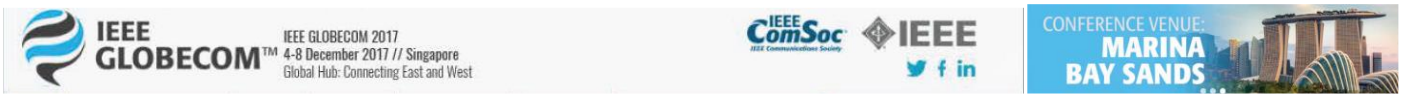


# 6th International Workshop on Emerging Technologies for 5G and Beyond Wireless and Mobile Networks (ET5GB)

In conjunction with IEEE GLOBECOM 2017, Friday December 8, 2017, Singapore, http://www.et5gb.com/

## Workshop Chairs

Tommy Svensson, Chalmers U. of Technology, Sweden
Wei Yu, University of Toronto, Canada
Peiying Zhu, Huawei Technologies, Canada

## Technical Program Chairs

Halim Yanikomeroglu, Carleton University, Canada
Lingjia Liu, University of Kansas, USA
Charlie (Jianzhong) Zhang, Samsung Electronics, USA

## Keynote Speakers

To be confirmed

## Panel Program

To be confirmed

## Technical Program Committee

*Raviraj Adve, University of Toronto*
*İbrahim Altunbaş, Istanbul Technical University*
*Sergey Andreev, Tampere University of Technology*
*Imran Ansari, Texas A&M University at Qatar (TAMUQ)*
*Jonathan Ashdown, US Air Force*
*Hadi Baligh, Huawei Technologies Canada co. Ltd.*
*Ebrahim Bedeer, Carleton University*
*Daniel Calabuig, Universidad Politecnica de Valencia*
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*Julian Cheng, University of British Columbia*
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*Subhrakanti Dey, Uppsala University*
*Qinghe Du, Xi'an Jiaotong University*
*Lutfiye Durak-Ata, Istanbul Technical University*
*Salman Durrani, The Australian National University*
*Ozgur Ertug, Gazi University*
*Carlo Fischione, KTH*
*Ramy Gohary, Carleton University*
*Ekram Hossain, Univ. of Manitoba*
*Salama Ikki, Lakehead University*
*Hazer Inaltekin, Princeton University*
*Toufiqul Islam, Huawei Canada Research Center*
*Omneya Issa, Communications Research Centre Canada*
*Aman Jassal, Huawei*
*Gunes Karabulut Kurt, Istanbul Technical University*
*Witold Krzymień, University of Alberta*
*Michel Kulhandjian, Univ. of Ottawa*
*Yicheng Lin, Huawei Technologies Inc.*
*Liang Liu, University of Toronto*
*Behrooz Makki, Chalmers University of Technology*
*Nicholas Mastronarde, Univ. at Buffalo*
*Hani Mehrpouyan, Boise State University*
*Nader Mokari, Tarbiat Modares University*
*Masoumeh Nasiri-Kenari, Sharif University of Technology*
*Keivan Navaie, Lancaster University*
*Nikolaos Pappas, Linköping University*
*Benoit Pelletier, InterDigital Canada*
*Yinan Qi, Samsung R & D Institute UK*
*S. Mohammad Razavizadeh, Iran University of Science & Technology (IUST)*
*Sandra Roger, Universitat Politècnica de València*
*Frank Schaich, Nokia Bell Labs*
*Karim Seddik, American University in Cairo*
*Nima Seifi, APT College*
*Cong Shen, University of Science and Technology of China*
*Gokul Sridharan, Rutgers University*
*David Steer, Huawei Technologies Co*
*Mehrdad Taki, University of Qom*
*Chintha Tellambura, University of Alberta*
*Milos Tesanovic, Samsung Electronics R&D Institute UK*
*Antti Tölli, University of Oulu*
*Stefan Valentin, Huawei Technologies*
*Joerg Widmer, IMDEA Networks Institute*
*Xiaodong Xu, Beijing University of Posts and Telecommunications*
*Di Yuan, Linköping University*
*Keyvan Zarifi, Huawei Technologies*
*Wolfgang Zirwas, Nokia Siemens Networks GmbH&CoKG*
*Yaning Zou, TU Dresden*

## Important Dates

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|---|---|
| **Full Paper Submission:** | ~~8 July~~ **23 July 2017** |
| Acceptance Notification: | 1 September 2017 |
| Camera-Ready Submission: | 1 October 2017 |
| Workshop: | 8 December 2017 |

Papers should be submitted using EDAS:
https://edas.info/newPaper.php?c=23469&track=85951
Authors should follow Globecom submission guidelines (maximum 6 pages).

## Call for papers

The wireless cellular network has been one of the most successful communications technologies of the last three decades. The advent of smartphones and tablets over the past several years has resulted in an explosive growth of data traffic over the cellular network not seen in previous generations. With the proliferation of more smart terminals communicating with servers and each other via broadband wireless networks, numerous new applications have also emerged to take advantage of wireless connectivity. As the fourth generation (4G) networks, namely 3GPP LTE-A, matured and become great commercial success, the research community is now increasingly looking into 5G technologies both in standardization body such as 3GPP, and in research programs such as 5GPPP in EU Horizon2020.

Fundamental requirements that have emerged for radio access networks in the 2020 and beyond era include: 1) Capabilities for supporting massive capacity and massive connectivity; 2) Support for an increasingly diverse set of services, applications and users being both humans and machines – all with extremely diverging requirements; 3) Flexible and efficient use of all available non-contiguous micro- and millimeter-wave spectrum bands for wildly different network deployment and usage scenarios. These requirements bring a number of challenges to the design of future wireless networks, including the capability of supporting diverse traffic characteristics, massive connectivity due to massive number of devices (including machine-type terminals), and the densification and heterogeneity of such networks.

This workshop will be a venue to brainstorm on and to identify the emerging concepts, technologies, and analytical tools for 5G and beyond cellular and cell-less networks. We aim to bring together leading researchers in both academia and industry, and to provide a forum for researchers from diverse backgrounds to share their views on 5G and beyond and to have an open dialogue on the future of wireless research. The goal is to identify key 5G and beyond technologies that can deliver significant capacity, coverage and user-experience benefits. Topics of interest include, but are not limited to the following:

- Novel radio access network (RAN) architectures
  - Multi-tier HetNets with overlay of high- and low-power nodes
  - Cooperative and coordinated multi-point transmission and reception
  - Distributed antenna systems and cell-less systems
  - Advanced relaying, user terminal relaying, mesh relaying
  - Small cell deployment, femtocells, picocells, moving cells/networks
  - Terminal intelligence, context awareness
- Advanced radio resource management (RRM) techniques
  - Interference management, interference awareness
  - Inter-cell/node interference coordination, congestion management
  - Artificial intelligence/deep learning in wireless communications
- Emerging technologies in physical layer
  - Interference-robust air interface
  - Higher-order massive MIMO, active antenna systems (AAS)
  - Multiuser communications, network information theory
  - Novel modulation and coding schemes, waveforms
- Novel services
  - Enhanced voice and video, telepresence
  - Machine-to-machine (M2M), machine-type communications (MTC)
  - Point-to-point (P2P) / device-to-device (D2D) communications
- mmWave communications
  - Channel characteristics and modeling, feasibility studies
  - Initial access; beamforming, beam tracking; mobility solutions;
  - System design aspects
- Energy efficiency
  - Energy consumption models
  - Joint RF-baseband optimization; end-to-end energy optimization
- Spectrum
  - Aggregation of intra and inter-band carriers for both FDD and TDD
  - Cognitive radio and dynamic spectrum access,
  - Adaptive radio access techniques
- Prototype and test-bed for 5G and beyond technologies