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The 10th International Workshop on Evolutional Technologies & Ecosystems for 5G and Beyond (WDN-5G ICC2017)

Current research efforts on 5G Radio Access Networks (RAN) strongly focus on millimeter-wave (mmWave) access for addressing a critical weakness of deployed cellular systems, i.e. the capacity to realize enhanced mobile broadband (eMBB) services, as discussed at the World Radio-communication Conference 2015. Recently, mmWave technologies have reached a significant degree of maturity and their state-of-the-art products, operated in the 60GHz unlicensed band, are already in the market. However, there are many unsolved issues for an effective deployment of mmWave 5G RAN. The most critical issue is the impossibility of providing 10 Gigabit Ethernet backhaul everywhere. Meanwhile, Network Function Virtualization (NFV) and Mobile Edge Computing (MEC) have obtained much attention in 5G networks. Especially MEC is considered as a key technology to enable mission-critical applications by allocating storage and computation resources at the edge of the network, so to circumvent the backhaul networks' limited capacity. However, in the case of mobile networks, it is not easy to reallocate computational resources on demand, while meeting the strict latency constraints foreseen in 5G networks. It becomes a critical issue to develop evolutional technologies including a smooth combination of mmWave and MEC in future cellular architecture and the development of associated ecosystems providing new 5G vertical services. This workshop, co-located in ICC 2017, aims to offer an opportunity for academic and industrial researchers to discuss on feasible solutions including evolutional technologies and ecosystems for the realization of 5G and beyond. Topics of interest may include, but are not limited to the following:

- Heterogeneous cellular networks (HetNet)
- Cloud radio access networks (C-RAN)
- 5G & Beyond network architecture
- mmWave communications and new-RAT
- 5G ecosystems
- Proof-of-Concept of 5G systems
- Mobile edge computing in 5G
- Self-organizing networks (SON) and reinforcement learning
- Phantom cell, soft cell, and multi-flow carrier aggregation
- 3GPP, WiFi, and WiGig interworking
- Vertical applications and solutions for 5G
- Horizontal and/or vertical network slicing
- Standards landscape and progress in 5G

- Large scale CoMP for HetNet and dense small cells networks
- Massive MIMO and dynamic cell structuring
- Limited feedback technologies for massive MIMO
- Enhanced channel models for 5G & Beyond
- Backhaul (wired, wireless, millimeter wave, etc.) and networking
- Splitting of user- and control-planes for HetNet
- Mobility management and handoffs for HetNet
- Energy efficient algorithms and green wireless for HetNet
- Network load balancing and smart storage for C-RAN
- Cognitive, cooperative, and reconfigurable networks
- Analysis of future trends for 5G mmWave HetNet
- Storage and computation capability of small cells
- Regulation and standardization for 5G mmWave HetNet

Important Information:

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