ISWCS 2019
16th International Symposium on Wireless Communications Systems

**27-30 August
Oulu Finland**

Technically co-sponsored by IEEE ComSoc, VTS and Eurasip

General Chairs:

Dirk Slock, EURECOM, France
Taneli Riihonen, Tampere University, Finland

Workshop format

Half day Workshop
Keynote: Prof. Sriram Vishwanath
(UT Austin & GenXComm)
2 Technical Sessions

Submission Guidelines

Only full papers are considered. The length should not be longer than five A4 pages (in IEEE two-column format, 10pt, according to the IEEE template). Papers must be submitted via EDAS.
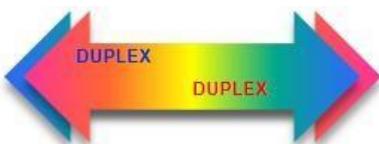
Important Dates

Full paper submission:	**May 17, 2019 (extended)**
Acceptance notification:	June 14, 2019
Camera-ready paper:	June 28, 2019
Author registration:	June 28, 2019

Workshop: August 27, 2019

Call for Workshop Papers

WS03: Full Duplex radio communications for 5G and Beyond (FDB5G)

Full-duplex (FD) technology, by which devices transmit and receive simultaneously on the same frequency band, can potentially double the spectral efficiency and allow a more flexible use of the spectrum, therefore making it a promising technology for future wireless networks. However, FD radios suffer from severe self-interference (SI), as well as extra cross interference between the uplink and downlink caused by simultaneous transmissions, which further degrades the overall network performance. To this end, many research groups around the world have proposed new transceiver designs, implemented advanced FD prototypes and have shown that SI can be suppressed almost down to the noise floor. Recently, some realistic field trials have already been completed in order to bring FD technology a step closer to practice. The impact of FD goes much beyond a simple factor of 2 increase in spectral efficiency. SI cancellation technology allows for simultaneous transmission and spectrum sensing which has a major impact on cognitive radio systems and on random access techniques. This is e.g. being exploited by the Austin startup GenXComm which has shown impressive throughput gains in dense random access systems. Still there are many challenges and open problems in order to achieve the full potential of FD transmission. It is necessary to cope with the self-interference and develop new mechanisms and efficient protocols, while reducing the energy consumption due to the required additional hardware.

Original research articles are solicited in, but not limited to, the following areas:

• Advanced antenna and transceiver designs for full-duplex
• Experimental evaluation of full-duplex transceivers and networks
• Advanced self-interference cancellation techniques for full-duplex
• Modelling of self-interference and channel measurements for FD
• MIMO and mmWave full-duplex transceiver design
• Performance analysis of full-duplex transceivers, systems and networks
• New FD MIMO techniques for multiuser interference cancellation
• Non-orthogonal multiple access (NOMA) and full-duplex techniques
• Physical layer security and full-duplex techniques
• Full-duplex relaying and cooperative communications
• Cognitive radio and full-duplex techniques
• Full-duplex techniques with wireless power and energy harvesting
• Full-duplex device-to-device and M2M communications
• Full-duplex small cell deployments and heterogeneous networks
• Ultra-reliable low-latency MAC and routing protocols for FD networks
• Cross-layer design and virtualization for full-duplex networks
• Resource allocation, medium access control, and scheduling for full-duplex systems