

Millimeter-wave and Massive MIMO in Future Wireless Networks

Call for Papers

1. Introduction/Overview

Exploiting high-frequency spectrum, including millimeter wave and even THz spectrum resource, has been recognized as one of the promising solutions to support high data rate communications and relieve the challenge of spectrum shortage in sub 6GHz in future wireless networks. Recently, increasing attentions from both academia and industry have been paid to the investigation of wideband millimeter-wave communications as well as its applications in the context of massive MIMO. Besides its unique advantages and potentials in enhancing future wireless communications, there still exist a number of challenges in realizing millimeter-wave MIMO, especially using massive antenna array, from both theoretical and engineering perspectives. The proposed workshop aims to provide a forum for authors to present early research results on advances in millimeter-wave massive MIMO technologies for future wireless networks. Topics of interest include (but not limited to) the following:

- Theoretical performance analysis for millimeter-wave MIMO networks
- Transceiver design and optimization for millimeter-wave MIMO
- New signal processing methods for millimeter-wave MIMO
- Integration of massive MIMO and millimeter wave communications
- Millimeter-wave MIMO for emerging wireless communication applications like wireless backhaul, UAV and vehicular communications
- Cross layer design in millimeter-wave MIMO networks
- Secure millimeter-wave MIMO and massive MIMO communications
- Hardware Impairment-Aware design in millimeter-wave and massive MIMO systems
- Testbeds, experimental measurements, performance evaluation of millimeter-wave MIMO networks
- Directional beam management and training in millimeter-wave massive MIMO networks
- Coverage design and optimization in millimeter-wave networks
- Channel measurements and modelling of millimeter wave MIMO channels
- Machine learning/Neural network application in millimeter wave and massive MIMO systems

2. Workshop organizers:

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