Call for Contributions

Inform the Chair: with the Title of your Contribution

Submission URL: https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=SIGNAL+2017+Special

Please select Track Preference as **5GSIGWAVE**

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Special track
5GSIGWAVE: Signal Processing for Decentralized, Cognitive and Self-organised 5G
Wireless Access Networks
Chair and Coordinator
Dr. Ramiro Sámano Robles, CISTER Research Centre, ISEP - Instituto Superior de Engenharia do Porto –
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along with
SIGNAL 2017, May 21 - 25, 2017 - Barcelona, Spain
The Second International Conference on Advances in Signal, Image and Video Processing
- from Sensing to Applications –
http://www.iaria.org/conferences2017/SIGNAL17.html

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The number of wireless connections is growing exponentially around the globe. It is expected that up to 50 billion devices will be connected to the net by 2050. Most of these connections will involve wireless technologies. However, with current wireless standards it will be impossible to cope with this increase in traffic demand and different quality of service requirements. In addition, the signalling load needed for resource allocation and device coordination in such massive deployment will become prohibitively large. 5G wireless access networks will need to combine several innovative aspects of decentralized and centralized allocation looking for maximizing performance and minimizing signalling load.

Spectrum resources need to be dynamically shared using advanced cognitive radios and self-organization that will enable the maximum exploitation of opportunities with minimized interference and maximum quality of service satisfaction. Centralized architectures with cloud computing, context-aware, and big data processing will enable large and dense network deployments with high interference rejection, embedded security, and energy savings. Signal processing will be of paramount importance in future 5G networks to make efficient use of resources, resolve conflicts, reduce signalling load, improve transfer of information, improve security, make efficient use of energy consumption, reject interference, and enable efficient detection of spectrum opportunities.

Contributing Papers are suggested to cover one or more (but not limited to) of the following sub-topics:

- Multiple antenna processing
- Signal processing for contention resolution algorithms
- Orbital angular momentum processing
- Full duplex algorithms
- Device-to-device signal processing
- 3D beamforming
- Sparse signal processing
- Massive MIMO,
- Full-dimension MIMO
- Large scale cooperative processing
- Imperfect channel and queuing state information in signal processing
- Context aware processing

- Innovative modulation formats and encoding

- MAC-PHY cross-layer design for 5G access

- Error correction protocols

- mm-wave design, spectrum sharing

- Energy harvesting for 5G

- Coordinated distributed antenna processing,

- Interference alignment

- Cooperative relaying diversity

- Adaptive beamforming

- Space division multiplexing

- Multi-packet reception with interference cancellation

- Cognitive radio resource allocation

- Self-organized resource allocation

- Multi-hop ad-hoc processing

- Blind and semi blind algorithms for multiuser detection and contention resolution

- Decentralized contention resolution protocols for 5G futures wireless networks

- Signal processing for cloud radio access network

- Software defined networking processing

- Ultra-dense networks

- Full duplex algorithms

- Non-orthogonal multiple access

- Error correction and channel coding for 5G

- PHY-layer for low latency

- Embedded security

- Filter bank multi carrier

- Spectral-efficient FDM systems

- Generalized FDM

- Channel modelling issues

- Multi-objective optimization for signal processing in 5G

- Game theory for self-organized and cognitive radio 5G networks

- Low latency solutions for machine-type communications

Important Datelines

- Inform the Chair: As soon as you decided to contribute
- Submission: February 28
- Notification with comments for camera-ready: March 15
- Registration: April 2
- Camera ready: April 9

Contribution Types

- Regular papers [in the proceedings, digital library]

- Short papers (work in progress) [in the proceedings, digital library]

- Posters: two pages [in the proceedings, digital library]

- Posters: slide only [slide-deck posted on www.iaria.org]

- Presentations: slide only [slide-deck posted on www.iaria.org]

- Demos: two pages [posted on www.iaria.org]

Paper Format

- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications

- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org

- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html

- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission

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Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.

- Registration fees are available at http://www.iaria.org/registration.html
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