

CALL FOR PAPERS

CrownCom 2010

The 5th International Conference on Cognitive Radio
Oriented Wireless Networks and Communications

June 9-11 Cannes, France

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Cognitive radio is an emerging technology in wireless access, aimed at vastly improving the way radio spectrum is utilized. The motivation for cognitive radio stems from various measurements of spectrum utilization, which generally show that spectrum is under-utilized. This means that there are many "holes" in the radio spectrum that could be exploited by the secondary users. The secondary user must exploit these spectrum opportunities without causing harmful degradation to the primary system. The research challenges in this area include devising methods for efficient spectrum pooling and sensing, and for interference management and dynamic resource allocation, as well as circuits and architectures meeting the often challenging requirements.

The aim of this conference is to bring together original, high-quality contributions that present new techniques, concepts and analyses in the area of cognitive radio algorithms and system design. Specific topics of the conference include: spectrum sensing and pooling, network design and optimization, software-defined and flexible radio architectures, channel modeling, cooperative communications, as well as beamforming and multicast methods.

Track 1 – Cognitive access and interference management strategies

- Advanced access technologies for spectrum sharing
- Location-aided optimization of communication networks
- Cooperative and compressed sensing techniques for spectrum measurements
- Higher-layer resource allocation and scheduling
- Interference management, avoidance and alignment
- Multiple-antenna techniques (beamforming, MIMO, multicast)

Track 2 – Fundamental limits

- Fundamental limits of cognitive radio
- Cooperative and coordinated multiuser communications
- Network, resource, and interference aware coding and decoding
- Network information theory, channel capacity bounds and network coding
- Wireless networks with private and common information: physical layer secrecy

Track 3 – Network design and optimization

- Self-organizing networks
- WSN aided cognitive radio
- Cognitive radio protocols design
- Cognitive radio pilot channel

Track 4 – Architectures and implementation aspects

- Software defined radio and flexible radio
- Real-time implementation and testbeds for cognitive radio
- Circuits and architectures for cognitive radio

Track 5 – Modeling and performance evaluation tools

- Spectral and spatial aspects of channel modeling
- Antenna issues in cognitive radio
- Phy/Mac layers abstraction and modeling
- Interference modeling
- System level simulations

Important Dates

Submission Due: ~~February 14, 2010~~ **Extended deadline to February 28, 2010**

Tutorial Proposals Due: February 14, 2010

Notification of Acceptance: April 11, 2010



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