WORKSHOP ON COGNITIVE RADIO AND INNOVATIVE SPECTRUM SHARING PARADIGMS FOR FUTURE NETWORKS (CRAFT 2016)

Scope and Topics of Interest

There has been a surge in wireless technologies over the last decade, which has led to the crowding of existing spectrum. In order to address the resulting congestion and shortage of capacity, the cognitive radio (CR) concept has been envisioned in the context of 5G networks. Among other benefits, CR can increase the efficiency of spectrum utilization, and improve the management, performance and coexistence of heterogeneous networks with diverse radio access technologies.

It is widely expected that new emerging techniques applied in 5G networks will enable many new services, making them beneficial and economically viable. In order to achieve this goal, advanced solutions have to be identified in both technical and legislative areas. In response to the above, the workshop aims to gather and promote discussion among researchers, engineers, practitioners, and end user groups, with the goal of inspiring the analysis and development of cognitive radio and spectrum sharing solutions for future networks. Further, additional concepts of relevance here for future networks and spectrum include advanced flexible transmission techniques, platforms and applications, cognitive carrier aggregation aspects, advanced management of coexisting networks, and regulatory aspects of efficient spectrum sharing. The main focus of this workshop is on the practical implementations of the above concepts, and "shift-to-market" considerations.

The workshop focuses on issues, advances and challenges in various research areas related to cognition and wider spectrum sharing schemes in future generation communication systems and networks. CRAFT is soliciting papers describing original work, unpublished and not currently submitted for publication elsewhere, on topics including, but not limited to, the following:

- Signal processing for cognitive applications,
- SDN and SDR in self-organising networks,
- Cognitive communication security,
- Cognitive MAC protocols,
- Cognitive RRM mechanisms,
- Cognitive self-organised networks (SONs),
- Cognitive Radio for 5G networks,
- Cognitive HetNet, D2D, M2M and V2V networks,
- Advanced solutions for access to combined spectrum opportunities, including spectrum, carrier and link aggregation techniques,
- Energy and spectral efficient cognitive radio network,
- Geolocation/spectrum databases for cognitive radio,
- Cognitive small cells and heterogeneous networks,
- Spectrum regulation and management aspects for cognitive 5G networks,
- Spectrum sharing and inherent challenges for carrier aggregation,
- Spectrum sharing in 5G HetNets,
- Novel applications of cognitive radio technology,
- New wireless communication technologies for rural broadband using white spaces (MIMO, full-duplex radios, hierarchical cells, novel waveform design),
- Spectrum access systems (SAS),
- Licensed-shared access (LSA),

- TV white spaces,
- Innovative methods of white spaces identification,
- Underlay wide area coverage networks,
- Regulatory frameworks for spectrum management and dynamic access.

Paper Submission Guidelines

The workshop accepts novel and previously unpublished papers. All submissions should be written in English with a maximum paper length of six (6) printed pages (10-point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge if accepted). Papers should be submitted through EDAS: https://edas.info/newPaper.php?c=22449

Standard IEEE templates for Microsoft Word or LaTeX formats can be found at: http://www.ieee.org/conferences_events/conferences/publishing/templates.html

Important Dates

Paper submission: ~~29th April, 2016~~, **13th May, 2016**
Paper acceptance notification: 10th June, 2016
Camera Ready paper submission: 1st July, 2016

Workshop Organisers

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This workshop has been supported by the FP7 ICT-SOLDER project <www.ict-solder.eu>, the H2020 ICT-COHERENT project <www.ict-coherent.eu>, the H2020 SPEED-5G project < www.speed-5g.eu>, and the ANR French project ACCENT5.