In conjuction with:

World of Wireless

Mobile and Multimedia Networks

CORAL

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First International Workshop on Emerging COgnitive Radio Applications and aLgorithms (CORAL'12)

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TO BE COMPLETED

Cognitive Radio (CR) is emerging as one of the key technologies to solve the problem of spectrum scarcity faced by current wireless systems. A CR network aims to support highly reconfigurable devices that are capable of sensing the current environment, and adapting the transmission parameters to the specific scenarios, also based on the Quality of Service (QoS) requirements of the applications. The potential deployment of CR networks has been further augmented through various standardization activities supported by the IEEE (e.g. IEEE 802.22, IEEE 802.16h, IEEE 802.11y), and directives of spectrum regulatory agencies (e.g. the FCC in US). These efforts have opened portions of the spectrum for opportunistic spectrum access and laid down rules for sharing the spectrum so that general purpose networks as well as communication in critical scenarios, like vehicular networks, public safety networks, emergency networks are supported. However, to fully realize the potential of CR networks, there is a need to draw the attention of the research community for developing advanced, context-based and innovative **methodologies**, **techniques and algorithms** possibly inspired by **multi-disciplinary** research fields.

The objective of this workshop is to bring together practitioners and researchers from both academia and industry in order to have a forum for discussion and technical presentations on the recent advances in both the methodological and algorithmic aspects and the novel applications of cognitive radio networking. In line with such objectives, original contributions are solicited in **topics of interest** including, but not limited to, the following:

- Centralized/Distributed algorithms for Radio Resource Management in CR networks
- Centralized/Distributed algorithms for CR network management
- Machine learning techniques for CR networks
- Swarm Intelligence and biological-inspired networking for CR networks
- Cooperative and non-cooperative techniques for spectrum management and access
- Algorithms and protocols for self-configuring CR networks
- Environmental and context-based factors exploitation in CR systems
- Space-Time spectrum information sharing and RF DB integration in CR systems
- Protocol stack adaptation and Cross-layering in CR systems
- Multi-disciplinary approaches and solutions for novel CR methodologies
- Spectrum sensing and spectrum sharing techniques
- Game theoretical analysis of CR networks
- CR enhanced vehicular networks
- Dynamic Spectrum Access (DSA) and Management in vehicular environments
- Mobile Cognitive Radio Ad Hoc Networks
- CR for emergency and public safety applications
- CR for wireless medical networks
- CR implementations and test-beds
- Novel Applications of CR technology
- Emergent behavior of CR systems
- New paradigms for CR systems
- Modeling, Analysis and Simulation of CR technologies and CR networks
- Security and safety aspects of CR systems

Submission Deadline:	Notification Deadline:	Workshop Date:
February 5, 2012	**April 8, 2012**	**June 25, 2012**