SCOPE

Full-duplex (FD) has been considered as an advanced radio technology for next generation communication systems. It breaks the barrier of today’s communications by supporting bi-directional communications without time, frequency and spatial duplexer. By transmitting and receiving at the same time, on the same frequency and on the same spatial link, full-duplex has the potential to double the system capacity and reduce the end-to-end latency. The major challenge for a FD capable device (e.g., a FD capable base station or a FD capable user equipment) is how to effectively cancel the self-interference (SI) that consists of the leakage and reflection of its own transmitting signal which can be more than 100 dB stronger than the sensitivity level of a receiver. In the past few years, SI cancellation techniques have attracted considerable attention from both industry and academia, and have made remarkable progress in design, implementation and prototyping. Multi-stage and cross-domain approaches involving antenna design, analogue and digital signal processing have made FD technology feasible for future communication products.

In the meantime, research and investigation of FD-enabled communication networks are on the horizon. The implication and impact of FD-enabled devices on the throughput and scheduling of FD networks have been widely studied. Traditional communication networks have been challenged by the additional interference caused by FD nodes and devices. One issue that is particularly detrimental to FD networks is the additional mutual interference (MI) among FD capable nodes and devices when all or some of them operate in full-duplex mode. It suggests that network-wide SI and MI cancellation and mitigation are needed, and FD-aware and FD-optimum upper layer protocols are keys to capitalizing FD gains in FD networks.

TOPICS

Consequently, this workshop invites papers that address issues on the following topics:

- Analogue SI and MI cancellation techniques
- Antenna design for SI and MI suppression
- Digital SI and MI cancellation techniques
- Experimental and trial results of FD systems and networks
- FD MIMO and massive MIMO systems
- FD mmWave systems
- FD relay systems
- FD-optimal scheduler and upper layer protocols
- Information theory on FD devices and networks
- SI and MI channel models and measurements in FD networks
- Throughput analysis and demonstration for FD networks
- Tracking and adaptation of SI/MI channel and environment

EDAS submission link: [https://edas.info/N23911](https://edas.info/N23911)

Accepted and presented papers will be published in the IEEE PIMRC 2017 Conference Proceedings and submitted for inclusion in IEEEExplore®.

IMPORTANT DATES

- Review paper submission: 04 August 2017
- Notification of acceptance: 18 August 2017
- Camera-ready submission: 25 August 2017

WORKSHOP WS-06 CO-CHAIRS

- Jaehoon Chung, Advanced Standard R&D Lab, LG Electronics, Korea
- Tho Le-Ngoc, McGill University, Canada
- Shilpa Talwar, Wireless Communications Research, Intel Labs, USA
- Huan Wu, Huawei Technologies, Canada (Lead Co-Chair)

MORE INFO

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Workshops webpage: [http://pimrc2017.ieee-pimrc.org/authors/call-for-workshop-papers/](http://pimrc2017.ieee-pimrc.org/authors/call-for-workshop-papers/)