IEEE Global Communications Conference
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Accelerating the Digital Transformation through Smart Communications

IEEE GLOBECOM® 2022

CALL FOR PAPERS AND PROPOSALS

Selected Areas in Communications
Cloud Computing, Networking and Storage

Symposium Co-Chairs

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Scope and Motivation

Data storage is at the core of the information technology revolution, from the smartphones to data centers in the cloud. Flash memories, new non-volatile memory technologies, and distributed storage network technologies are combined to provide ubiquitous access to data and computing closer to storage devices. However, these new and existing systems pose novel problems of storage density, reliability, efficiency, security and privacy. Data detection, communications, signal processing and coding techniques are the foundation for solving these problems. While storage channel models are fundamentally communication channels and networks, the new devices and system architectures create new theoretical challenges in order to utilize their potential.

On the other hand, the new computation technologies, such as big data analytics, machine learning, and blockchain, have great influence on the cloud. These challenges enforce cooperation of various players in the Cloud system, each of which focuses on a different segment such as computing, network, applications, and systems. This track covers fundamental theoretical aspects of the data storage, cloud computing, edge/fog computing, and networking.

Topics of Interest

The cloud track seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Channel and noise characterization for flash memories and emerging memory technologies
- Coding for storage channels and distributed storage networks
- Coding for distributed storage networks
- Information theory for data storage
- Coding and signal processing for data storage systems

- In-storage and in-memory computing
- Theoretical concepts of cloud-based storage fog and edge computing
- Information and communication theory-based approaches for decentralized storage i n cloud and fog/edge computing systems
- Security and privacy in the cloud and fog/edge computing, networking and storage
- Energy-efficient designs and resource optimization for storage systems and edge/cloud networking
- High throughput signal processing for data storage
- Circuit design for coding, detection and signal processing for data storage
- Novel and emerging storage media
- Signal processing for cloud and fog/edge computing, networking and storage systems
- Design and analysis of algorithms and system architectures for networking and computing for cloud, fog and edge computing
- Machine learning, data mining for cloud and fog/edge computing
- Data-driven methodology and architecture

Important Dates

Paper Submission: 15 April 2022
Notification: 25 July 2022
Camera Ready and Registration: 1 September 2022

How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers are provided on the IEEE Globecom 2022 website: https://globecom2022.ieee-globecom.org/