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CALL FOR PAPERS

Intelligent Communications for Shared Prosperity

SAC Symposium: Cloud/Edge Computing, Networking and Storage

Co-Chairs

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Scope and Motivation

Capabilities of the cloud systems have emerged to encompass three essential organizational requirements: computation, storage and networking. Employment of the cloud systems made data storage and processing scalable, flexible and resilient. On the other hand, edge and fog computing allows storage and computation to be handled closer to edge devices, enabling Internet of Things (IoT) and mobile applications meet unprecedented performance. However, there are many important technical difficulties to tackle, including reliable distributed storage for both big data applications and small devices, high-speed networking in complex and heterogeneous environments, secure virtualization of compute, storage and network resources, information processing and computing with varied quality of service requirements, development of algorithms and protocols for better system integration and computing services, the support for emerging applications including the IoT, Artificial Intelligence, Augmented Reality, Blockchain, Big Data, Robotics, and more. The objective of this track is to bring together the collective/individual efforts of the academia and the industry to improve information systems in many unpredictable ways. Theory, algorithms and system technologies that can substantially impact existing cloud, fog and edge computing systems or lead to novel future developments are particularly encouraged.

Topics of Interest

The Cloud/Edge Computing, Networking and Storage track seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Cloud and edge/fog computing
- Cloud data center architecture and networking
- Cloud-hosted Blockchain infrastructures and services
- Cloud management, orchestration and automation
- Cloud federation, traffic characterization and bridging
- Cloud system reliability modelling and data endurance

- Energy-efficient designs and resource optimization for edge/cloud networking and storage systems
- Machine learning, data mining for cloud and edge/fog computing
- Design and analysis of algorithms and system architectures for networking and computing for cloud, edge and fog computing
- Channel and noise characterization for flash memories and emerging memory technologies
- Coding for storage channels and distributed storage networks
- Coding for distributed storage networks
- Circuit design for coding, detection and signal processing for data storage
- Novel and emerging storage media
- Novel storage system architecture
- Information theory for data storage
- Coding and signal processing for data storage systems
- In-storage and in-memory computing
- Data analytics for distributed computing and IoT
- Decentralized/Distributed storage in cloud and fog/edge computing systems
- Distributed ledger technologies for smart system design (smart cities, grids, energy, etc.)
- Elasticity and scalability of cloud resources
- Intra and inter-cloud networking
- Mobile networking and computing for cloud/fog/edge
- Security and privacy in the cloud/fog /edge infrastructure, services and storage
- Serverless computing and FaaS
- Software defined storage and networking
- SDN-enabled cloud data centers
- Virtualization of storage, networking and computing

Biographies of Co-Chairs

Ilhem FAJJARI is researcher and project leader on cloud-native network function orchestration in Orange Innovation. From 2012 to 2014, she worked as research project leader on network virtualization in VirtuOR Startup. In 2012, she obtained the PhD in computer sciences with honours from Pierre & Marie Curie University (Paris 6) in France. Her main research interests include telco cloud, network function virtualization, orchestration and optimization of communication networks.

Paolo Amato is with Micron Italy, where he is Distinguished Member of the Technical Staff and System Architect for Automotive. He investigates storage and memory architectures for Automotive systems, focusing on UFS. He is an expert on statistical methods, error correcting codes, and security. He has authored about 50 papers and filed more than 100 patents.

How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers and important deadlines are posted at <https://globecom2023.ieee-globecom.org/>