

# Call for Papers: Second IEEE Workshop CogNet: Towards Cognition in Wireless Networks

Technical sponsorship: IEEE Technical Committee on Cognitive Networks  
IEEE ICC 2008 Workshop, 19 May 2008, Beijing, China  
<http://www.ieee-cognet.org>

## Scope of the Workshop

Recently we are witnessing an unbounded growth in communication technology, in particular proliferation of wireless devices. There is a serious demand for spectrum to support the communication needs of all these devices. At the same time, many researchers are developing methodologies to sieve the unused spectrum.

There are already many solutions proposed under the umbrella of 'Cognitive Radio' (CR) that address this issue. IEEE 1900 Working Group and various researchers are blazing a trail in the direction of intelligently using the spectrum available locally for communication needs, making Cognitive Radio Wireless Networking (CRWN) one of the promising candidates for future communication. These efforts are usually segregated as architecture, sensing, optimization, resource allocation, cross layer issues, etc. However, an end user requires a system that is capable of intelligently finding and handling the available frequency band without any compromise on the QoS. Thus there is a need for the community to look at the issues holistically such that these solutions, results and proposals can lead to the rapid deployment of cognitive radio networks.

The need is to bring together all the efforts resulting in a cohesive approach. This workshop will enable such a platform. We select, from the submissions, a small set of papers discussing novel ideas that should not only analyze the issues in a CRWN but also incorporate a clear direction towards the implementation of the CRWN systems. This workshop brings together researchers, practitioners and the early proponents of CR. This workshop will be planned so as to allow more interactions amongst the participants rather than a conference would allow.

CRWN paradigm has been trying also to gain industrial relevance through the Cognitive Radio work done especially in the USA. The workshop aims to bring in together both long-term and short term academic and industrial viewpoints.

We are planning to provide an added value in our ICC Workshop by emphasizing general aspects, soliciting selected authors to provide very high quality contributions, and especially focusing on the wireless networking aspects of cognition instead of the pure spectrum agility issues.

## Topics of Interest

Topics of interest are (but not limited to):

- Architectures for Hardware and Software defined CR;
- Regulatory policies for non-centralized spectrum management;
- Enforcement of policies for CR devices;
- Pricing and billing for CR devices;
- Authorization and authentication of CR devices;
- Novel Dynamic/Opportunistic Spectrum Access techniques;
- MAC and Network layer management in CR context;

- Cross-layer optimization of CRWN;
- End-to-End modeling of CRWN;
- Security of CRWN;
- Applications of CR, i.e., CR for Personal Area Networks;
- Spectrum Sensing and Quality of Detection;
- Signal Processing for CRWN;
- Theoretical Foundations for CRWN
- Game Theoretical Analysis of CRWN
- Error Correction and Coding for CR;
- Testbeds, Experiences of CR implementations.

## Organizing Committee

- Ignas Niemegeers (General Chairperson), Delft University of Technology, the Netherlands
- Joseph Evans (Vice General Chairperson), University of Kansas, USA
- R. Venkatesha Prasad (TPC Chairperson), Delft University of Technology, the Netherlands
- Petri Mähönen (TPC Vice-Chairperson), RWTH Aachen, Germany
- Przemysław Pawełczak (Posters and Demos Chairperson), Delft University of Technology, the Netherlands
- Sai Shankar (Publicity Chairperson), Qualcomm, USA

## Important Dates

Full papers due: 20 December 2007  
Acceptance notification: 31 January 2008  
Camera ready version: 28 February 2008

## Submission Guidelines

IEEE CogNet Workshop accepts only novel, previously unpublished articles related to the area of Cognitive Radio Networking not limited only to the Radio aspects. Prospective Authors are encouraged to submit a 5-page (including all text, figures, and references) complete paper through EDAS system.

Accepted papers must be presented at the workshop by one of the authors. The presenter must register for the workshop at one of the non-student rates offered, and must register before the deadline given for author registration. Failure to register before the deadline will result in withdrawal of the paper from the workshop proceedings and program automatically.

