



Call for Papers for *Cognitive Radio and Networks Symposium*

Scope and Motivation:

The emerging cognitive radio communications and networking technologies promise to mitigate the spectrum underutilization problem in wireless access, improve the interoperability and coexistence among different wireless/mobile communications systems, and make the future generation radio devices/systems autonomous and self-reconfigurable. The goal of this symposium is to bring together and disseminate the state of the art research contributions that address the various aspects of analysis, design, optimization, implementation, standardization, and application of cognitive radio communications and networking technologies. The scope of this symposium includes (but not limited to) the topics mentioned above.

Main Topics of Interest:

The Cognitive Radio and Networks Symposium seeks original contributions in, but not limited to, the following topical areas:

- Challenges and issues in designing cognitive radios and networks
- Architectures and building blocks of cognitive radio networks
- Spectrum sensing, measurements and statistical modeling of spectrum usage
- Waveform design, modulation, interference aggregation, mitigation for cognitive radio
- Distributed cooperative spectrum sensing and multiuser access
- Cognitive medium access control, interference management, interference modeling
- Handoff and routing protocols
- Resource allocation for multi-antenna based cognitive radio communications
- Distributed adaptation and optimization methods
- Energy-efficient cognitive radio communications and networking
- Machine learning techniques for cognitive radio systems
- Self-configuration, interoperability and co-existence issues
- Dynamic spectrum sharing
- Security and robustness of cognitive spectrum-agile networks

- Cross-layer optimization of cognitive radio systems
- Applications and services based on cognitive radio networks (e.g., cognitive networking in TV whitespace, cognitive femtocell networks, public safety networks, and vehicular networks)
- Economic aspects of spectrum sharing (e.g., pricing, auction) in cognitive radio networks
- Regulatory policies and their interactions with communications and networking
- Cognitive radio standards, test-beds, simulation tools, and hardware prototypes
- Modeling and performance evaluation
- Quality of service provisioning in cognitive radio networks
- Attack modeling, prevention, mitigation, and defense in cognitive radio systems
- Architecture and implementation of database-based cognitive radio networks
- Selfishness and Incentive issues in cooperative spectrum sensing
- Physical-layer secrecy in cognitive networks

Sponsoring Technical Committees:

- Cognitive Networks
- Wireless Communications
- Ad hoc and Sensor Networks

How to Submit a Paper:

The IEEE Globecom 2014 website provides full instructions on how to submit papers. You will select the desired symposium when submitting. **The paper submission deadline is April 1, 2014. Unlike recent ICC's and Globecom's, this is a hard deadline that will not be extended.**

Symposium Co-Chairs:

- Ahmed E. Kamal, Iowa State University, USA, kamal@iastate.edu
- Haojin Zhu, Tsinghua Jiao Tong University, China, zhuhaojin@gmail.com
- Alberto, Rabbachin, European Commission –DG CONNECT, alberto.rabbachin@ec.europa.ec

Biographies:



Ahmed E. Kamal (IEEE F'12) received a B.Sc. (distinction with honors) and an M.Sc. both from Cairo University, Egypt, and an M.A.Sc. and a Ph.D. both from the University of Toronto, Canada, all in Electrical Engineering in 1978, 1980, 1982 and 1986, respectively. He is currently a professor of Electrical and Computer Engineering at Iowa State University.

Kamal's research interests include optical networks, wireless sensor networks, cognitive radio networks, and performance evaluation. He is a Fellow of the IEEE, a senior member of the Association of Computing Machinery. He is an IEEE Communications Society Distinguished Lecturer for the period of January 2013 to December 2014. He received the best paper award of the IEEE Globecom 2008 Symposium on Ad Hoc and Sensors Networks Symposium, and the best paper award for papers published in Computers and Control in IEE journals in 1993.

Kamal has chaired or co-chaired many Technical Program Committees of a number of IEEE ComSoc conferences including the Optical Networks and Systems Symposia of the IEEE Globecom 2007, and the IEEE Globecom 2010, the IEEE Globecom Cognitive Radios and Networks Symposium in 2012. He is on the editorial boards of the IEEE Communications Surveys and Tutorials, and Elsevier's Computer Networks journal, and the Optical Switching and Networking journal.



Dr. Haojin Zhu received his B.Sc. degree (2002) from Wuhan University (China), his M.Sc. (2005) degree from Shanghai Jiao Tong University (China), both in computer science and the Ph.D. in Electrical and Computer Engineering from the University of Waterloo (Canada), in 2009. After that, he joined Shanghai Jiao Tong University as an Assistant Professor. He is currently an Associate Professor with Department of Computer Science and Engineering, Shanghai Jiao Tong University, China.

His current research interests include wireless network security and distributed system security. He published 26 international journal papers, including IEEE Transactions papers, and more than 40 international conference papers, including ACM SIGCOMM poster and IEEE INFOCOM, ICDCS, GLOBECOM, ICC and WCNC papers. He received the SMC-Young Research Award (Rank B), Shanghai Jiao Tong University, Nov, 2011. He was a co-recipient of best paper awards of IEEE ICC 2007 - Computer and Communications Security Symposium and Chinacom 2008 - Wireless Communication Symposium.

He serves as the Associate Editor of IEEE Internet of Things Journal, KSII Transactions on Internet and Information Systems (Jan. 2012 ~ present), Ad Hoc & Sensor Wireless Networks (July 2012 - present), guest editor for IEEE Network, Special Issue on Security in Cognitive Radio Networks (2013), Guest Editor, Peer-to-Peer Networking and Applications, SI on Security and Privacy of P2P Networks in Emerging Smart City. He was the Workshop Co-Chair of BodyNets 2012 and Publicity Co-Chair of IST-

AWSN'11. He will be TPC Symposium CO-Chair, Symposium on Cognitive Radio Networks, IEEE GLOBEOCM 2014, and he also served on the technical program committees for many international conferences.



Alberto Rabbachin received the Ph.D. degree in Electrical Engineering from the University of Oulu, Finland and the Master degree in Telecommunications Engineering from University of Bologna, Italy, in 2008 and 2001, respectively.

He recently joined the European Commission where he is a scientific project officer. Previously he was with the Laboratory of Information and Decision Systems at the Massachusetts Institute of Technology (MIT) as a Marie Curie Fellow.

Dr. Rabbachin received the 2012 IEEE Communications Society William R. Bennett Prize in the field of Communication Networks. He was awarded with the prestigious International Outgoing Marie Curie Fellowship in 2011. He also received the Best Paper Award and the GOLD Best Paper Award at IEEE Global Communication Conference in 2010. In the same year he was recipient of the JRC Best Young Scientist Award. His research interests involve theory and experimentation of wireless systems and networks including physical-layer security techniques, small-cells, heterogeneous network coexistence, cognitive radio networks, GNSS acquisition, network interference characterization, and UWB networks.

Dr. Rabbachin is an Editor of the IEEE Communication Letters. He is currently co-chair of the 2013 IEEE International Workshop on Advances in Network Localization and Navigation. He was Publication Chair for the IEEE International Conference on Ultra-Wideband.