Call for Papers for
Symposium on Selected Areas in Communications
Data Storage Track

Scope and Motivation:

Data storage is at the core of the information technology revolution, from the smartphones in our hands to data centers in the cloud. Hard disk drives, which have long been the pillar of data storage technologies, have recently been joined by flash memories, and new types of non-volatile memory devices are already emerging on the technology horizon. In addition, massive distributed storage networks have arisen to provide ubiquitous access to data. These new and existing systems pose novel problems of storage density, reliability, efficiency and security. Signal processing and coding techniques are the foundation for solving these problems. While storage channel models are fundamentally communication channels, the unique demands of recording and storage create new challenges to maintain the pace of growth. The goal of this Data Storage Track is to bring together researchers to present novel and significant results on emerging data storage applications.

Main Topics of Interest:

- Signal processing and detection methods for storage channels
- Signal processing for shingled writing and bit-patterned media recording
- Channel or noise characterization for magnetic recording, flash and emerging memory technologies
- Error correcting and modulation codes
- Two-dimensional intersymbol-interference channels
- Information theory for storage
- Circuit design for coding, detection, and read/write channels
- Error-correcting codes for storage channels
- Coding techniques for distributed storage networks
- Security and data compression for cloud storage and storage devices
- Novel and emerging storage media: Optical, holography, PCM, MRAM, RRAM, etc.
- Energy-efficient designs for storage
- Architecture and design of large-scale storage subsystems based on new non-volatile memories

Sponsoring Technical Committees:

- Data Storage Technical Committee

Symposium Co-Chair:

O. Ozan Koyluoglu, University of Arizona

TPC Members:

Suayb Arslan, MEF University

Kui Cai, Singapore Univ. of Technology and Design

Lara Dolecek, UCLA

Mehmet Fatih Erden, Seagate Technology

Shayan Garani, Indian Institute of Science, Bangalore

Kiran K. Gunnam, HGST Research, Western Digital

Jeongseok Ha, KAIST, Korea

Mustafa N. Kaynak, Micron Technology

Soheil Mohajer, University of Minnesota

Jaekyun Moon, KAIST, Korea

Kenneth Shum, The Chinese University of Hong Kong

Ying Tai, SanDisk Corporation

Bane Vasic, University of Arizona

Tony Xia, Avago Techologies

Eitan Yaakobi, Technion