDMA Scheme Using Despreading Before Equalization
Dah-Chung Chang, Ruo-Yu Wu, Yung-Fang Chen

Efficient Link Adaptation for Precoded Multi-rank Transmission and Turbo SIC Receivers
Meilong Jiang, Narayan Prasad, Guosen Yue, Sampath Rangarajan

Interference Mitigation Using Coordinated Backhaul Timing Allocation for LTE-Advanced Relay Systems
Yassaki Yuda, Ayako Iwata, Daichi Imamura

Interference Control with Beamforming Coordination for Two-Tier Femtocell Networks and its Performance Analysis
Jun Zhu, Hong-Chuan Yang

Lattice Signal Sets to Combat Pulsed Interference from Aeronautical Signals
Khodr A. Saatfan, Werner Henkel

Co-Channel Interference Cancellation: Cross Coding vs. Beamforming
Xiaoying Shao, Cornelis H. Stump

Performance of Adaptive MS-GSC with Co-channel Interference
Mohamed-Ali Daghiou, Redha M. Radaydeh, Mohamed-Slim Alouini

Analysis on TOA and TDOA Location Estimation Performances in a Cellular System
Shinsuke Hara, Daisuke Anzai, Tomofumi Yabu, Thomas Derham, Radim Zemek

Multiple Transmitter Localization and Communication Footprint Identification Using Sparse Reconstruction Techniques
Y. R. Venugopalabirsha, Chandra R. Murthy, D. Narayana Dutt, Sheha Latha Kottapalli

Positioning in Chinese Digital Television Network Using TDS-OFDM Signals
Linglong Dai, Zhaoying Wang, Changyong Pan, Sheng Chen

Sequential Compressive Target Detection in Wireless Sensor Networks
Haiqiang Zheng, Shilin Xiao, Xinbing Wang

Fault Tolerant Fingerprint-based Positioning
Christos Laoudias, Michalis P. Michaelides, Christos Panayioutou

DNS-based Solution for Operator Control of Selected IP Traffic Offload
Tariq Taleb, Konstantinos Samdanis, Stefan Schmidt
Regulating Wireless Access Pricing............................................................................................................................... 5706
   Kwanfong Leung, Jianwei Huang
Opportunistic Feedback Scheme in OFDMA Systems with Imperfect Uplink Channels.............................................. 5711
    Mohamad Assaad, Hamidou Tembine, Naveed Ul Hassan
Efficient Anchor Power Allocation for Location-Aware Networks ..................................................................................... 5716
    William Wei-Liang Li, Yuan Shen, Ying Jun Zhang, Moe Z. Win
Mobile Group based Location Service Management for Vehicular Ad-hoc Networks ........................................... 5722
   Hyanje Woo, Meejeong Lee
A Probabilistic Bundle Relay Strategy In Two-Hop Vehicular Delay Tolerant Networks.............................................. 5728
    Maurice J. Khabbaz, Wissam F. Fawaz, Chadi M. Assi
Optimal Relaying in Heterogeneous Delay Tolerant Networks ..................................................................................... 5734
     Yong Li, Zhaosheng Wang, Depeng Jin, Li Su, Lieguang Zeng, Sheng Chen
Power-Optimized Routing With Bandwidth Guarantee in Multihop Relaying Networks .......................................... 5739
     Ramin Babaei, Norman C. Beaulieu
Channel-hole Based Cooperative Scheduling in Multiple Relay Systems ................................................................. 5745
     Yan Li, Yacine Ghamri-Doudane
Energy Detection based Signal-Time Coding for AWGN Relay Networks ................................................................. 5751
      Ke Xiong, Pingyi Fan, Yunquan Dong, Zhengding Qiu, Khaled Ben Letaief
Orthogonal LTE Two-Tier Cellular Networks .................................................................................................................. 5757
      Leonardo S. Cardoso, Marco Maso, Mari Kobayashi, Merouane Debbah
Identifying Influential Nodes in Online Social Networks Using Principal Component Centrality ................................. 5762
       Muhammad U. Ilyas, Hayder Radha
Conflict-free Many-to-One Data Aggregation Scheduling in Multi-channel Multi-hop Wireless Sensor
Networks......................................................................................................................................................................... 5767
       Deying Li, Qinghua Zhu, Hongwei Du, Weili Wu, Hong Chen, Wenping Chen

Author Index