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Call for Papers for
Cognitive Radio and Networks Symposium

Symposium Co-Chairs

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Submissions must be done through EDAS at http://edas.info/N20743

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

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 cognitive radio networks
- Architectures and building blocks of cognitive radio networks
- Spectrum sensing, measurements and statistical modeling of spectrum usage
- Waveform design, modulation, interference aggregation, and mitigation for cognitive radio
- Distributed cooperative spectrum sensing and multiuser access
- Cognitive medium access control, interference management, and interference modeling
- Dynamic spectrum sharing
- Handoff and routing protocols in cognitive radio networks
- Resource allocation for multi-antenna based cognitive radio communications
- Energy-efficient cognitive radio communications and networking
- Self-configuration, interoperability and co-existence issues in cognitive radio networks
- Distributed adaptation and optimization methods in cognitive radio networks
- Machine learning techniques for cognitive radio systems
- Architecture and implementation of database-based cognitive radio networks
- Cooperative and coordinated communications in cognitive radio and dynamic spectrum access networks
- Economic aspects of spectrum sharing (e.g., pricing, auction) in cognitive radio networks
- Spectrum regulatory policies and their interactions with communications and networking
- Privacy and security of cognitive spectrum-agile networks
- Attack modeling, prevention, mitigation, and defense in cognitive radio systems
- Physical-layer secrecy in cognitive networks
- Modeling and performance evaluation in cognitive radio networks
- Quality of service provisioning in cognitive radio networks
- Applications and services (e.g., cognitive networking in TV whitespace, adaptation with LTE networks such as LTE-unlicensed, and integration with other merging techniques such as massive MIMO and full-duplex)
- Cognitive radio standards, test-beds, simulation tools, and hardware prototypes.

Co-Chairs Biographies

Norman C. Beaulieu received the B.A.Sc. (honours), M.A.Sc.,and Ph.D. degrees in electrical engineering from the University of British Columbia, Vancouver, BC, Canada. He has held academic appointments at the Beijing University of Posts and Telecommunications (BUPT), the University of Alberta, the University of Electronic Science and Technology of China (UESTC), King Abdulaziz University, and Queen's University. He served two terms as the Editor-in-Chief of the IEEE Transactions on Communications, and as Senior Editor and Associate Editor for a number of IEEE and other journals. He also served on the Editorial Board of the Proceedings of the IEEE. Dr. Beaulieu is a Fellow of the Royal Society of Canada and was awarded the Thomas W. Eadie Medal of the Society in 2005. Professor Beaulieu is listed on ISIHighlyCited.com and has been an IEEE Communications Society Distinguished Lecturer. He is the recipient of the IEEE Communications Society 2007 Edwin Howard Armstrong Achievement Award. In 2011, he was awarded the Radio Communications Committee Technical Recognition Award and in 2013 the (Inaugural) Signal Processing and Communications Electronics (SPCE) Technical Committee Technical Recognition Award. He is a Fellow of the IEEE.

His current research interests include cognitive radio, cooperative wireless networks, signal processing in communications, applied probability theory, broadband digital communications systems including ultra-wide bandwidth wireless systems, fading channel modeling and simulation, interference channels, and multiple input multiple output (MIMO) systems

Lingyang Song received his PhD from the University of York, UK, in 2007, where he received the K. M. Stott Prize for excellent research. He worked as a research fellow at the University of Oslo, Norway, and Harvard University, until rejoining Philips Research UK in March 2008. In May 2009, he joined the School of Electronics Engineering and Computer Science, Peking University, China, as a full professor. His main research interests include MIMO, cognitive and cooperative communications, physical layer security, and wireless ad hoc/sensor networks. He published extensively and wrote 3 text books. He is the recipient of 2012 IEEE Asia Pacific (AP) Young Researcher Award, and received 7 best paper awards, including IEEE WCNM 2007, IEEE ICCC 2012, ICST Chinacom 2012, IEEE WCNC2012, IEEE WCSP 2012, IEEE ICC 2014, and IEEE Globecom 2014. Dr. Song is currently on the Editorial Board of IEEE Transactions on Wireless Communications, China Communications, and Journal of Network and Computer Applications. He served as the TPC co-chairs for the International Conference on Ubiquitous and Future Networks (ICUFN 2011 and ICUFN 2011) and registration co-chair for the 1st IEEE International Conference on Communications in China (ICCC 2012). He served as symposium co-chairs for International Wireless Communications and Mobile Computing Conference (IWCMC 2009 and 2010), IEEE International Conference on Communication Technology (ICCT 2011), IEEE International Conference on Communications (ICC 2014).

Dr. Song is is a senior member of IEEE, and an IEEE distinguished lecturer since 2015.