Next Generation Networking and Internet Symposium

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SCOPE AND MOTIVATION

We are witnessing an exciting period in next generation Internet-networking research that has to deal with many innovations triggered by high-performance computing, programmable network equipment, and computing-harvesting next generation services. Leveraging three enablers, namely Software-Defined Networking (SDN), Network Function Virtualization (NFV), and Mobile Edge Computing (MEC), communication networks can be more agile handling network functions implemented as virtualized machines. Communication devices can also host very advanced applications, and datacenters can be pervasively distributed down to network access points. Many salient issues are affecting next-generation networks, such as, network densification, network slicing, mobile cloud computing, mobility management, cross-layer activities, self-organization, security, performance predictability, and energy efficiency operations.

The Next Generation Networking and Internet (NGNI) Symposium at IEEE Globecom 2020 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 methodologies, techniques, 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, and to foster technical debate on future directions in this exciting area.

TOPICS OF INTEREST

- Addressing and naming with the presence of mobility and portability
- Centralized-RAN, Could-RAN, and Fog-RAN architectures
- Cloud-based networking
- Content-centric networking: caching, naming, distribution, load balancing, resiliency, traffic engineering, and congestion control
- Converged networks and applications, including NGN telecom converged management mechanism for RAN and mobile backhaul
- Data center network architectures and performance
- 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 survivability and network resilience strategies
- Mobile Cloud Computing (MCC) and Multi-access Edge Computing (MEC)
- Mobile security: device, application, and data
- Mobile/wireless content distribution
- Network and service virtualization
- Networking for Cloud and Fog computing
- Network Slicing
- 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 virtual/augmented reality, interactive media, voice and video, games, and immersive applications
- Next-generation IP multimedia subsystem: architecture and design
- Next-generation network management and control
- NFV Management and Orchestration
- 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
- Quality of Service (QoS) and Quality of Experience (QoE) in next-generation networks
- Resource orchestration in next-generation networks
- Self-protection and self-organization networking
- Software Defined Networking (SDN), Software Defined Radio (SDR), and Network Function Virtualization (NFV)
- Traffic measurement, analysis, modeling, visualization, and engineering

IMPORTANT DATES

Paper Submission: 15 April 2020

Notification: 25 July 2020

Camera Ready and Registration: 1 September 2020

SUBMISSION INSTRUCTION

All papers for technical symposia should be submitted via EDAS through the following link: https://edas.info/N27054