SCOPE:
The enormous increase in the mobile connected equipment and mobile subscribers number, in addition to the emergence of data-centric standards such as 3GPP’s LTE-A raises an urgent call to find sustainable solution that permits to fulfil data rate, spectrum, and coverage requirements. However, resources are scarce and the frequency spectrum availability is limited. To address these issues, coordinated multi-point (CoMP) transmission/reception and heterogeneous networks (HetNet) play a key role for future 5G cellular networks. In the HetNet, low power base stations of smaller coverage and/or different frequency bands e.g. above 6GHz are deployed inside the conventional macrocells for traffic offloading. Furthermore, base stations clustering and coordination has been studied as a mean for improving the network energy efficiency, users’ quality of experience, and for delivering cloud services by pooling computational and communication resources. Toward the realization of HetNet in 5G cellular networks, beside research activities in academia, there are considerable industry-wide standardization and regulation efforts in 3GPP RAN working groups, IEEE and ITU-R. While industry efforts have also targeted efficient operation of CoMP and HetNet, fundamental research on the cost-performance tradeoffs of each of these deployments are certainly desirable for both academia and industry. This workshop is co-located with the IEEE 26th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications (http://pimrc2015.eee.hku.hk/). The main objective of the workshop is to offer an opportunity for academic and industrial researchers for promoting HetNet including the emerging mm-wave communication technologies in 5G cellular networks to be more energy efficient and more area spectrally efficient than they are today.

TOPIC AREAS:

- HetNet architecture for 5G and beyond
- Cloud radio access networks (C-RAN)
- Cloud services and virtual operation integration in HetNet
- Energy efficiency vs. QoS tradeoffs in HetNet
- Heterogeneous seamless positioning
- Resource allocation techniques for HetNet
- WiFi offloading and WiFi/WiGig coordination
- Novel waveform design for 5G HetNet
- Self-organizing networks (SON) and reinforcement learning
- Phantom cell, soft cell, and multi-flow carrier aggregation
- 3GPP, WiFi, and WiGig interworking
- Open and closed access operation modes
- Game theoretic techniques for future HetNet
- Coordinated multi-point transmission (CoMP) techniques
- Distributed antenna systems (DAS)
- Limited feedback techniques for CoMP
- License Assisted Access (LAA)
- Large scale CoMP for HetNet and dense small cells networks
- Massive MIMO, active antenna systems and dynamic cell structuring below and above 6GHz
- Enhanced channel models for 5G HetNet
- New fronthaul and backhaul architecture (wired, wireless, millimeter wave, etc.)
- Context aware small cells
- Cloud-based support for HetNet
- 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 information storage for C-RAN
- Cognitive, cooperative, and reconfigurable networks
- Analysis of future trends for HetNet and mm-wave
- Spectrum use and new spectrum sharing models in 5G
- Regulation and standardization for cooperative HetNet
- 5G experimental prototypes or demonstration systems

ORGANIZING COMMITTEE:

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For more information please access the following link
https://sites.google.com/a/icwdn.org/wndcn2015-autumn/

SUBMISSION GUIDELINES:
The manuscript must follow IEEE two-column format. The maximum manuscript length is five (5) pages. All figures, tables, references are included in the page limit. Papers need to be uploaded to EDAS (http://edas.info/N21051). Accepted papers will be published in the IEEE Xplore if presented at the workshop.

IMPORTANT DATES:
Full paper submission: 3 July 2015
Notification of acceptance: 17 July 2015
Final camera ready copy: 24 July 2015
Workshop: 30 August 2015