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Communications Technologies 4Good

Call for Papers and Proposals

# SAC Symposium: Cloud Computing, Networking, and Storage Track

## 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 form the foundation for solving these problems. While storage channel models are fundamentally communication channels and networks, the new devices and system architectures create new technical challenges that need to be addressed before their potential can be fully realized.

In parallel, new computation technologies, such as big data analytics, machine learning, and blockchain, are having a significant 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 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
- 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 in 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 and architectures
- 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
- Inter and Intra-cloud networking
- SDN/NFV/VNF
- Cloud Native Function
- Cloud/Edge Networking and computing
- Cloud management, orchestration, automation
- Network Softwarization
- Generative AI for cloud/edge systems
- LLM/SLMs and Future AI for computing, networking and storage systems

## 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://icc2025.ieee-icc.org/>

The authors of selected papers from this symposium will be invited to submit an extended version of their work for fast-track review and possible publication in the IEEE Open Journal of the Communications Society.