

IEEE International Conference on Communications  
IEEE ICC 2014  
Communications: The Centrepiece of the Digital Economy  
10-14 June 2014, Sydney, Australia

## Selected Areas in Communications Symposium Data Storage Track

### **Symposium Co-Chair**

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The 2014 IEEE International Conference on Communications (ICC) will be held in the beautiful city of Sydney, Australia between 10 and 14 June 2014. The theme of this flagship conference of IEEE Communications Society for 2014 is "Communications: The Centrepiece of the Digital Economy." The conference will feature a comprehensive technical program including twelve Symposia and a number of Tutorials and Workshops. IEEE ICC 2014 will also include an attractive expo program including keynote speakers, and Industry Forum & Exhibitions (IF&E). We invite you to submit your original technical papers, industry forum, workshop, and tutorial proposals to this event. Accepted and presented papers will be published in the IEEE ICC 2014 Conference Proceedings and in IEEE Xplore®. Full details of submission procedures are available at <http://www.ieee-icc.org/2014>.

### Scope and Topics of Interest for Data Storage Track

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, flash memories, new non-volatile memory technologies, as well as distributed storage networks combine to provide ubiquitous access to data. But 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. Researchers and engineers are invited to submit novel and practical results relating to aspects of signal processing and coding for data storage in areas including, but not limited to:

- Equalization, detection and filtering for data storage systems
- Timing recovery and write pre-compensation techniques
- Channel and noise characterization for magnetic recording, flash memories and emerging memory technologies
- Error-correcting codes for storage channels and distributed storage networks
- ECC decoding techniques
- Information theory for storage
- Network coding techniques for distributed storage networks
- Signal processing for shingled writing, heat-assisted magnetic recording and bit-patterned media
- WOM codes, modulation codes and run-length limited codes
- Circuit design for coding, detection, and read/write channels
- Security for cloud storage and storage devices
- Novel and emerging storage media: optical, PCM, MRAM, RRAM, etc.
- Energy-efficient designs for storage

### Submission Guidelines

Prospective authors are invited to submit original technical papers by the deadline 15 September 2013 for publication in the IEEE ICC 2014 Conference Proceedings and for

oral or poster presentation(s). All submissions should be written in English with a maximum paper length of Six (6) printed pages (10- point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge if accepted).

Standard IEEE Transactions templates for Microsoft Word or LaTeX formats found at <http://www.ieee.org/portal/pages/pubs/transactions/stylesheets.html>

Alternatively you can follow the sample instructions in [template.pdf](http://www.comsoc.org/confs/globecom/2008/downloads/template.pdf) at

<http://www.comsoc.org/confs/globecom/2008/downloads/template.pdf>

Only PDF files will be accepted for the review process and all submissions must be done through EDAS at

<http://edas.info/>

**Brian M. Kurkoski** is an Associate Professor at the Japan Advanced Institute of Science and Technology (JAIST) in the School of Information Science. From 2007 to 2012 he was an Associate Professor at the University of Electro-Communications in Tokyo. He was a JSPS postdoctoral fellow from 2004 to 2006. He received the M.S. and Ph.D. degrees from the University of California San Diego in 2000 and 2004, respectively, and the B.S. degree from the California Institute of Technology in 1993. Since 2010, he has been an associate editor for *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*. He has been an organizer, technical program co-chair and organizing committee member for recent and upcoming conferences on information theory and data storage. His research interests include coding theory, information theory, communication theory and their application to storage systems.