

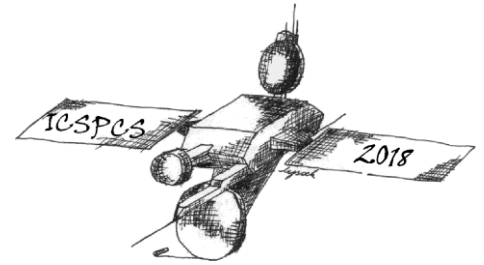
Call for Papers



12th International Conference on Signal Processing and Communication Systems, ICSPCS'2018

Cairns, Australia 17-19 December 2018

http://www.dspcs-witsp.com/icspcs_2018/index.html



Communication Systems worldwide have provided a rapidly growing and useful range of services and are continuing to evolve using a multitude of Signal Processing techniques. The 12th International Conference on Signal Processing and Communication Systems, ICSPCS'2018, follows the very successful ICSPCS'2016 and ICSPCS'2017. A major objective of the Conference will be to pursue the progression from communication and information theory through to the implementation, evaluation and performance improvement of practical communication systems using Signal Processing technology. The Conference is also planned to be a forum for presenting research into topics ranging from those of the physical layer to the application layer. All aspects of the protocols and processes required for the future communication systems to operate better and the applications to utilize the full potential offered by the current and the emerging networking infrastructure are also encompassed. In addition, we expect that, as during the previous events, there will be several papers dealing with image, video and audio processing for multimedia, medical and forensic applications, as well as with the security of networks and information transmitted and stored. Papers that deal with design of cubesat and other smallsat systems, and their associated subsystems, missions, and CONOPS, with an emphasis on understanding and solving the emerging problems facing sensing and communication in space are invited as well.

As in the previous years, the conference is technically co-sponsored by the IEEE Communications Society. Accepted and presented papers will be published in the conference proceedings and submitted to IEEE Xplore as well as other Abstracting and Indexing (A&I) databases.

Previously unpublished contributions to the following technical areas, but not limited to, are solicited:

Networking

- Traffic modelling
- Protocols
- Embedded Internet devices
- Internet of 'Things'
- Resource and information management
- Adaptive QoS provisioning
- Smart grid communications
- Emerging technologies

Wireless Networks

- Mobile ad hoc networking
- Green networking
- Cognitive radio and spectrum sensing
- Broadband Wireless Access
- Cross Layer Design
- Mesh Networks
- Cooperative and Intermittent Networks
- Sensor Networks
- Nano-networks
- Military Communications
- Test-beds and new applications

Information Security

- Security primitives and algorithms
- Security of wireless and distribution networks
- Security of sensor networks
- Authentication and authorization
- Encryption
- Data integrity
- Information assurance

Unconventional applications of Signal Processing

- Medical applications
- Financial modelling
- Data mining
- Forensic applications
- Traffic modelling
- Bio-signaling
- Molecular communications
- Inter and intra-cellular communications

DSP algorithms and hardware implementations

- DSP implementation in hardware
- Parallel acceleration techniques
- DSP algorithms
- Smart antennas and tracking
- Signal separation

Fixed networks

- Optical networks and switching
- Network architectures and equipment
- Programmable networks
- Peer-to-peer networking
- Test-beds and trials
- Network gaming
- New and enhanced services

Communication theory and techniques

- Channel measurements and modelling
- Coding and modulation techniques
- MIMO - theory and trials
- Spread Spectrum and CDMA systems
- OFDM technology
- Space-time coding
- Diversity techniques
- Ultra-Wideband Communications
- Antennas and propagation

Multimedia signal processing

- Streamed multimedia applications
- Algorithms and implementations
- Image audio and video processing
- Audio and speech processing
- Error concealment techniques
- Management of multimedia services
- Test-beds and trials
- Multimedia games

Ranging and Localization

- Indoor Positioning Technologies and Techniques
- Radio-based Positioning Systems
- Ranging and Localization Algorithms
- Vehicle/Robot Navigation
- Hybrid Positioning and Communication
- RFID Localization/Communication
- UWB Ranging and Localization

Molecular Communications

- Bio-signaling
- Molecular communications
- Inter- and intra-cellular communications
- Modeling of biological processes
- Biological and chemical sensors
- Synthetic biology
- Bio-informatics



Important Dates:

- **Full Paper Submission Deadline:**
30 June 2018
- **Notification of acceptance:**
15 September 2018
- **Camera-Ready Copy:**
15 October 2018
- **Early/Authors Registration:**
15 October 2018

Chair of the Organizing Committee:
Prof: Tadeusz A. Wysocki,
University of Nebraska – Lincoln, USA

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Cubesats and smallsats systems

- Network architectures, middleware integration, data management
- Antenna design and processing
- Integrated vehicle systems and robotics
- High speed, low latency, multi-stream data techniques
- Availability, certification, and spaceflight qualification for wireless devices/systems
- Propagation modeling and channel description
- Optical communication systems
- Large-scale networking of mega constellations
- Seamless handovers among satellites