IEEE ICC™

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Empowering Intelligent Communications

CALL FOR PAPERS

SELECTED AREAS IN COMMUNICATIONS SYMPOSIUM

ACCESS NETWORKS AND SYSTEMS TRACK

Track Chair

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Scope and Topics of Interest

Access networks of today terminate on a plethora of home devices catering to services from voice over IP (VoIP), IPTV, conventional and high-definition video and a variety of multimedia. The evolution towards multi-service platforms and the emergence of a spectrum of new IP-based applications are fuelling more demand for bandwidth. This challenge demands innovative solutions in wired and wireless transmission media and access systems that enable technologies to cater to high user density, challenging and varied propagation channels and services requiring varied Quality of Service (QoS) requirements.

The essential cornerstones of a broadband system are the transmission media, that may be wired or wireless, sensor/antenna nodes, access protocols and the backbone network infrastructure. Transmission media and systems could be either (1) wired access such as twisted-pair copper based systems (xDSL), coaxial-cable plants, fiber based solutions (passive and active optical networks), power-lines systems (PLC) or (2) wireless systems with unique transmission waveforms such as Wi-Fi, WiMAX, LTE, and upcoming 5G wireless technologies. Innovation in transmission media and waveforms go hand in hand with innovation in associated access protocols that address efficient trade-offs between demand and available resources. Most importantly future broadband access systems may be a hybrid combination of wired and wireless systems that would require a unification of expertise and innovation from several standpoints, making system integration a tremendous task. Understanding the performance characteristics of all the technological ingredients of tomorrow's access networks/systems is critical for delivering the desired QoS to end users.

The aim of the Access Systems and Networks (ASN) Track of the Symposium on Selected Areas on Communications is to provide a forum that brings together scientists and researchers from all over the world to present their cutting-edge innovations in all aspects of the field ranging from wired to wireless access systems and networks. Papers on practical applications and R&D results from industry and academic/industrial collaborations are particularly encouraged.

To ensure complete coverage of the advances in this field, the ASN Track of the SAC Symposium solicits original contributions in, but not limited to, the following topical areas:

- Twisted pair copper systems and networks; xDSL
- Hybrid Fiber Coaxial (HFC) systems and networks
- FTTx and Passive/Active Optical systems and networks (PONs and AONs)
- Cable TV systems and networks
- Bluetooth, Wi-Fi, WiMAX, and LTE Access

- Channel estimation for wireless access systems
- Novel waveforms and physical layer schemes for 5G wireless access
- Novel radio network dimensioning and scheduling for 5G wireless access
- Advances in antenna array signal processing for improved capacity, QoS and coverage
- Antenna/sensor array beamforming and sensor fusion for enhanced wireless access
- Integrated wired/wireless access
- 5G front/mid-haul networks
- Optical-Wireless integration and radio over fiber
- Free-Space Optical-Access (components, systems, and networks)
- Optical access protocols
- Digital satellite access technology
- New technologies and architectures in access and aggregation nodes
- Service convergence and multimedia networks
- Quality of Service (QoS): characterization and provisioning
- Access network survivability and security
- Power Line Communication (PLC)
- Synchronization (time & frequency) support in the access
- Billing and management aspects
- Standardization

Submission Guidelines

The IEEE ICC 2019 website provides full instructions on how to submit papers and the paper format.

You will select the desired symposium/track when submitting papers.

The paper submission deadline is October 14, 2018.

Only PDF files will be accepted for the review process and all submissions must be done through EDAS at http://edas.info/