CITS 2015 Special Session on cognitive radio based on wireless sensor networks

Dates and Location 15-17 July 2015, Gijon, Spain

Important Dates:

Paper Submission March 31, 2015
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About the Special Session

With the emergence in large numbers of wireless communication terminals and technologies, spectrum resources become increasingly scarce. Cognitive radio has been considered as an effective methods to improve the spectrum utilization. Spectrum sensing is the key technology in cognitive radio. In order to improve the reliability and throughput of the networks, high accuracy spectrum sensing algorithms such as cooperative sensing are necessary. We also could monitor spectrum resources for a long time and analyze the monitoring data to reuse the idle spectrum resources for improving the spectrum utilization.

Signal enhancement and distributed cooperative detection technologies can be used to improve the accuracy of signal detection effectively. In addition, parameter and state estimation in ahead of time is a proven way to enhance the reliability of sensing methods. Moreover, cooperative relaying communication has been recognized as an efficient diversity technique to combat fading effects in wireless communications. Cooperative relaying has been introduced into underlay cognitive radio to compensate the performance loss caused by interference constraints and thus improved the throughput of the networks. In some special scenarios, we should take accurate distributed signal localization algorithms into account when we need to locate the illegal radio source. Spectrum big data computing could quickly and efficiently process the volume and various spectrum data transmitted from nodes in cognitive radio networks.

This special session will attract high-quality unpublished research articles on cooperative spectrum monitoring in cognitive radio. Topics of interest include, but are not limited to:

Signal detection and signal enhancement technology
Cooperative spectrum sensing and data transmission
Parameter and state estimation
Dynamic spectrum sharing
Cooperative relaying communication
Resource allocation in wireless sensor networks
Distributed signal localization and tracking
Software defined radio for spectrum scene description
Spectrum data centers and spectrum big data computing

Guidelines for submission

Papers should be written in English with a maximum paper length of 5 printed pages (10-point font, A4 size paper) including figures. For your submission you can use the standard IEEE Transactions templates for Microsoft Word or LaTeX formats found at: http://www.ieee.org/go/conferencepublishing/templates (Remember: A4 size).

All accepted papers will be published in the conference proceedings. At least one author of accepted papers is required to register and attend the conference. The paper review and requirements of this special session will be exactly as the main CITS 2015 conference and acceptance ratio will abide by this in the main CITS 2015 conference.

Special session chairs

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