

Workshop on Cognitive Communications (WUN COGCOM 2010)

Organized by WUN Cognitive Communications Consortium

CALL FOR PAPERS

to be held in conjunction with IEEE VTS and ComSoc sponsored ISWCS 2010, York, UK, 19-22 September 2010

(www.iswcs.org/iswcs2010/)

Future radio communication networks will be heterogeneous in nature and will need to dynamically adapt to changing needs. This will require networks, sub-systems and devices to be increasingly intelligent, i.e. cognitive. The aim of this public workshop, organized by the WUN Cognitive Communications Consortium, is to showcase work being done within the Consortium, while also providing like-minded non-members a forum to present their latest research. The WUN Cognitive Communications Consortium (www.wun-cogcom.org) was established in January 2009, and now has over 50 academic and industrial members.

Cognitive communications – the application of cognition to wireless systems in the most general sense, is a field which incorporates techniques from several disciplines, including distributed artificial intelligence, electromagnetics, regulatory policy and economics, in addition to wireless communications. Thus, cognitive communications encompasses more than just the standard areas of cognitive radio and cognitive networks, and includes more speculative areas, such as cognitive environments (incorporating frequency selective surfaces), and cognitive acoustics. The workshop seeks papers dealing with architectural issues, theoretical studies, new paradigms, enabling technologies for cognitive communications, practical implementations, and policy issues. Topics of interest include but are not limited to:

- Application of distributed artificial intelligence
- Cognitive routing metrics
- Smart environments, incorporating FSS (frequency selective surfaces)
- Cognitive acoustics
- Cognitive wireless sensor networks/systems
- Reduced complexity cognitive radio
- 'Green' cognitive radio
- Link maintenance and robust cognitive radio
- Dynamic spectrum access/management
- Cognitive physical layers
- Cognitive femtocells
- Standardisation and regulatory efforts
- Spectrum charging/auctions in cognitive networks
- Self-organising backhaul networks
- Cross-layer designs
- Cognitive mesh, ad hoc, and body networks
- Fast and wideband spectrum sensing
- Software defined & reconfigurable radio
- Testbeds and trials
- Sensing and measurement for cognitive radio
- Cognitive Medium Access Control/Etiquette protocols
- Security in cognitive radio & networks

Submission Guidelines

WUN COGCOM 2010 accepts only novel, previously unpublished papers in the area of Cognitive Communications. Submissions must include an abstract, five to ten keywords, the e-mail address of the corresponding author and should not exceed 5 pages, including tables and figures in standard IEEE camera-ready format (double-column, 10-pt font). The proceedings of the workshop will be published in the ISWCS main conference proceedings and on IEEE Xplore database.

Submission of a paper should be regarded as an undertaking that, should the paper be accepted, at least one of the authors will register in full for the main conference and present the work. Submissions will be conducted electronically via Track Chair (wun-cogcom2010.trackchair.com).

Important Dates

Paper submission: **Extended to 29 May 2010**
Author notification: 15 June 2010
Camera-ready due: 6 July 2010
Conference dates: 19-22 September 2010

Workshop Chairs

Dr David Grace (dg@ohm.york.ac.uk), University of York, UK
Dr Alexander M. Wyglinski, Worcester Polytechnic Institute, USA
Prof Honggang Zhang, Zhejiang University, China

