IEEE ICC 2010 - General Symposium on Selected Areas in Communications

Program

Symposium Co-Chairs:
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Monday, May 24

14:00 - 15:45

**SA-C1: Competetive Approaches in Cognitive Networks**

*Room: 1.61 Session Chair: Qing Zhao (University of California at Davis, USA)*

*Band Synchronization in The Control Channel of Cognitive Radio Systems: A Collaboration Game*
Husheng Li (University of Tennessee, USA)

*A Stochastic Game Model for Jamming in Multi-channel Cognitive Radio Systems*
Quanyan Zhu (University of Illinois at Urbana Champaign, USA); Husheng Li (University of Tennessee, USA); Zhu Han (University of Houston, USA); Tamer Basar (University of Illinois at Urbana-Champaign, USA)

*Joint Spectrum Access and Pricing in Cognitive Radio Networks with Elastic Traffic*
Jocelyne Elias (Politecnico di Milano, Italy); Fabio Martignon (University of Bergamo, Italy)

*Design of Power Control Protocols for Spectrum Sharing in Cognitive Radio Networks: A Game-Theoretic Perspective*
Hung-Yun Hsieh (National Taiwan University, Taiwan); You-En Lin (National Taiwan University, Taiwan); Kun-Hsing Liu (National Taiwan University, Taiwan)

*A Channel Portfolio Optimization Framework for Trading in a Spectrum Secondary Market*
Hong Xu (University of Toronto, Canada); Jin Jin (University of Toronto, Canada); Baochun Li (University of Toronto, Canada)

*Coordinated Denial-of-Service Attacks in IEEE 802.22 Networks*
Yi Tan (Stevens Institute of Technology, USA); Shamik Sengupta (John Jay College of Criminal Justice, City University of New York, USA); Koduvayur P Subbalakshmi (Stevens Institute of Technology, USA)
16:15 - 18:00

SA-C2: Cognitive Network Design
Room: 1.61 Session Chair: R Venkatesha Prasad (TUDelft -- Delft University of Technology, The Netherlands)

Single and Multiple Carrier Designs for Cognitive Radio Systems
Tariq Jamal Al-Khasib (University of British Columbia, Canada); Michael Botros Shenouda (University of British Columbia, Canada); Lutz Lampe (University of British Columbia, Canada)

Power Allocation for OFDM-based Cognitive Radio Systems under Outage Constraints
Kyuho Son (KAIST, Korea); Bang Chul Jung (KAIST Institutes for Information Technology Convergence, Korea); Song Chong (KAIST, Korea); Dan Keun Sung (Korea Advanced Institute of Science and Technology, Korea)

Fair and Efficient Channel Allocation and Spectrum Sensing for Cognitive OFDMA Networks
Chunhua Sun (Hong Kong University of Science and Technology, P.R. China); Wei Chen (Tsinghua University, P.R. China); Khaled Ben Letaief (Hong Kong University of Science & Technology, Hong Kong)

Classification-based predictive channel selection for cognitive radios
Marko Höyhtyä (VTT Technical Research Centre of Finland, Finland); Sofie Pollin (IMEC / UC Berkeley, USA); Aarne O Mammela (VTT, Finland)

Modeling and Characterization of Spectrum White Spaces for underlay Cognitive Radio Networks
Vicent Pla (Universitat Politècnica de València, Spain); Jose R Vidal (Universitat Politècnica de València, Spain); Jorge Martinez-Bauset (Universitat Politècnica de València, Spain); Luis Guijarro (Universitat Politècnica de València, Spain)

Controlling sensing error for cognitive PANs with 1-limited packet scheduling
Jelena Misic (Ryerson University, Canada); Vojislav B. Misic (Ryerson University, Canada)

Tuesday, May 25

10:30 - 12:15

SA-C3: Sensing in Cognitive Radios
Room: 1.61 Session Chair: Jelena Misic (Ryerson University, Canada)

Opportunistic Wideband Spectrum Sensing for Cognitive Radios with Genetic Optimization
Michele Sanna (University of Cagliari, Italy); Maurizio Murroni (University of Cagliari, Italy)

Doubly Sequential Energy Detection for Distributed Dynamic Spectrum Access
Nikhil Kundargi (University of Minnesota, Twin Cities, USA); Ahmed Tewfik (Prof. University of Minnesota, USA)

Cognitive Radio Wideband Spectrum Sensing Using Multitap Windowing and Power Detection with Threshold Adaptation
Tsung-Han Yu (University of California, Los Angeles, USA); Santiago Rodriguez-Parera (University of California, Los Angeles, Belgium); Dejan Markovic (University of California, Los Angeles, USA); Danijela Cabric (University of California Los Angeles, USA)

SpiderRadio: An incumbent sensing implementation for cognitive radio networking using IEEE 802.11 devices
Kai Hong (Stevens Institute of Technology, USA); Shamik Sengupta (John Jay College of Criminal Justice, City University of New York, USA); Rajarathnam Chandramouli (Stevens Institute of Technology, USA)

A Sequential Sensing Data Transmission and Fusion Approach for Large Scale Cognitive Radios
Yu Rao (Tsinghua University, P.R. China); Wei Chen (Tsinghua University, P.R. China); Zhigang Cao (Tsinghua University, P.R. China)

A Connectivity-Agile Sensing Algorithm for Cognitive Radio Networks
Lei Sun (NC State University, USA); Wenye Wang (NC State University, USA)
SA1p: Selected Areas in Communications 1

Posters
Room: Exhibit Hall

Priority-Based Scheme for File Distribution in Peer-to-Peer Networks
Mario Rivero (INRIA, France); Gerardo Rubino (Inria/Irisa, France)

SA1p: SAS OWI

Optical and Wireless Integration for Access Networks
Room: Exhibit Hall

Wavelength Assignment Scheme of ONUs in Hybrid TDM/WDM Fiber-Wireless Networks
Shifang Dai (City University of Hong Kong, Hong Kong); Zeyu Zheng (City University of Hong Kong, Hong Kong); Jianping Wang (City University of Hong Kong, Hong Kong); Xinnming Zhang (University of Science and Technology of China, P.R. China)

QoS-Aware Layer-2 VPNs over EPON-WIMAX
Ahmad R. Dhaini (University of Waterloo, Canada); Pin-Han Ho (University of Waterloo, Canada); Xiaohong Jiang (Tohoku University, Japan)

Prototyping Multi-Transceiver Free-Space-Optical Communication Structures
Abdullah Sevincer (University of Nevada, Reno, USA); Mehmet Bilgi (University of Nevada, Reno, USA); Murat Yuksel (University of Nevada - Reno, USA); Nezih Pala (Florida International University, USA)

GPU-based Particle Swarm Optimization for Topology Control in Hybrid RF/FSO Mesh Networks
Ala I Al-Fuqaha (Western Michigan University, USA)

Reconfiguration Modeling for Reconfigurable Wireless FSO Networks
Hassan Moradi (University of Oklahoma, USA); Maryam Falahpour (University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA); Mohammed Atiquzzaman (University of Oklahoma, USA); Peter LoPresti (Tulsa University, USA)

SA-V1: Vehicular Ad hoc and Delay Tolerant Networks

VANETs & V-DTNs
Room: 1.61 Session Chair: Khaled Bousetta (University of Paris 13, France)

Congestion Control to Achieve Optimal Broadcast Efficiency in VANETs
Fei Ye (University Washington, USA); Raymond Yim (Mitsubishi Electric Research Labs, USA); Jinyun Zhang (MERL, USA); Sumit Roy (University of Washington, USA)

Comparison of CSMA and TDMA for a Heartbeat VANET Application
Razvan Stanica (National Polytechnic Institute of Toulouse, France); Andre-Luc Beylot (ENSEEIHT, France); Emmanuel Chaput (IRIT-ENSEEIHT, France)

A New Aggregate Local Mobility (ALM) Clustering Algorithm for VANETs
Evandro Souza (University of Alberta, Canada); Ioanis Nikolaidis (University of Alberta, Canada); Pawel Gburzynski (University of Alberta, Canada)

Prioritized Broadcast Contention Control in VANET
Fei Ye (University Washington, USA); Raymond Yim (Mitsubishi Electric Research Labs, USA); Jianlin Guo (Mitsubishi Electronic Research Lab, USA); Jinyun Zhang (MERL, USA); Sumit Roy (University of Washington, USA)

Inter-Domain Traffic Routing in Vehicular Delay Tolerant Networks
Exploiting Node Localization for Performance Improvement of Vehicular Delay-Tolerant Networks
Vasco Soares (Superior School of Technology of the Polytechnic Institute of Castelo Branco, Portugal); Joel J. Rodrigues (IT, University of Beira Interior, Portugal); Farid Farahmand (Sonoma State University, USA); Mieso Denko (University of Guelph, Canada)

16:15 - 18:00

SA-SS: Satellite and Space Communications
Room: 1.61 Session Chair: Igor Bisio (University of Genoa, Italy)

Optimization of Satellite Optical Transmission Subject to Reciprocal Pareto Fading
Xian Liu (University of Arkansas at Little Rock, USA); Jung Kim (University of Arkansas at Little Rock, USA)

Interplanetary Networks: Architectural Analysis, Technical Challenges and Solutions Overview
Igor Bisio (University of Genoa, Italy); Mauro De Sanctis (University of Rome "Tor Vergata", Italy); Giuseppe Araniti (University "Mediterranea" of Reggio Calabria, Italy)

Joint Power and Carrier Allocation for the Multibeam Satellite Downlink with Individual SINR Constraints
Lei Jiang (Universidad Autónoma de Barcelona, Spain); Maria-Angeles Vazquez-Castro (Universidad Autónoma de Barcelona, Spain)

On the Capacity Degradation in Broadband MIMO Satellite Downlinks with Atmospheric Impairments
Andreas Knopp (Fed. Office of the Bundeswehr for Information Technology, Germany); Robert T Schwarz (Fed. Office of the Bundeswehr for Information Technology, Germany); Berthold Lankl (Munich University of the German Armed Forces (Bundeswehr), Germany)

Frequency and Time-Space Duality Study for Multibeam Satellite Communications
Lei Jiang (Universidad Autónoma de Barcelona, Spain); Maria-Angeles Vazquez-Castro (Universidad Autónoma de Barcelona, Spain)

Performance evaluation of channel change for DVB-SH streaming services
Marie-Line Alberi Morel (Alcatel-Lucent Bell Labs France, France); Sylvaine Kerboeuf (Alcatel Lucent Bell Labs France, France); Bessem Sayadi (Alcatel-Lucent Bell-Labs, France); Yann Leprovost (Alcatel-Lucent, France); Frederic Faucheux (Alcatel Lucent Bell Labs France, France)

Wednesday, May 26
08:30 - 10:15

SA-DS: Data Storage
Room: 1.61 Session Chair: Riccardo Raheli (University of Parma, Italy)

Construction of Burst-Erasure Efficient LDPC Codes for Use with Belief Propagation Decoding
Kan Li (University of Hawaii, USA); Aleksandar Kavcic (University of Hawaii, USA); Fatih Erden (Seagate Technology, USA)

Symmetric Information Rate of an Ideal Readback Two Dimensional Magnetic Recording (TDMR) Channel with Random Voronoi Grains
Euiseok Hwang (Carnegie Mellon University, USA); Rohit Negi (Carnegie Mellon University, USA); Vijayakumar Bhagavatula (Carnegie Mellon University, USA)

Distributed Storage Allocation for High Reliability
Derek Leong (California Institute of Technology, USA); Alex Dimakis (California Institute of Technology, USA); Tracey Ho (California Institute of Technology, USA)
MFR: Multi-Loss Flexible Recovery in Distributed Storage Systems
Xiaozhao Wang (University of Science and Technology of China, P.R. China); Yinlong Xu (University of Science and Technology of China, P.R. China); YuChong Hu (University of science and technology of China, P.R. China); Kaiqian Ou (University of Science and Technology Of China, P.R. China)

A Communication-Theoretic Approach to Phase Change Storage
Michele M Franceschini (IBM T.J. Watson Research Center, USA); Luis A Lastras-Montaño (IBM TJ Watson Research Center, USA); Ashish Jagmohan (IBM T. J. Watson Research Center, USA); Mayank Sharma (IBM T. J. Watson Research Center, USA); Roger Cheek (IBM T.J. Watwon Research Center, USA); Ming-Hsiu Lee (Macronix International Co.,Ltd., Taiwan)

Coding for Multilevel Heterogeneous Memories
Ashish Jagmohan (IBM T. J. Watson Research Center, USA); Luis A Lastras-Montaño (IBM TJ Watson Research Center, USA); Michele M Franceschini (IBM T.J. Watson Research Center, USA); Mayank Sharma (IBM T. J. Watson Research Center, USA); Roger Cheek (IBM T.J. Watwon Research Center, USA)

10:45 - 12:30

SA2p: Selected Areas in Communications 2
Posters
Room: Exhibit Hall

Performance Comparison of Different Correlation Techniques for the AltBOC Modulation in Multipath Environments
Youssef Tawk (Ecole Polytechnique Federal de Lausanne, Switzerland); Cyril Botteron (Ecole Polytechnique Federal de Lausanne, Switzerland); Aleksandar Jovanovic (Ecole Polytechnique Federal de Lausanne (EPFL), Switzerland); Pierre-Andre Farine (Ecole Polytechnique Federal de Lausanne, Switzerland)

Cooperative Delay Diversity in Hybrid Satellite/Terrestrial DVB-SH System
Simone Morosi (University of Florence, Italy); Sara Jayousi (CNIT University of Florence, Italy); Enrico Del Re (University of Florence, Italy)

GNSS Signal Detection Under Noise Uncertainty
Chandrasekhar J (Indian Institute of Science, Bangalore, India); Chandra R Murthy (Indian Institute of Science, India)

Subset Optimization of Adaptive Coding and Modulation Schemes for Broadband Satellite Systems
Vincent Boussemart (DLR, Germany); Hartmut Brandt (DLR, Germany); Matteo Berioli (German Aerospace Center (DLR), Germany)

Methods for the Soft-decision Decoding of MTR Codes in Multiple-Head Magnetic Recording Systems
Nikola Djuric (University of Novi Sad, Serbia); Vojin Senk (University of Novi Sad, Yugoslavia (defunct))

Target Trajectory Querying in Wireless Sensor Networks
Jin Zheng (Central South University, P.R. China); Weijia Jia (City University of Hong Kong, P.R. China); Guojun Wang (The Central South University, P.R. China)

SA-V2: Vehicular Communications, Networks and Services
VCNS
Room: 1.61 Session Chair: Yacine Ghamri-Doudane (LIGM and ENSIIE, France)

Data Dissemination in Cooperative ITS from an Information-centric Perspective
Matthias Roeckl (DLR, Germany); Patrick Robertson (German Aerospace Center (DLR), Germany)

Performance Evaluation of Location-based Service Discovery Protocols for Vehicular Networks.
Azzedine Boukerche (Univ. of Ottawa, Canada); Kaouther Abrougui (SITE, University of Ottawa, Canada); Richard W. Pazzi (University of Ottawa, Canada)

Forward Link Performance Analysis for the Future IEEE 802.16-based Airport Data-Link
Paola Pulini (German Aerospace Center (DLR), Germany)
Efficient and Spontaneous Privacy-Preserving Protocol for Secure Vehicular Communication
Hu Xiong (University of British Columbia, Canada); Konstantin Beznosov (University of British Columbia, Canada); Zhiguang Qin (University of Electronic Science and Technology of China, P.R. China); Matei Ripeanu (University of British Columbia, Canada)

Ranging Sequences Design for OFDMA Systems
Kuhn-Chang Lin (National Chiao Tung University, Taiwan); Yu Ted Su (National Chiao Tung University, Taiwan)

Seer: Trend-Prediction-Based Geographic Message Forwarding in Sparse Vehicular Networks
Liqun Li (Institute of Software, Chinese Academy of Sciences, P.R. China); Limin Sun (Institute of software, chinese academy of sciences, P.R. China)

14:00 - 15:45
SA-C4: Cognitive Network Management and Applications
Room: 1.61 Session Chair: Neeli Rashmi Prasad (Center for TeleInFrastruktur (CTIF), Denmark)

Centralized Cooperative Spectrum Sensing for Ad-hoc Disaster Relief Network Clusters
Nuno Pratas (Center for TeleInFrastruktur (CTIF), Aalborg University, Denmark); Nicola Marchetti (Aalborg University, Denmark); Neeli Rashmi Prasad (Center for TeleInFrastruktur (CTIF), Denmark); António J. Rodrigues (IT / Instituto Superior Técnico, Portugal); Ramjee Prasad (Center for TeleInFrastruktur (CTIF), Aalborg University, Denmark, Denmark)

Agile Spectrum Evacuation in Cognitive Radio Networks
Mohammad Iqbal Bin Shahid (Monash University, Australia); Joarder Kamruzzaman (Monash University, Australia, Australia)

Achievable Transmission Capacity of Secondary System in Cognitive Radio Networks
Jemin Lee (Yonsei University, Korea); Sungmook Lim (Yonsei University, Korea); Jeffrey Andrews (The University of Texas at Austin, USA); Daesik Hong (Yonsei Univ., Korea)

Impact of the Secondary Network on the Outage Performance of the Primary Service in Spectrum Sharing
Mohammad Khoshkholgh (Tarbiat Modares University, Iran); Keivan Navaie (Tarbiat Modares University, Iran); Halim Yanikomeroglu (Carleton University, Canada)

Voluntary Spectrum Handoff: A Novel Approach to Spectrum Management in CRNs
Suk-Un Yoon (The Ohio State University, USA); Eylem Ekici (The Ohio State University, USA)

Achieving Efficient and Optimal Joint Action in Distributed Cognitive Radio Networks using Payoff Propagation
Kok Lim Yau (Victoria University of Wellington, New Zealand); Peter Philip Komisarczuk (Victoria University of Wellington, New Zealand); Paul D Teal (Victoria University of Wellington, New Zealand)

16:15 - 18:00
SA-C5: Collaboration in Cognitive Networks
Room: 1.61 Session Chair: Zhu Han (University of Houston, USA)

Distributed Relay Selection and Power Control in Cognitive Radio Networks with Cooperative Transmission
Changqing Luo (Carleton U., Canada); F. Richard Yu (Carleton University, Canada); Hong Ji (Beijing University of Posts and Telecommunications, P.R. China); Victor CM Leung (The University of British Columbia, Canada)

Cooperative Relay Communication Performance Under Spectrum-Sharing Resource Requirements
Vahid Asghari (University of Quebec, INRS-EMT, Canada); Sonia Aissa (University of Quebec, INRS-EMT, Canada)

Stability Analysis for Network Coded Multicast Cell with Opportunistic Relay
Zhi Hui Shu (Shanghai Jiaotong University, P.R. China); Wen Chen (Shanghai Jiaotong Uuniversity, P.R. China)

Cooperative Spectrum Sharing with Distributed Secondary User Selection
On the Connectivity and Multihop Delay of Ad Hoc Cognitive Radio Networks
Wei Ren (University of California, Davis, USA); Qing Zhao (University of California at Davis, USA); Ananthram Swami (Army Research Lab., USA)

Time-Divisional Cooperative Periodic Spectrum Sensing for Cognitive Radio Networks
Sithamparanathan Kandeepan (Create-Net International Research Centre, Italy); Andrea Giorgetti (University of Bologna, Italy); Marco Chiani (University of Bologna, Italy)