



IEEE ICC™

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Empowering Intelligent Communications

CALL FOR PAPERS

COGNITIVE RADIO AND NETWORKS (CRN) SYMPOSIUM

Symposium Co-Chairs

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Scope and Topics of Interest

Cognitive radio communications and networking (CRN) technologies represent a promising solution to the spectrum utilization problem and can improve the performance of resource-constrained wireless networks. The success of CRN requires transformative innovations in all technology, policy and economics domains. The 5G evolution calls for a system level design to empower CRN with new cognitive and adaptive capabilities, and encourages inter-disciplinary approaches from communications, networking, machine learning, and economics community. This symposium aims to bring together and disseminate the state of the art research contributions to address various aspects of analysis, design, optimization, implementation, standardization, and application of CRN technologies.

The scope of this symposium includes (but is not limited to) the topics in the following.

- Challenges and issues in designing cognitive radios and cognitive radio networks
- Spectrum sensing, measurements and statistical modeling of spectrum usage
- Architectures and building blocks of cognitive radio networks
- Waveform design, modulation, and interference aggregation for cognitive radio
- Distributed cooperative spectrum sensing and multi-user access
- Cognitive medium access control, interference management and modeling
- Cooperative spectrum sharing
- Handoff and routing protocols
- Resource allocation for multi-antenna based cognitive radio communications
- Energy-efficient and cost-aware cognitive radio communications and networking
- Self-configuration, interoperability and co-existence issues
- Distributed adaptation and optimization methods
- Machine learning techniques for cognitive radio systems
- Architecture and implementation of database-based cognitive radio networks
- Economic and policy aspects of spectrum sharing in cognitive radio networks
- Mechanism design of sharing economy for wireless networks
- Privacy and security of cognitive spectrum-agile networks
- Attack modeling, prevention, mitigation, and defense in cognitive radio systems
- Surveillance and intervention of cognitive networks (e.g., proactive eavesdropping and cognitive jamming)
- Modeling and performance evaluation
- Quality of service provisioning in cognitive radio networks
- Spectrum sensing and sharing for Internet of Things and mm-wave
- Cognitive radio standards, test-beds, simulation tools, and hardware prototypes.

Submission Guidelines

The IEEE ICC 2019 website provides full instructions on paper submission and submission format.

Please select the designated symposium when submitting papers.

The paper submission deadline is October 14, 2018.

Only PDF files will be accepted for review and all submissions must be uploaded to EDAS at <http://edas.info/>