



Next Generation Networking (NGN) Symposium

Symposium Co-Chairs

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The Next Generation Networking (NGN) Symposium is one of the 12 important symposia within the IEEE ICC 2015 to be held from 8-12 June in London, UK. Themed “Smart City & Smart World,” with its proximity to Tech City, the fastest growing technology cluster in Europe, this flagship conference of IEEE Communications Society will feature a comprehensive technical program. IEEE ICC 2015 will also include an exceptional Industry Forum & Exhibition program including business panels and keynote speakers as well as Tutorials and Workshops. We invite you to submit your original technical papers to this NGN symposium and also welcome you to participate in this event. Accepted and presented papers will be published in the IEEE ICC 2015 Conference Proceedings and submitted for inclusion in IEEE Xplore®/IEEE Digital Library. Full details of submission procedures are available at <http://www.ieee-icc.org/2015>.

Scope and Topics of Interest

Advances in communications and networking technologies have reached unprecedented heights, while many new challenges and opportunities are still emerging. Of particular importance to next generation networks are the emerging topics in the area of software defined networks (SDN), network virtualization, mobile cloud, network heterogeneity, scalability, services and applications, security, manageability, dependability, and performance predictability. Furthermore, many salient issues are affecting next-generation broadband wireless networks, such as, handover/mobility management, cross-layer activities, self-organization, and energy efficiency operations. The NGN Symposium at IEEE ICC 2015 aims to consolidate and disseminate the latest developments and advances in these emerging focus areas. This symposium invites participation from both academic and industry researchers working in the area of next-generation networking technologies, services, architectures, and protocols. The overall goal is to present the latest snapshot of the cutting-edge research as well as to shed light on future directions in this area.

Authors are invited to submit papers presenting novel technical studies as well as broader position and vision papers comprising hypothetical/speculative scenarios. The Next Generation Networking Symposium solicits original contributions in, but not limited to, the following topical areas:

- Addressing and naming with the presence of mobility and portability
- Centralized-RAN and Cloud-RAN architectures
- Cloud-based networking
- Content-based networking: caching, distribution, load balancing, resiliency
- Converged networks and applications, including NGN telecom converged management mechanism for RAN and mobile backhaul
- Energy-efficient green communications
- Future Internet and next-generation networking architectures
- Heterogeneous multi-layer and multi-domain wireless-wireline internetworking
- High speed and parallel processing architectures for next generation routers and switches
- Internet economics, pricing, accounting, and growth modelling
- Internet of Things (IoT), M2M, D2D, MTC

- Internet signalling and service enabling protocols, including SIP, NSIS, HTTP, and RTSP/RTP
- Internet survivability and network resilience strategies
- Mobile cloud
- Mobile security: device, application, and data
- Mobile/wireless content distribution
- Network and service virtualization
- Next-generation access networking
- Next-generation anomaly, intrusion, and attack detection/prevention
- Next-generation flow management: resource sharing, congestion control
- Next-generation Internet applications and services, including interactive media, voice and video, games, and immersive applications
- Next-generation IP multimedia subsystem: architecture and design
- Next-generation network management and control
- Next-generation VoIP protocols and services
- Operational and research issues with IPv6
- Overlay and peer-to-peer (P2P) networking
- Packet classification and forwarding mechanisms at ultra-high link rates (terabits)
- Policy-based mechanisms and high-speed firewall technology
- Quality of Service (QoS) and Quality of Experience (QoE) in next-generation networks
- Self-protection and self-organization networking
- Software Defined Networking (SDN)
- Software Defined Radio (SDR)
- Traffic measurement, analysis, modelling, visualization, and engineering

Submission Guidelines

Prospective authors are invited to submit original technical papers by the deadline 15 October 2014 for publication in the IEEE ICC 2015 Conference Proceedings. All submissions should be written in English with a maximum paper length of Six (6) printed pages (10-point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge if accepted).

Standard IEEE Transactions templates for Microsoft Word or LaTeX formats found at
<http://www.ieee.org/portal/pages/pubs/transactions/stylesheets.html>

Alternatively you can follow the sample instructions in template.pdf at
<http://www.comsoc.org/confs/globecom/2008/downloads/template.pdf>

Only PDF files will be accepted for the review process and all submissions must be done through EDAS at
<https://edas.info/newPaper.php?c=17709>

Co-Chairs Biographies

Shiwen Mao received Ph.D. in electrical and computer engineering from Polytechnic University, Brooklyn, NY. Currently, he is the McWane Associate Professor in the Department of Electrical and Computer Engineering, Auburn University, Auburn, AL, USA. His research interests include wireless networks and multimedia communications, with current focus on cognitive radio, small cells, 60 GHz mmWave networks, free space optical networks, and smart grid. He is on the Editorial Board of IEEE Transactions on Wireless Communications, IEEE Internet of Things Journal, IEEE Communications Surveys and Tutorials, Elsevier Ad Hoc Networks Journal, and Wiley International Journal on Communication Systems. He received the 2013 IEEE ComSoc MMTC Outstanding Leadership Award and the NSF CAREER Award in 2010. He is a co-recipient of The IEEE ICC 2013 Best Paper Award and the 2004 IEEE Communications Society Leonard G. Abraham Prize in the Field of Communications Systems.

Ying-Dar Lin is Professor of Computer Science at National Chiao Tung University in Taiwan. He received his Ph.D. in Computer Science from UCLA in 1993. He served as a visiting scholar at Cisco Systems in San Jose during 2007-2008. Since 2002, he has been the founder and director of Network Benchmarking Lab (NBL), which reviews network products with real traffic. He also cofounded L7 Networks Inc. in 2002, later acquired by D-Link Corp. His research interests include QoS, network security, deep packet inspection, and embedded hardware/software co-design. His work on "multi-hop cellular" was the first along this line, and has been cited over 600 times and standardized into IEEE 802.11s, IEEE 802.16j, IEEE 802.15.5 and 3GPP LTE-Advanced. He is an

IEEE Fellow and IEEE Distinguished Lecturer. He serves on the editorial boards of several journals and magazines and guest-edited several special issues. He published a textbook "Computer Networks: An Open Source Approach", with Ren-Hung Hwang and Fred Baker (McGraw-Hill, 2011).

Zhili Sun is a Professor (Chair of Communication Networking) with the Centre for Communication Systems Research (CCSR), University of Surrey, UK. He received his PhD in Computer Science from Lancaster University, UK in 1991. He has been principal investigator and technical coordinator in many research projects funded by European Framework Programme, UK Electronics and Physical Sciences Research Council (EPSRC), European Space Agency (ESA) and industries. He has published over 150 papers in International journals including many papers in the IEEE Transactions, magazines, Journals and conferences and 3 books as author or co-author. He has also served as TPC committee members in many international conferences including the IEEE ICC and Globecom, and been ERSRC College Member, Reviewer and Panel member. His research interests include IP networking protocols and technologies, satellite communications and networking, Internet and teletraffic engineering, network security, mobile and wireless communications and mobile operating systems