

IEEE WCNC2013 Workshop

Call for Papers

MobNet

April 12, 2013
Shanghai China

2013

International Workshop on Mobile Internet: Traffic Modeling, Subscriber Perception Analysis and Traffic-aware Network Architecture Design for Mobile Cellular Systems (MobNet)

For the past few decades, wireless cellular telecommunication has become an indispensable part of our modern society. More than four billion subscribers around the world depend on their mobile phones for their private and professional lives. With the development of technologies in 3G and LTE/4G telecommunication systems, smart phones such as iPhone/Android and emerging interesting applications such as Weibo (twitter) QQ and Facebook, people's demand for multimedia communication, such as image and video, is increasingly growing, so is the quality requirements for multimedia communication in wireless systems. The era of Mobile Internet has coming. China now is the largest mobile market with more than 1 billion subscribers, and mobile Internet subscribers more than 600 million, even more than PC users.

However, mobile Internet has brought many problems – the contradiction of increasing demand for data rate and limited bandwidth of air interface of mobile cellular systems, poor subscriber perception performance or quality of experience (QoE), some Internet apps such as IM/P2P not suitable for transmissions in mobile cellular systems. As a result, mobile Internet traffic analysis, modeling and management and the traffic-aware network architecture design has become a prerequisite for mobile cellular system architecture operation and development for the three major mobile telecom operators in China, including China Mobile, China Telecom and China Unicom. For example, China Mobile proposes the concept of C-RAN aims at addressing the challenges in the mobile Internet era which is to find a green Radio Access Network evolution path through the exploration of cutting-edge technologies like Centralized processing, Collaborative radio, and real-time Cloud computing. China Unicom proposes the architecture of I-Net which is designed to face face the challenges brought by mobile internet applications with prominent characteristic of interactivity. With controllable direct transmission among base stations, I-Net has capability to offload traffics inside the radio access network (RAN) without the processing of core networks, which is expected to reduce the data processing pressure of both core networks and transport networks, and to some extent, reduce the CAPEX and OPEX to improve bit data income per user. This workshop “Mobile Internet: Traffic Modeling, Subscriber Perception Analysis and Traffic-aware Network Architecture Design for Mobile Cellular Systems” is devoted to recent state-of-the-art advances on the research and study in wireless communications systems and networks. The workshop will be held together with IEEE WCNC 2013 on **April 12, 2013 in Shanghai, China.**

We are seeking papers that present original and unpublished contributions addressing various aspects of
2013 IEEE WCNC Workshop

mobile Internet traffic modeling, subscriber perception analysis and traffic-aware network architecture design for mobile cellular systems. Possible topics of interest include, but are not limited to:

- Traffic analysis, modeling for mobile Internet
- User behavior and user pattern modeling
- Intelligent traffic management and optimization
- Traffic flow analysis
- Subscriber perception analysis and Quality of Experience (QoE) design
- New mobile cellular network architecture design for mobile Internet
- Optimization of small cells in Heterogeneous networks based on traffic characteristics
- User convergence for energy saving in cellular systems

Any other papers related to mobile Internet analysis, tools and solutions design, as well as user perception/quality of experience study in wireless networks are all welcome.

This workshop accepts only novel, previously unpublished papers in the area of mobile Internet traffic analysis, user perception design. Prospective Authors are encouraged to submit a 5-page IEEE conference style paper (including all text, figures, and references) through submission system (<http://xxx>). All accepted and presented papers will be published together with IEEE WCNC 2013 proceedings and available on IEEE eXplore database and indexed by Engineering Information (EI).

For the detail on the manuscript preparation, please refer to the link:

<http://xxx>

Important Dates

Submission deadline: 1 October 2012

Notification of acceptance: 31 November 2012

Camera-ready paper due: 22 January 2012

Workshop date: 12 April 2013

General Co-Chairs:

TBD ()

TPC Co-chairs:

Xing Zhang (BUPT, China)
Zhaobiao Lv (Director of Wireless Lab, China Unicom Research Institute, China)

TPC members: (to be added)

Geyong Min (University of Bedfordshire, UK)
Laurie Cuthbert (Queen Mary, University of London, UK)
Yue Gao (Queen Mary, University of London, UK)
Jianquan Wang (Director of Network Center, China Unicom Research Institute, China)
Lei Sun (Research Fellow of Wireless Lab, China Unicom Research Institute, China)
Fanggang Wang (The Chinese University of Hong Kong, China)
Lei SHU (Osaka University, Japan)
Weifeng Sun (Dalian University of Technology, China)
Nancy Alonistioti (National & Kapodistrian University of Athens, Greece)
Jinjing Jiang (Texas A&M University, USA)
Yuli Fu (South China University of Technology, China)

Xiangyu Yu (South China University of Technology, China)
Yi Liu (Guangdong University of Technology, China)
Zhenyu Liu (Guangdong University of Technology, China)

Brief CV of the organizers:

Xing Zhang

Xing ZHANG was born in 1980, he received his BS and Ph.D. degree in Electronic Engineering (both with highest honors) from BUPT in 2002 and 2007, respectively. Since July 2007, he has been with the School of Information and Communications Engineering (SICE), BUPT, where he is currently an Associate Professor. Prof. Zhang is the PI or Co-PI of several major national funds and projects, e.g., National 973 project, National Science Funds of China (NSFC), Specialized Research Fund for the Doctoral Program of Higher Education, etc. Currently Prof. Zhang's projects include one National 973 project (2012-2016), two NSFC projects (2011-2013, 2011-2014, respectively). Prof. Zhang received the Distinguished Paper Award from OPNETWork, Microsoft Fellowship, the nomination for 100 Best Doctor's Dissertations of China, etc.

Prof. Zhang's research interests are in wide areas of green communications and energy efficient design, heterogeneous wireless networks, cognitive radio and cooperative communications, traffic modelling and cross-layer design. Since 2006, Prof. Zhang has published/translated six books and more than 40 papers in these areas including IEEE Transactions on Wireless Communications, IEEE Transactions on Vehicular Technology, IEEE Communications Letters, IEEE Signal Processing Letters, etc. He served as TPC members for a number of major international conferences, including IEEE ICC, Globecom, Chinacom, etc. Email: zhangx@ieee.org, hszhang@bupt.edu.cn.

Zhaobiao Lv

Zhaobiao Lv received his Ph.D. degree from BUPT in 2006. Dr. Lv is now the supervisor of Department of Wireless Technology, China Unicom Research Institute. His research interests include the wide area of wireless mobile communications, including LTE/LTE-Advanced, Network Optimization and Planning, New Network Architecture, etc. In response to the significant impact and the severe challenges on the conventional mobile network architecture due to the rapid development of mobile internet business, in 2011 Dr. Lv proposed the new network architecture – I-Net, which is a new type of mobile network architecture. I-Net is based on the base station direct communication coinciding with the trend of general information exchange and resource sharing. It aims at local traffic offload between the core network (CN) and the radio access network (RAN), as well as the end-to-end user interaction with effective management and control in RAN. Email: lvzb7@chinaunicom.cn