IEEE ICC™ 2018

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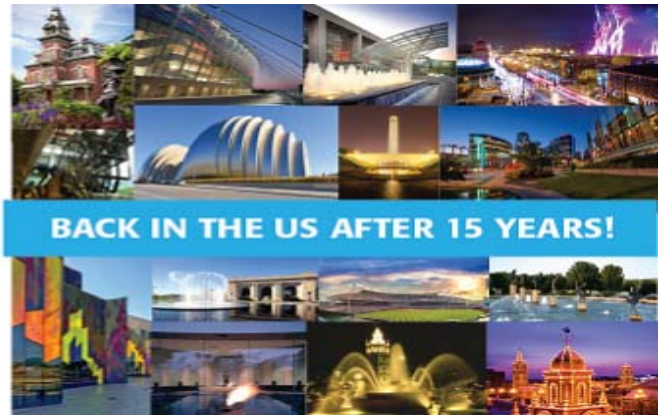
COMMUNICATIONS FOR CONNECTING HUMANITY



CALL FOR PAPERS

COGNITIVE RADIO AND NETWORKING SYMPOSIUM

Symposium Co-Chairs

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Scope and Topics of Interest

The use of cognition in radio access and networking is expected to enable a number of significant enhancements in mobile and wireless communications. These include better utilization of spectrum, autonomous network configuration, interference reduction, energy efficiency, interoperability and coexistence among different wireless/mobile communications systems and devices, etc. The cognitive and adaptive capabilities of radio access will be of fundamental importance in 5G and beyond networking contexts, where the complexity and localized variations in context, as well as the availability of various access means particularly under heterogeneous networking in 5G, will be increased greatly compared with current networks. Cognitive networking will enable future networks to become more adaptable, self-organizing, self-healing, and able to cope with environmental changes, network dynamics, and malicious attacks, etc.

This symposium is to serve as an international forum for experts from academia, industry, and government to exchange new research ideas and results 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.

- Design, analysis, and optimization of large-scale cognitive radio networks.
- Forward-looking cognitive radio architectures.
- Full-duplex cognitive radio communications.
- Dynamic spectrum sensing, access, and management.
- Detection and estimation techniques for cognitive radio networks.
- Measurements and statistical modeling of spectrum usage.
- Waveform design, coding, modulation, interference mitigation and management for cognitive radio networks.
- Crowdsourcing based cognitive radio spectrum sensing and access
- Cloud based cognitive radio networking.
- Geolocation-database or other database-driven methods for spectrum sharing and opportunistic spectrum usage, such as TV white space, Licensed-Shared Access, and 3.5 GHz Citizens Broadband Radio Service.
- Intelligence measurement and assessment of cognitive radio and networking.
- Game-theoretic modeling of cognitive radio systems.
- Waveform design, modulation, and interference aggregation for cognitive radio

- Energy-efficient cognitive radio communications and networking.
- Applications of cognitive radio networking concepts in emerging cellular, ad hoc, and heterogeneous wireless networks.
- Self-healing, self-organization, and self-configuration features for cognitive radio networks.
- Machine learning, distributed optimization, and reinforcement learning methods for enhanced spectrum sharing, access, and cognitive communications.
- Routing protocols and architectures for cognitive radio networks.
- Cognitive radio applications in software defined networks and network function virtualizations.
- Cognitive radio in 5G.
- Learning techniques for harmonious co-existence among heterogeneous cognitive radio systems.
- Economic challenges of cognitive radio networking and spectrum sharing.
- Modeling and performance evaluation.
- Spectrum sensing and sharing for Internet of Things or cyber-physical systems.
- Spectrum sensing and sharing for mm-wave.
- Security and privacy in cognitive radio networks.
- Attack modeling, prevention, mitigation, and defense in cognitive radio systems.
- Standardization efforts and regulatory policies for cognitive radio networks.
- Quality-of-service provisioning in cognitive systems.
- Experimental results and test-beds for real-world deployment of cognitive radio networks.

The authors of selected papers from this symposium will be invited to submit an extended version of their work for fast-track review in the IEEE Transactions on Cognitive Communications and Networking.

Submission Guidelines

The IEEE ICC 2018 website provides full instructions on how to submit papers & the paper format.

You will select the desired symposium when submitting.

The paper submission deadline is October 15, 2017.

Only PDF files will be accepted for the review process and all submissions must be done through EDAS at http://edas.info/