

Contents

Dynamic Spectrum Access/Management and Database

A New Evaluation Criteria for Learning Capability in OSA Context	3
<i>Navikkumar Modi, Christophe Moy, Philippe Mary, and Jacques Palicot</i>	
A Two-Stage Precoding Algorithm for Spectrum Access Systems with Different Priorities of Spectrum Utilization	15
<i>Yiteng Wang, Youping Zhao, Xin Guo, and Chen Sun</i>	
Closed Form Expression of the Saddle Point in Cognitive Radio and Jammer Power Allocation Game	29
<i>Feten Slimeni, Bart Scheers, Vincent Le Nir, Zied Chtourou, and Rabah Attia</i>	
Code-Aware Power Allocation for Irregular LDPC Codes	41
<i>Zeina Mheich and Valentin Savin</i>	
Cooperative Game and Relay Pairing in Cognitive Radio Networks	53
<i>Lifeng Hao, Sixing Yin, and Zhaowei Qu</i>	
Effect of Primary User Traffic on Largest Eigenvalue Based Spectrum Sensing Technique	67
<i>Pawan Dhakal, Shree K. Sharma, Symeon Chatzinotas, Björn Ottersten, and Daniel Riviello</i>	
Energy Efficient Information Sharing in Social Cognitive Radio Networks . . .	79
<i>Anna Vizziello and Riccardo Amadeo</i>	
Fair Channel Sharing by Wi-Fi and LTE-U Networks with Equal Priority . . .	91
<i>Andrey Garnaev, Shweta Sagari, and Wade Trappe</i>	
Is Bayesian Multi-armed Bandit Algorithm Superior?: Proof-of-Concept for Opportunistic Spectrum Access in Decentralized Networks	104
<i>Sumit J. Darak, Amor Nafkha, Christophe Moy, and Jacques Palicot</i>	
Minimum Separation Distance Calculations for Incumbent Protection in LSA	116
<i>Markku Jokinen, Marko Mäkeläinen, Tuomo Hänninen, Marja Matinmikko, and Miia Mustonen</i>	
Mobile Content Offloading in Database-Assisted White Space Networks	129
<i>Suzan Bayhan, Gopika Preamsankar, Mario Di Francesco, and Jussi Kangasharju</i>	

Neighbours-Aware Proportional Fair Scheduler for Future Wireless Networks	142
<i>Charles Jumaa Katila, Melchiorre Danilo Abrignani, and Roberto Verdone</i>	
Performance Analysis of Dynamic Spectrum Allocation in Multi-Radio Heterogeneous Networks	154
<i>Yongjae Kim, Yonghoon Choi, and Youngnam Han</i>	
Secondary User QoE Enhancement Through Learning Based Predictive Spectrum Access in Cognitive Radio Networks.	166
<i>Anirudh Agarwal, Shivangi Dubey, Ranjan Gangopadhyay, and Soumitra Debnath</i>	
Sensing Based Semi-deterministic Inter-Cell Interference Map in Heterogeneous Networks	179
<i>Fatima Zohra Kaddour, Dimitri Kténas, and Benoît Denis</i>	
Simultaneous Uplink and Downlink Transmission Scheme for Flexible Duplexing.	192
<i>Adrian Kliks and Paweł Kryszkiewicz</i>	
Networking Protocols for Cognitive Radio	
FTA-MAC: Fast Traffic Adaptive Energy Efficient MAC Protocol for Wireless Sensor Networks.	207
<i>Van-Thiep Nguyen, Matthieu Gautier, and Olivier Berder</i>	
Threshold Based Censoring of Cognitive Radios in Rician Fading Channel with Perfect Channel Estimation	220
<i>M. Ranjeeth and S. Anuradha</i>	
Wireless Network Virtualization: Opportunities for Spectrum Sharing in the 3.5 GHz Band	232
<i>Marcela M. Gomez and Martin B.H. Weiss</i>	
Distributed Topology Control with SINR Based Interference for Multihop Wireless Networks	246
<i>Maryam Riaz, Seiamak Vahid, and Klaus Moessner</i>	
PHY and Sensing	
A Comparison of Physical Layers for Low Power Wide Area Networks	261
<i>Yoann Roth, Jean-Baptiste Doré, Laurent Ros, and Vincent Berg</i>	
A Novel Sequential Phase Difference Detection Method for Spectrum Sensing	273
<i>Shaojie Liu, Zhiyong Feng, Yifan Zhang, Sai Huang, and Dazhi Bao</i>	

A Simple Formulation for the Distribution of the Scaled Largest Eigenvalue and Application to Spectrum Sensing	284
<i>Hussein Kobeissi, Youssef Nasser, Amor Nafkha, Oussama Bazzi, and Yves Louët</i>	
Doppler Compensation and Beamforming for High Mobility OFDM Transmissions in Multipath.	294
<i>Kalyana Gopala and Dirk Slock</i>	
Frequency Agile Time Synchronization Procedure for FBMC Waveforms . . .	307
<i>Jean-Baptiste Doré and Vincent Berg</i>	
IEEE 1900.7-2015 PHY Evaluation on TVWS Scenarios	319
<i>Dominique Noguét and Jean-Baptiste Doré</i>	
LRS- G^2 Based Non-parametric Spectrum Sensing for Cognitive Radio	330
<i>D.K. Patel and Y.N. Trivedi</i>	
On Convergence of a Distributed Cooperative Spectrum Sensing Procedure in Cognitive Radio Networks	342
<i>Natalia Y. Ermolova and Olav Tirkkonen</i>	
Simple and Accurate Closed-Form Approximation of the Standard Condition Number Distribution with Application in Spectrum Sensing.	351
<i>Hussein Kobeissi, Amor Nafkha, Youssef Nasser, Oussama Bazzi, and Yves Louët</i>	
Spectrum Sensing for Full-Duplex Cognitive Radio Systems	363
<i>Abbass Nasser, Ali Mansour, Koffi-Clement Yao, Hussein Charara, and Mohamad Chaitou</i>	
Performance of an Energy Detector with Generalized Selection Combining for Spectrum Sensing	375
<i>Deep Chandra Kandpal, Vaibhav Kumar, Ranjan Gangopadhyay, and Soumitra Debnath</i>	
Modelling and Theory	
Analysis of a Multicarrier Communication System Based on Overcomplete Gabor Frames	387
<i>Alexandre Marquet, Cyrille Siclet, Damien Roque, and Pierre Siohan</i>	
Efficient Power Allocation Approach for Asynchronous Cognitive Radio Networks with FBMC/OFDM.	400
<i>Juwendo Denis, Mylene Pischella, and Didier Le Ruyet</i>	
Invisible Hands Behind 3.5 GHz Spectrum Sharing.	412
<i>Liu Cui and Martin Weiss</i>	

Aggregate Interference in Random CSMA/CA Networks	424
<i>June Hwang, Jinho Choi, Riku Jäntti, and Seong-Lyun Kim</i>	
Throughput Capacity Analysis of a Random Multi-user Multi-channel Network Modeled as an Occupancy Problem	437
<i>Vincent Savaux, Apostolos Kountouris, Yves Louët, and Christophe Moy</i>	
Understanding Current Background Noise Characteristics: Frequency and Time Domain Measurements of Noise on Multiple Locations	448
<i>Alexandros Palaïos, Vanya M. Miteva, Janne Riihijärvi, and Petri Mähönen</i>	
Utilization of Licensed Shared Access Resources in Indoor Small Cells Scenarios	462
<i>Eva Perez, Karl-Josef Friederichs, Andreas Lobinger, Bernhard Wegmann, and Ingo Viering</i>	
When Does Channel-Output Feedback Enlarge the Capacity Region of the Two-User Linear Deterministic Interference Channel?	471
<i>Victor Quintero, Samir M. Perlaza, Iñaki Esnaola, and Jean-Marie Gorce</i>	
Hardware Architecture and Implementation	
A Flexible 5G Receiver Architecture Adapted to VLSI Implementation	487
<i>Vincent Berg and Jean-Baptiste Doré</i>	
Evolutionary Multiobjective Optimization for Digital Predistortion Architectures	498
<i>Lin Li, Amanullah Ghazi, Jani Boutellier, Lauri Anttila, Mikko Valkama, and Shuvra S. Bhattacharyya</i>	
Experimental Study of an Underlay Cognitive Radio System: Model Validation and Demonstration.	511
<i>Hanna Becker, Ankit Kaushik, Shree Krishna Sharma, Symeon Chatzinotas, and Friedrich Jondral</i>	
Flexible In-Band Full-Duplex Transceivers Based on a Modified MIMO RF Architecture	524
<i>Alexandre Debar, Patrick Rosson, David Dassonville, and Vincent Berg</i>	
Large-Signal Analysis and Characterization of a RF SOI-Based Tunable Notch Antenna for LTE in TV White Space Frequency Spectrum	536
<i>Essia Ben Abdallah, Serge Bories, Dominique Nicolas, Alexandre Giry, and Christophe Delaveaud</i>	

On the FPGA-Based Implementation of a Flexible Waveform from a High-Level Description: Application to LTE FFT Case Study	545
<i>Mai-Thanh Tran, Matthieu Gautier, and Emmanuel Casseau</i>	
Performance of Fractional Delay Estimation in Joint Estimation Algorithm Dedicated to Digital Tx Leakage Compensation in FDD Transceivers	558
<i>Robin Gerzaguët, Laurent Ros, Fabrice Belvéze, and Jean-Marc Brossier</i>	
Predictive Channel Selection for over-the-Air Video Transmission Using Software-Defined Radio Platforms	569
<i>Marko Höyhtyä, Juha Korpi, and Mikko Hiivala</i>	
Next Generation of Cognitive Networks	
Uplink Traffic in Future Mobile Networks: Pulling the Alarm	583
<i>Jessica Oueis and Emilio Calvanese Strinati</i>	
Adaptive Channel Selection among Autonomous Cognitive Radios with Imperfect Private Monitoring.	594
<i>Zaheer Khan and Janne Lehtomäki</i>	
An Analysis of WiFi Cochannel Interference at LTE Subcarriers and Its Application for Sensing.	605
<i>Prasanth Karunakaran and Wolfgang Gerstacker</i>	
Dynamic Sleep Mode for Minimizing a Femtocell Power Consumption	618
<i>Rémi Bonnefoi, Christophe Moy, and Jacques Palicot</i>	
Energy Detection Performance with Massive Arrays for Personal Radars Applications.	630
<i>Francesco Guidi, Anna Guerra, Antonio Clemente, Davide Dardari, and Raffaele D'Errico</i>	
Energy Management of Green Small Cells Powered by the Smart Grid	642
<i>Mouhcine Mendil, Antonio De Domenico, Vincent Heiries, Raphaël Caire, and Nouredine Hadj-said</i>	
Min-max BER Based Power Control for OFDM-Based Cognitive Cooperative Networks with Imperfect Spectrum Sensing	654
<i>Hangqi Li, Xiaohui Zhao, and Yongjun Xu</i>	
TOA Based Localization Under NLOS in Cognitive Radio Network	668
<i>Dazhi Bao, Hao Zhou, Hao Chen, Shaojie Liu, Yifan Zhang, and Zhiyong Feng</i>	

Standards, Policies and Business Models

Business Models for Mobile Network Operators Utilizing the Hybrid Use Concept of the UHF Broadcasting Spectrum.	683
<i>Seppo Yrjölä, Petri Ahokangas, and Pekka Talmola</i>	
Co-primary Spectrum Sharing and Its Impact on MNOs' Business Model Scalability	695
<i>Petri Ahokangas, Kari Horneman, Marja Matinmikko, Seppo Yrjölä, Harri Posti, and Hanna Okkonen</i>	
Spectrum Toolbox Survey: Evolution Towards 5G	703
<i>Michal Szydelko and Marcin Dryjanski</i>	

Workshop Papers

A Reconfigurable Dual Band LTE Small Cell RF Front-end/Antenna System to Support Carrier Aggregation	717
<i>Cyril Jouanlanne, Christophe Delaveaud, Yolanda Fernández, and Adrián Sánchez</i>	
Energy Efficient Target Coverage in Partially Deployed Software Defined Wireless Sensor Network	729
<i>Slavica Tomovic and Igor Radusinovic</i>	
SDN for 5G Mobile Networks: NORMA Perspective	741
<i>Bessem Sayadi, Marco Gramaglia, Vasilis Friderikos, Dirk von Hugo, Paul Arnold, Marie-Line Alberi-Morel, Miguel A. Puente, Vincenzo Sciancalepore, Ignacio Digon, and Marcos Rates Crippa</i>	
Statistically Sound Experiments with OpenAirInterface Cloud-RAN Prototypes: CLEEN 2016.	754
<i>Niccolò Iardella, Giovanni Stea, Antonio Virdis, Dario Sabella, and Antonio Frangioni</i>	
Erratum to: Utilization of Licensed Shared Access Resources in Indoor Small Cells Scenarios	E1
<i>Eva Perez, Karl-Josef Friederichs, Andreas Lobinger, Bernhard Wegmann, and Ingo Viering</i>	
Author Index	767

Cognitive Radio Oriented Wireless Networks
11th International Conference, CROWNCOM 2016,
Grenoble, France, May 30 - June 1, 2016, Proceedings
Noguet, D.; Moessner, K.; Palicot, J. (Eds.)
2016, XVIII, 769 p. 340 illus., Softcover
ISBN: 978-3-319-40351-9