



## Symposium on Data Storage and Cloud Computing

### Symposium Co-Chairs

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The 2015 IEEE International Conference on Communications (ICC) will be held in London, UK from 8-12 June 2015. Themed "Smart City & Smart World," with its proximity to Tech City, the fastest growing technology cluster in Europe, this flagship conference of IEEE Communications Society will feature a comprehensive technical program including twelve Symposia and a number of Tutorials and Workshops. IEEE ICC 2015 will also include an exceptional Industry Forum & Exhibition program including business panels and keynote speakers. We invite you to submit your original technical papers, and industry forum, workshop, and tutorial proposals to this event. Accepted and presented papers will be published in the IEEE ICC 2015 Conference Proceedings and submitted for inclusion in IEEE Xplore®/IEEE Digital Library. Full details of submission procedures are available at <http://www.ieee-icc.org/2015>.

### Scope and Topics of Interest

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. In addition, the session will be also include cloud computing and storage related topics. Cloud Computing will focus on networking challenges in cloud computing. Specifically, cloud computing is an emerging computing paradigm that enables infrastructure, platform and applications to be delivered as services over ubiquitous network access. Users can, thus, access the services anywhere and anytime over the Internet and widely available wireless networks. It follows that networking is crucial to facilitate the wide deployment of the cloud computing paradigm. While studies on computing and storage aspects of cloud computing are actively being pursued, investigation on networking challenges and issues in cloud computing have just gained sufficient attention from our research community.

To ensure complete coverage of the advances in this field, the selected areas in Communications Symposium – Data storage and Cloud Computing Track solicits original contributions in, but not limited to, the following topical areas:

- 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
- DSP/ECC for flash-based data storage systems
- Channel coding/equalization for flash-based data storage systems
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- Energy-efficient designs for storage
- 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.
- Network attached storage solutions
- Digital signal processing for cloud computing and cloud storage systems
- RAID for cloud storage systems
- Energy-efficient designs for storage
- Data center networking modeling and analysis
- Layer 2/3 network technologies for cloud computing
- Load balancing technologies in cloud computing
- Scalable, congestion-free and loop-free routing in data center networking
- Network resource management in inter- and intra- cloud
- Network-aware service orchestration between mobile device and cloud
- Transport layer issues for cloud computing
- Scalable, secure, green and fault-tolerant data center networking
- Networking Measurements for cloud computing
- Networking issues in delivering IaaS, PaaS and SaaS cloud services
- Network virtualizations and software defined networking technologies for cloud computing
- Network management and control algorithms for cloud computing
- Network security and privacy for cloud computing
- Emerging Network-as-a-Service Architecture and Performance
  - Network economics for cloud computing

### Submission Guidelines

Prospective authors are invited to submit original technical papers by the deadline 15 October 2014 for publication in the IEEE ICC 2015 Conference Proceedings. 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 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**  
<https://edas.info/newPaper.php?c=17733&track=57943>

### Co-Chairs Biographies

Dr. Xinde Hu is currently System Architect at SanDisk. His responsibility includes creating, designing, and evaluating innovative system architecture concepts and implementations for the next generations of non-volatile memory based storage systems. Dr. Xinde Hu received his Ph. D in Electrical and Computer Engineering from Carnegie Mellon University (CMU). Prior to joining SanDisk, Dr. Hu worked for STEC and STMicroelectronics inc. as a system architect.

Dr. Xinde Hu has authored more than a dozen technical papers on the area of coding/signal processing for data storage systems and has 20+ patent applications pending. His paper, "Error Floor Estimation of Long LDPC Codes on Partial response Channels," was awarded the best student paper award in signal processing & coding for data storage (awarded by IEEE Communications Society). He is currently serving as Vice Chairman of the IEEE Data Storage Technical Committee (DSTC). And he is an organizer of the annual Flash Memory Summit conference and serves on the committee for key IEEE conferences.