



IEEE Communications Society

**Data Storage Technical Committee
Meeting at ICC 2017**

Tuesday, 23-May, 12:30-14:00, Hyatt Regency Etoile, Batignolles

Brian M. Kurkoski, Chair

Agenda

DSTC

Data Storage Technical Committee
IEEE Communications Society

- **Committee Mission and Officers**
- **Data Storage Tracks at ICC/Globecom**
 - ICC 2019 in Shanghai, China. Xinmiao Zhang, Track Chair nominee
 - Globecom 2018 in Abu Dhabi, United Arab of Emirates. Eitan Yaakobi, Track Chair nominee.
 - ICC 2018 in Kansas City, Missouri, USA. Shayan Garani Srinivasa, Track Chair.
 - Globecom 2017 in Singapore. Cai Kui, Singapore University of Technology and Design, Track Chair
 - ICC 2017 in Paris, France. Ozan Koyluoglu, Track Chair
- **JSAC Issue (September 2016) Report**
- **2015 Best Paper Awards in Data Storage**
- **Recognition of Outgoing Officers**
- **Technical & Educational Activities Meeting (TEAC) Report**
- **Web Site**
- **Discussion**

IEEE ComSoc DSTC

DSTC

Data Storage Technical Committee
IEEE Communications Society

▪ **Goals and activities:**

- Technical committee under IEEE Communications Society to promote data storage related technologies and their applications.
- The Data Storage Technical Committee (DSTC) promotes advances in state-of-the-art communications, signal processing and coding technologies to enhance data storage systems, in order to achieve high storage densities, fast access, and low error rates.
- Activities: sponsoring / co-sponsoring technical sessions at major conferences, organizing workshops and tutorials, and organizing special issues of IEEE journals and magazines.
- Bridge between storage industry and universities to engage research collaboration

▪ **Members**

- 25 Active Members
- 210 Members

2017-2018 Officers



Chair

Brian Kurkoski

Japan Advanced
Institute of Science
and Technology



Vice-Chair from Industry

Xinmiao Zhang

Western Digital Corp



Vice-Chair from Academia

Shayan Garani
Srinivasa

Indian Institute of
Science



Secretary

Jeongseok Ha

Korea Advanced
Institute of Science
and Technology



Treasurer

Qi Qi

Avago Technologies

ICC 2017

- 21-25 MAY 2017 // PARIS, FRANCE
- Selected Areas in Communications (SAC) Data Storage Track Chair: O. Ozan Koyluoglu (U. of Arizona)
- Updates:
 - 7 accepted papers (out of 18 submissions)
 - Monday, May 22 14:05–14:45
 - Tuesday, May 23 16:00–17:30 (SAC–DS-01, regular oral session, Room 361)

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 Technologies)
- Eitan Yaakobi (Technion)



ICC 2017 Interactive Session

Globecom 2017 - Singapore

- *Cai Kui, Track Chair*
- Call for papers submitted to the TPC chair Dr. Ying-Chang Liang on 14th October 2016.
- Paper submission and review status
 - Initially 21 papers submitted, 3 papers appeared to be out of scope and have been re-assigned to other tracks/symposia
 - The 18 papers have been assigned at least 3 reviewers each. Reviews reports expected by 1/6/2017
- **TPC members**
 - Benjamin Belzer, Washington State Univ.
 - Fatih Erden, Seagate Technology
 - Anxiao (Andrew) Jiang, Texas A&M University
 - Borja Peleato, Purdue University
 - Iryna Andriyanova, ENSEA/Univ. of Cergy-Pontoise/CNRS
 - Jeongseok Ha, KAIST
 - Thomas Mittelholzer, IBM Zurich Research Laboratory
 - [B. V. K. Vijaya Kumar](#), CMU
 - Xinmiao Zhang, Sandisk
 - Qi Qi, Broadcom
 - [Lara Dolecek](#), UCLA
 - Alexandre Graell i Amat, Chalmers University of Technology
 - Roy Cideciyan , IBM Zurich Research Laboratory
 - J. R. Cruz, University of Oklahoma
 - Suayb Arslan, MEF University
 - Ravi Motwani, Intel
 - Ying Tai, SanDisk
 - Bane Vasic, University of Arizona
 - [Edward Au](#), Huawei Technologies
 - Qin Huang, Beihang University
 - Haitao (Tony) Xia, Broadcom
 - Eitan Yaakobi, Technion

ICC 2018

- 20-24 MAY 2018 // Kansas City, Missouri, USA
- Data Storage track is selected as part of the Selected Areas in Communications (SAC) Symposium
- Track Chair: Shayan Garani Srinivasa
- Deadlines:
 - Technical Symposia Papers: 15 October 2017
 - Tutorial Proposals: 15 September 2017
 - Workshop Proposals: 15 July 2017
- Updates:
 - Call for papers submitted to the TPC chair Yi Qian on 12 May 2017

Globecom 2018

- Abu Dhabi, United Arab of Emirates.
- Track Chair nominee: Eitan Yaakobi

ICC 2019

- Shanghai, China.
- Track Chair nominee: Xinmiao Zhang

JSAC Special Issue

- *IEEE Journal on Selected Areas on Communications*
Special Issue on Channel Modeling, Coding and Signal Processing for Novel Physical Memory Devices and Systems
- Totally 19 papers were accepted.
- They fell into the following categories:
 - Flash memories: Device characterization, Modeling, Coding, Capacity Analysis, System Level Optimization (10 papers)
 - TDMR related papers (4 papers)
 - Coding for RRAMs (1 paper)
 - Fast decoders for futuristic memories (1 paper)
 - Spatially coupled EG codes (1 paper)
 - Novel Signal Processing for Existing Channels (2 papers)

GUEST EDITORS: **Shayan Garani Srinivasa** (Indian Institute of Science), **Tong Zhang** (Rensselaer Polytechnic Institute), **Ravi Motwani** (Intel Corporation), **Haralampos Pozidis** (IBM Zurich) and **Bane Vasic** (University of Arizona)

2015 Best Paper Award

- **2015 IEEE Data Storage Best Paper Award**
 - Awardees: Haitao Xia, Lu Lu, Seongwook Jeong, Lu Pan and Jun Xiao for their paper “Signal processing and detection for array reader magnetic recording system,” published in *IEEE Transactions on Magnetics* in June 2015.
- **2015 IEEE Data Storage Best Student Paper Award**
 - Awardees: Ryan Gabrys, Eitan Yaakobi and Lara Dolecek for their paper “Correcting Grain-Errors in Magnetic Media,” published in *IEEE Transactions on Information Theory* in May 2015.

The jury comprises of five members balancing the areas between physical and distributed data storage.

- Kannan Ramchandran, Jeongseok Ha, Brian M. Kurkoski, Jae Moon and Chao Tian

Congratulations

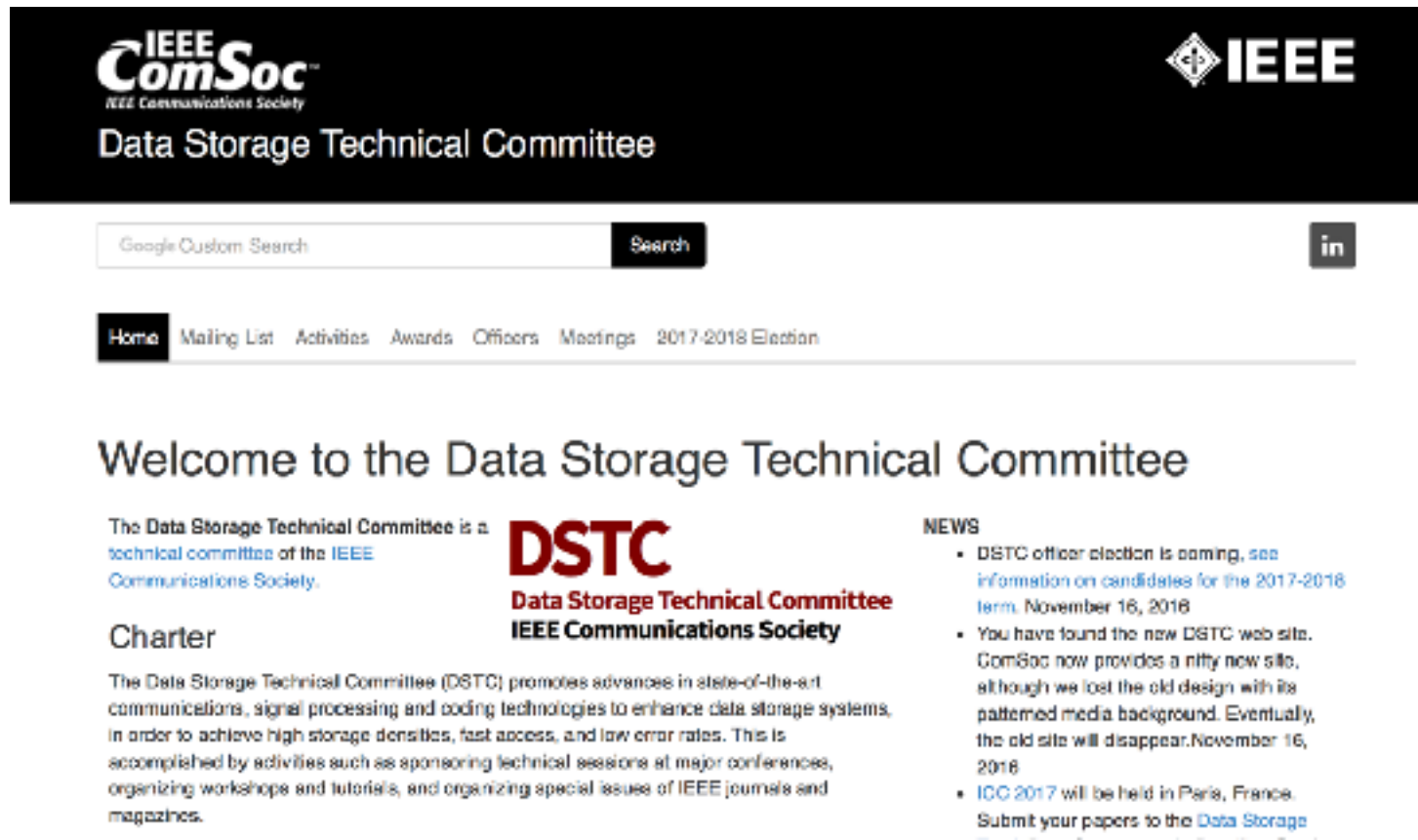
- **ICC 2017 Best Paper Award (CT Symposium)**
 - Jy-yong Sohn, Beongjun Choi, Sung Whan Yoon, Jaekyun Moon, “Capacity of Clustered Disturbed Storage”
 - Communication Theory Symposium
 - Wednesday, May 24, 16:00

TEAC Meeting

- TEAC = Technical and Education Actives Committee
- May 23, 2017
- **ComSoc ESB - Education Services Board.** Summer School in Italy and New Mexico, USA. Education Track and ICC/GC targets young professionals and PhD students. Panel discussion, how to write a proposal. 24 May 2017, please attend. Tutorial series on 5G
- **TSB Technical Services Board.** Summary of recertification progress. Wants to help TC to be more active.
 - ComSoc requires that the technical committees, including our DSTC, periodically go through a recertification procedure. The main point is to fill out a questionnaire, to demonstrate that our committee is active.
 - TC-Specific Awards: Common award policy desired. Best Paper Award, Service Award, PhD Thesis Award;. CT has Early Career Award. Various committees have various awards.
 - DSTC has no service award, suggestion to add. TAEC-level discussion to add a PhD dissertation award.
- **Emerging Technologies Committee** . JSAC issues, identity new emerging topics. Disbanded some committees and Few recent new topics. Few submissions for "Fog emerging committee"

DSTC Web Site

- Now hosted on ComSoc web site, WordPress-based
- <http://dstc.committees.comsoc.org>
- Google “DSTC IEEE”
- Send updates to Jeonseok Ha



The screenshot shows the homepage of the IEEE ComSoc Data Storage Technical Committee. At the top left is the IEEE ComSoc logo, and at the top right is the IEEE logo. Below the logos is the text "Data Storage Technical Committee". A search bar with the text "Google Custom Search" and a "Search" button is located below the header. To the right of the search bar is a small "in" icon. Below the search bar is a navigation menu with the following items: Home, Mailing List, Activities, Awards, Officers, Meetings, and 2017-2018 Election. The main content area features a large heading "Welcome to the Data Storage Technical Committee". To the left of this heading is a paragraph: "The Data Storage Technical Committee is a technical committee of the IEEE Communications Society." To the right of this paragraph is the DSTC logo, which consists of the letters "DSTC" in a large, bold, red font, with "Data Storage Technical Committee" and "IEEE Communications Society" in a smaller, black font below it. To the right of the DSTC logo is a "NEWS" section with a list of three items: "DSTC officer election is coming, see information on candidates for the 2017-2018 term. November 16, 2016", "You have found the new DSTC web site. ComSoc now provides a nifty new site, although we lost the old design with its patterned media background. Eventually, the old site will disappear. November 16, 2016", and "ICC 2017 will be held in Paris, France. Submit your papers to the Data Storage".

Recognition of Outgoing Officers

- Bane Vasic, University of Arizona
 - Chair 2015–2016
- Xinde Hu, SanDisk Corporation
 - 2013–2016 Vice Chair from Industry
- Kui Cai, Singapore University of Technology and Design
 - 2015–2016 Vice-Chair from Academia
 - 2011–2014 Treasurer

Become a Member

DSTC Member = On the DSTC mailing list

Subscribe

- To subscribe to the DSTC mailing list, send a message to:
- listserv@listserv.ieee.org

with message body:

- subscribe dstc Your Name, Your Affiliation