IEEE GLOBECOM 2015
GLOBAL COMMUNICATIONS CONFERENCE, EXHIBITION & INDUSTRY FORUM
6-10 DECEMBER 2015 // SAN DIEGO, CA, USA
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#GLOBECOM

International Workshop on Emerging Technologies for 5G Wireless Cellular Networks
In conjunction with IEEE GLOBECOM 2015, Monday, December 6-10, 2015, San Diego, CA, USA

Workshop Chairs

Wei Yu, University of Toronto, Canada
Tommy Svensson, Chalmers University of Technology, Sweden
Lingjia Liu, University of Kansas, USA

Technical Program Chairs

Halim Yanikomeroglu, Carleton University, Canada
Charlie (Jianzhong) Zhang, Samsung Research America at Dallas, USA
Peiying Zhu, Huawei Technologies, Canada
Huseyin Arslan, Istanbul Medipol University, Turkey

Plenary Speakers

TBD

Panel Program

TBD

Technical Program Committee

Hatem Abou-zeid, Queen's University
Ibrahim Abualhaol, Carleton University
Abdulkareem Adinoyi, Carleton University
Raviraj Adve, University of Toronto
Kelvin Au, Huawei Technologies
Erdem Bala, InterDigital
Anantharaman Balasubramanian, Interdigital Communications
Hadi Baligh, Huawei Technologies
Anass Benjebbour, NTT DoCoMo, Inc.
Shengrong Bu, University of Glasgow
Zaher Dawy, American University of Beirut
Qinghe Du, Xi'an Jiaotong University
Salman Durrani, The Australian National University
Ozgur Ertug, Gazi University
Ramy Gohary, Carleton University
David González G, Aalto University
Mark Hawryluck, Huawei Technologies
Ekram Hossain, University of Manitoba
Hazer Inaltekin, Antalya International University
Mehmet Kemal Karakayali, Bell Labs, Alcatel-Lucent
Witold Krzymien, University of Alberta / TRLabs
Nicholas Mastronarde, University at Buffalo
Hani Mehrpouyan, California State University
Keivan Navaie, Lancaster University
Apostolos Papathanassiou, Intel Corporation
Karim Seddik, American University in Cairo
Jaspreet Singh, SpiderCloud Wireless, Inc.
Cenk Toker, Hacettepe University
Zekeriya Uykan, American University of the Middle East
Stefan Valentin, Huawei Technologies
Xiaodong Xu, Beijing University of Posts and Telecommunications
Rui Yang, Interdigital
Yang Yi, University of Kansas
Yasir Zaki, New York University Abu Dhabi (NYUAD)

Important Dates

Full Paper Submission: **1 July 2015**
Acceptance Notification: 1 September 2015
Camera-Ready Submission: 1 October 2015
Workshop: 6-10 December 2015

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 LTE-A, mature and become great commercial success, the research community is now increasingly looking beyond 4G and into future 5G technologies both in standardization body such as 3GPP, and in research projects such as the EU FP7 METIS. The increased importance of 5G is also evidenced by its central role in the emerging EU Horizon2020 research program in Europe and the recent establishment of the South Korea, China, and Japan joint 5G Forum.

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, application and users – all with extremely diverging requirements for work and life; 3) Flexible and efficient use of all available non-contiguous spectrum for wildly different network deployment 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 cellular 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 what 5G should be and to have an open dialogue on the future of wireless research. The goal is to identify key 5G technology drivers 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
  - HetNets with overlay of high- and low-power nodes
  - CoMP (coordinated multi-point) transmission and reception
  - Distributed antenna systems
  - Advanced relaying, user terminal relaying
  - Small cell deployment, femtocells, picocells
  - Terminal intelligence
  - Energy efficiency
- Advanced radio resource management (RRM) techniques
  - Interference management, interference awareness
  - Inter-cell interference coordination (ICIC, eICIC)
  - Artificial intelligence in wireless communications
  - Congestion management
- Emerging technologies in physical layer
  - Interference-robust air interface
  - Higher-order massive MIMO
  - Active antenna systems (AAS)
  - Full-duplex and flexible duplex systems
  - Multiuser communications
  - Network information theory
  - Novel modulation and coding schemes
  - Beyond OFDM(A)
- Novel services
  - Enhanced voice and video
  - Machine-to-machine (M2M), machine-type communications (MTC)
  - Point-to-point (P2P) / device-to-device (D2D) communications
  - Low-latency services, real-time control applications
  - Telepresence
- mmW technologies
  - Channel characteristics and modeling
  - Feasibility studies
  - System design aspects
- 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 emerging 5G technologies

Papers should be submitted using EDAS (https://edas.info/N20669).

The authors should follow the IEEE guidelines that apply to all GLOBECOM submissions when preparing their contributions (maximum paper length: 6 pages with 10-pt font).

Call for Papers in PDF