2013 IEEE VTC Fall – Workshop

The First International Workshop
on
Wideband Mobile Cognitive Radio Communications and Networks
(WMCR 2013)

www.ieeevtc.org/vtc2013fall/workshops

Call for Papers

The cognitive radio (CR) concept emerged as an evolution of software-defined radio (SDR) whose original purpose was to address the issue of interoperability. As proliferation of mobile wireless services and systems continues, wideband cognitive radio technology has the potential to introduce a new paradigm in the world of wireless communications and networking. Indeed, with the recent declaration of the President's Council of Advisors on Science and Technology (PCAST) Report in July 2012 of a 1000 MHz of new spectrum that would be made available for commercial communications, the mobile wireless telecommunications can only be expected to grow further. However, conventional transceiver technologies may not be capable of operating with mobility over such a wideband spectrum. Wideband mobile cognitive radio (WMCR) technology promises multi-mode, multi-band radios with the ability to capitalize on such wide spectrum opportunities. However, realizing full-potential of this technology requires bold rethinking of protocol, hardware and signal processing architectures beyond what is normally assumed in cognitive radios for utilizing idle primary channels.

This workshop organized by a mixed blend of researchers from industry and academia will be aimed at recognizing the broad potential of WMCR and advancing new technological trends.

The program will include three key note presentations, oral presentations and a poster & demonstration session to enable lively discussions. The workshop welcomes submissions from both researchers and practitioners, either closely related to currently standardized, emerging or visionary future systems.

Areas of interest include, but are not limited to:

- Wideband spectrum knowledge acquisition techniques
- Novel solutions for real-time wideband spectrum sensing
- New access techniques for mobile wideband spectrum sharing
- PHY/MAC protocols for mobile wideband cognitive radios
- Mobile multi-mode/multi-band cognitive radios
- Interoperability and wideband cognitive radios
- Novel networking solutions for mobile wideband autonomous cognitive radio operation
- Cooperative sensing and cooperative cognitive communications
- Information theoretic aspects of wideband cognitive radio
- Receiver architecture design facilitating cooperative wideband operation
- Computationally efficient signal processing techniques for wideband cognitive radios
- Artificial intelligence and machine learning methodologies
- SDR and reconfigurable hardware platforms for wideband cognitive radios
- Applications of wideband cognitive radios

Important Dates

Submission of papers
2013-MAY-27
Notification
2013-JUNE-1
Camera Ready
2013-JUNE-10

Submission Info

5-page full paper for presentation; accepted papers will appear on the CD and on IEEE Xplore

Please see the VTC 2013 Fall web site for submission instructions via TrackChair.

Organizing Committee

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