



ISWCS 2017

14th International Symposium on Wireless Communication Systems
www.iswcs2017.org

Special Session:

New challenges for Device-to-Device Communications in 5G and Beyond 5G Networks

The Special Session will be part of the 14th International Symposium on Wireless Communication Systems (ISWCS 2017), technically co-sponsored by the IEEE Communications Society (ComSoc), to be held in Bologna, Italy, on August 28-31, 2017. Paper submissions are invited on the Special Session topic.

Special Session papers will be reviewed by the TPC of ISWCS 2017; they will be part of the Conference Proceedings, and they will be uploaded to IEEE Xplore.

Call for Papers

Device-to-Device (D2D) communications is expected to become a key feature to be supported by 5G and Beyond 5G (B5G) cellular networks. The advantages are manifold: offloading the cellular system, reducing battery consumption, increasing bit-rate, robustness to infrastructure failures and thereby also enabling new services. Standardization on D2D communications in 3GPP LTE has focused on Proximity Services (ProSe) with network-centric management. However, in order to achieve the theoretical spectral efficiency gain of D2D communications, many technical challenges still need to be overcome. Firstly, distributed resource allocation allows decreasing signalling load and latency, but new solutions for interference management must then be proposed. Secondly, if network control is relaxed, then all transmissions and interferences may not be received synchronously at the receivers, and multi-carrier modulations with better frequency localization than Orthogonal Frequency Division Multiplex (OFDM) may be required. Thirdly, new Medium Access Control (MAC) protocols should be defined to perform device discovery and establish connections with enough security. Physical-layer security may also be considered for D2D communications. Finally, in B5G networks, the advent of Massive MIMO and mmWave communications raise new issues regarding D2D communications. For instance, mmWave communications will lead to a decrease of interference but devices should be in line of sight. These new challenges should be investigated in B5G framework.

Submission Guidelines

Prospective authors are invited to submit high-quality technical papers (max 6 pages) using standard IEEE conference templates that can be downloaded from the link <http://iswcs2017.org/call-for-papers/>. The proposal should be submitted by the deadline, via the EDAS link: <https://edas.info/newPaper.php?c=23468&track=85446>

Key Dates

- Paper submission: Thursday, May 4, 2017
- Acceptance notification: Friday, June 16, 2017

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