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Call for Papers for Selected Areas in Communications Symposium
Data Storage Track
(SAC-5 CDS)

Symposium Track Chair

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Submissions must be done through EDAS at: https://edas.info/newPaper.php?c=22646&track=81061
The paper submission deadline is October 14, 2016.

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

Biography

Onur Ozan Koyluoglu received the B.S. degree in electrical and electronics engineering from Bilkent University, Ankara, Turkey, in 2005, and the M.S. and Ph.D. degrees in electrical and computer engineering from The Ohio State University, Columbus, OH in 2007 and in 2010, respectively. From October 2010 to January 2011, he was with the Wireless Communication Theory Research Group, Alcatel-Lucent Bell Labs, Holmdel, NJ, as a research intern. From January 2011 to August 2013, he was a postdoctoral fellow at The University of Texas at Austin, Austin, TX. Since August 2013, he has been an assistant professor at the Department of Electrical and Computer Engineering, The University of Arizona. His current research interests are in the areas of information and coding theory, communications, statistics, and neuroscience with special emphasis on Networks, Security and Privacy, Cloud Computing, Storage Systems, and Neural Coding.