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Gateway to a Connected World

Call for Papers
Next-Generation Networking and Internet Symposium

Symposium Co-Chairs:

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Scope and Motivation:

There have been unprecedented advances in developing technologies to enable the next generation networks, while many new challenges and opportunities are emerging. Of particular importance to the next generation networks are the emerging topics such as software defined networking (SDN), network function virtualization (NFV), information-centric networking (ICN), cloud and fog computing, network heterogeneity, scalability, protocols, services and applications, security, manageability, dependability, quality of experience for added services and performance predictability. Furthermore, many salient issues are affecting next-generation broadband wireless networks, such as network densification, spectrum expansion, many techniques to enhance spectrum efficiency, self-organization, energy efficiency operations, mobile cloud computing, and mobility management and indoor localization. The Next Generation Networking and Internet (NGNI) Symposium at IEEE Globecom 2018 aims to consolidate and disseminate the latest developments and advances in these emerging focus areas. This symposium invites participation from academic, industry, and government researchers working in the broad area of next-generation networking and Internet, including technologies, theories, services, architectures, and protocols. The NGNI Symposium will provide a forum for researchers to get together, to present a latest snapshot of the cutting-edge research, as well as to shed light on future directions in this exciting area.

Main Topics of Interest:

Authors are invited to submit papers presenting novel technical studies as well as broader position and visionary papers in the area of next generation networking and Internet. The NGNI 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, Cloud-RAN, and Fog-RAN architectures
- Cloud-based and fog-based networking
- Content-centric networking: caching, naming, routing, privacy, resiliency, traffic

engineering, congestion control
- Converged networks and applications
- Data center network architectures and performance
- Free space optical (FSO) networks and Visible light communication (VLC)
- 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
- Indoor localization and navigation
- Information Centric Networking (ICN)/ Named Data Networking (NDN)
- Intent-based network control and management
- Internet economics, pricing, accounting, and growth modelling
- Internet of Things (IoT), M2M, D2D, MTC
- Internet survivability and network resilience strategies
- Integrated networking, storage and computing
- Mobile Cloud Computing (MCC) and Mobile Edge Computing (MEC)
- Mobile security: device, application, and data
- Network Function Virtualization (NFV)
- Networking flying vehicles such as UAVs and drones
- Next-generation access networks
- 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 networking protocols
- Next-generation network management and control
- Open Communities, Open API, Open Source
- Operational and research issues with IPv6
- Overlay and peer-to-peer (P2P) networking
- Packet classification and forwarding mechanisms at ultra-high link rates (terabits)
- Quality of Service (QoS) and Quality of Experience (QoE) in next-generation networks
- Resource orchestration in next-generation networks
- Routing and Switching
- Self-protection and self-organization networking
- Software Defined Networking (SDN)
- Software Defined Radio (SDR) and Cognitive Radio networks
- Traffic measurement, analysis, modelling, visualization, and engineering
- Vehicular networking (IoV/V2V/V2I)