

IEEE Information Theory Society Newsletter



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President's Column

Aylin Yener

Serving as the president of a professional society is an honor like no other. Simply put, it means the members put their trust in you to lead the entire organization. You also get to be the face of the society within the technical leadership of the IEEE. When the society is an intellectual powerhouse like ours, and is recognized as such, the pride one feels is simply overwhelming. So, the first of the four president's columns you will (hopefully) read this year starts with the expression of my sincere gratitude to you, the membership: It is truly my honor to be your president.



It is also a privilege for me to be able to express my thanks to all of our volunteers who have been serving the society tirelessly in a number of posts. In doing this, I would like to explain a bit the way our society is governed. Most of you are familiar with the board of governors, whose meeting minutes you find in the newsletter three times a year. This body is mostly elected by the membership directly (remember to fill in the ballots in the fall!), and includes also the appointed members: our treasurer, our secretary, and our conference committee chair. Additional members include the editors in chief of our two journals, and the executive editor of the transactions. Elected members of our board of governors serve three-year terms (up to two terms) and the appointed members serve typically three years. The officers, i.e., the second vice president, vice president, president, junior past president and the senior past president, are elected by the board from the set of elected members and serve one year each in sequence. This shift register model works well with duties shared between officers with respect to running the organization. Although the president's term is a quick one year (as opposed to many technical societies with two-year terms), as an officer, one gets to make an impact for five years, and sometimes even more (see next sentence). Our sincere gratitude goes to Frank Kschischang, who served in the two past president roles not once but twice and has spearheaded a significant revision in our bylaws last year along with Elza Erkip. Elza, of course led the society in 2018,

and served as the junior past president last year, when Emina Soljanin was the president. Both Elza and Emina are serving as officers this year, and deserve our gratitude for their continued service. Our thanks are also to the board members who completed their terms Alexander Barg (as the editor in chief of the Transactions), Andrew Barron, Michele Wigger and Greg Wornell. We thank Steven Hanly for his service on the board as well.

As in every relatively flat organization, committees run many of the functions of the society. Some members of these committees come from the board as ex-officio members and chairs, but most are volunteers from the community. These tireless volunteers include the nominations and appointments committee (which selects and recommends most of the volunteer positions in the society including the board candidates), the conference committee, the diversity and inclusion committee and the various award committees. The rosters are listed on our webpage itsoc.org. I would like to acknowledge all of our volunteers here for their service to our society and call on our members to continue to serve. Every one of us has a day job, and every one of us does this because this is our professional home and this is our community. This remains to be the case even if our interests and talents bring opportunities to contribute to adjacent fields.

When I started my service to the society as the student committee chair back more than 12 years ago, I could not have dreamed that it would lead to this post. But then again, many things that happened since then in my involvement with our society have been pleasant surprises. The more volunteers I worked with, at any level, the more I have observed that the level of dedication to scholarship and the society was matched only with the friendship and collegiality offered. Being part of this professional society sometimes felt more like being at home than anywhere else. Although our belonging

(continued on page 16)

From the Editor

We start the first issue of the newsletter this year with the column of the new president of our society, Aylin Yener. We congratulate all the members of our community who have recently received prestigious awards and honors. We are all honored as a community!

We have reports on the Van der Meulen Seminar, the founding of Information Theory Society Chapter in Guangzhou and the SYSU Workshop on Polar Coding Theory and Applications. We also have an update on our new journal, the IEEE Journal on Selected Areas in Information Theory (JSAIT), and a call for nominations for the first Editor in Chief of the IEEE BITS, our society's upcoming magazine. We continue with the BoG minutes from its last meeting in the fall. With sadness, we conclude with two articles celebrating the life and works of Jørn Justesen and Piet Schalkwijk who passed away recently.

Salim El Rouayheb



As a reminder, announcements, news, and events intended for both the printed newsletter and the website, such as award announcements, calls for nominations, and upcoming conferences, can be submitted at the IT Society website <http://www.itsoc.org>. Articles and columns can be e-mailed to me at salim.elrouayheb@rutgers.edu with a subject line that includes the words "IT newsletter."

The next few deadlines are:

April 10, 2020 for the issue of June 2020.

July 10, 2020 for the issue of September 2020.

October 10, 2020 for the issue of December 2020.

Please submit plain text, LaTeX, or Word source files; do not worry about fonts or layout as this will be taken care of by IEEE layout specialists. Electronic photos and graphics should be in high resolution and sent as separate files.

Salim El Rouayheb

IEEE Information Theory Society Newsletter

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Awards

Congratulations to the members of our community that have recently received prestigious awards and honors and to those that have been recently elevated to the grade of IEEE fellow!

We are all honored as a community!

2020 Japan Prize: Robert G. Gallager

Robert G. Gallager will be awarded the 2020 Japan Prize for his contributions to information theory, including the development of error-correcting codes that are used in 5G systems. The award recognizes **Gallager's** pioneering contribution to information and coding theory and the citation mentions the wide impact that low-density parity-check codes have had on digital communications and digital storage systems.

IEEE Control Systems Award: Anders Lindquist

The IEEE Control Systems Award that recognizes outstanding contributions to control systems engineering, science, or technology sponsored by the *IEEE Control Systems Society* is awarded to **ANDERS LINDQUIST** (FIEEE)—Zhiyuan Chair Professor, Shanghai Jiao Tong University, Shanghai, China. The award is for his “contributions to optimal filtering, stochastic control, stochastic realization theory, and system identification”.

IEEE Fourier Award for Signal Processing: Alfred O. Hero, III

The IEEE Fourier Award For Signal Processing is awarded for an outstanding contribution to the advancement of signal processing, other than in the areas of speech and audio processing—sponsored by the *IEEE Circuits and Systems Society* and the *IEEE Signal Processing Society*—to **ALFRED O. HERO, III** (FIEEE)—John H. Holland Distinguished University Professor, University of Michigan, Ann Arbor, Michigan, USA. The award is for his “contributions to the foundations of statistical signal processing with applications to distributed sensing and performance benchmarking”.

IEEE Leon K. Kirchmayer Graduate Teaching Award: Shu Lin

The IEEE Leon K. Kirchmayer Graduate Teaching Award that recognizes inspirational teaching of graduate students in the IEEE fields of interest—sponsored by the *Leon K. Kirchmayer Memorial Fund* is awarded to **SHU LIN** (LFIEEE)—Adjunct Professor, Department of Electrical and Computer Engineering, University of California at Davis, California, USA. The award is for “transforming graduate education in the fields of coding theory, information theory, and digital communications”.

IEEE Koji Kobayashi Computers and Communications Award: Balaji Prabhakar

IEEE Koji Kobayashi Computers and Communications Award that recognizes outstanding contributions to the integration of computers and communications—sponsored by *NEC Corporation*—is awarded to **BALAJI PRABHAKAR** (FIEEE)—VMware Founders Professor of Computer Science, Professor of Electrical

Engineering and Computer Science and Graduate School of Business, Stanford University, Stanford, California, USA. The award is for “contributions to the theory and practice of network algorithms and protocols, in particular Internet routers, data centers, and self-programming networks”

2020 Newly Elevated IEEE Fellows:

Amir Avestimehr

University of Southern California, USA.

for contributions to the analysis of communication and computation over wireless networks

Chong-yung Chi

National Tsing Hua University, Taiwan.

for contributions to convex analysis and optimization for blind source separation

Wan Choi

KAIST, South Korea.

for contributions to the analysis and design of multi-cell communication systems

Octavia Dobre

Memorial University, Canada.

for contributions to the theory and practice of signal intelligence and emerging wireless technologies

Christoforos Hadjicostis

University of Cyprus, Cyprus.

for contributions to distributed and discrete event systems

Philippe Jacquet

Paris-Saclay, France.

for contributions to wireless protocols and communication networks

Eduard Jorswieck

TU Braunschweig, Germany.

for contributions to resource allocation in wireless interference networks

Markku Juntti

University of Oulu, Finland.

for contributions to multiuser and multiantenna communications

Panagiotis Papadimitratos

Royal Institute of Technology, Sweden.

for contributions to wireless mobile network security and privacy

Christ Richmond

Arizona State University, USA.

for contributions to adaptive array processing algorithms

Aaron Wagner

Cornell University, USA.

for contributions to distributed data compression

Richard Wesel

UCLA, USA.

for contributions to channel coding and reliable communication

Report on the 8th Van der Meulen Seminar

Organizers: Frans M.J. Willems and Alex Alvarado

The information and Communication Theory Lab (ICT Lab) at the Eindhoven University of Technology (TU/e) organized the 8th Van der Meulen Seminar on December 13, 2019. The focus of the Seminar was neural networks in communication systems, and there were 40 registered participants from different European countries (France, Sweden, UK, The Netherlands, Luxemburg, and Belgium).

The program included a hands-on workshop on TensorFlow and a technical program that consisted of 3 invited talks. The speakers were Laurent Schmalen (Karlsruhe Institute of Technology, Germany), Christian Häger (Chalmers University of Technology, Sweden), and Jakob Hoydis (Nokia Bell Labs, France). The social program included a networking lunch and post-seminar drinks at the TU/e.

The workshop was sponsored by the IEEE Benelux Chapter on Information Theory and by the IEEE Photonics Benelux Chapter. The program, presentations, and photos can be found at: <https://www.sps.tue.nl/ictlab/event/vandemeulen2019/>

The organizing team was Frans M.J. Willems, Alex Alvarado, PhD students Y. C. Gültekin and K. Wu, and MSc students Kadir Gümüş and R. Büttler.



Report on the Founding of IEEE Guangzhou Section Information Theory Society Chapter and SYSU Workshop on Polar Coding Theory and Applications



The SYSU (Sun Yat-sen University) Workshop on Polar Coding Theory and Applications took place on November 29, 2019 at Sun Yat-sen University Guangzhou historic campus Old Mathematical School Building, which resides between the University Library and Xing Pavilion at the center axis. This is the first activity organized by IEEE Guangzhou Section Information Theory Society Chapter for celebrating the founding of the Chapter and facilitating the communications of researchers in the areas of information and coding theory. The IEEE Guangzhou Section Information Theory Society Chapter submitted its application in May 2019 and was approved in October 2019. It is the third IEEE Information Theory Society Chapter in mainland China, following the legacy of Beijing Chapter and Chengdu Chapter. Mission of the Chapter is to engage the collaborations of the researchers and engineers working on information and coding theory in China, especially in the Guangdong-Hong Kong-Macao Great Bay Area. The Chapter now has 20 members. The Chapter is organized by Chair, *Li Chen*, Vice Chair, *Xiao Ma*, Secretary, *Congduan Li*, and Treasurer, *Shiqiu Liu*.

For this one-day workshop, seven coding theorists were invited to deliver in-depth talks on polar coding theory and applications, each lasting for 50 minutes. It was hoped that students of the area were able to benefit from interacting with participants of the workshop.

The workshop was chaired by Li Chen, and had more than 60 participants. It started with a ceremony for the founding of the Chapter. Welcoming speeches were given by the Chair of IEEE Guangzhou Section, *Derong Liu*, the member of Board of Governors of

the IEEE Information Theory Society, *Stark Draper*, the Chair of Information Theory Society of the Chinese Institute of Electronics, *Baoming Bai*, representative of the IEEE ITSoc Beijing Chapter, *Kai Niu*, representative of the IEEE ITSoc Chengdu Chapter, *Yang Yang*, and representative of the IEEE ITSoc Hong Kong Chapter, *Linqi Song*.

After the opening ceremony, the workshop started and had following seven talks on the day.

Speaker	Title
Baomin Bai	Discussions on Some Problems in Polar Coding Systems (Polar编码系统中的几个有关问题探讨)
Kai Niu	On Design and Decoding of High Performance Polar Codes (高性能极化码的构造与译码)
Liping Li	Survey on Polar Code Construction
Xiao Ma	On the Design of Rate-loss-free Concatenated Polar codes (无码率损失的极化码级联方案设计)
Huazi Zhang	AI Coding and Future Challenges of Polar Coding
Zhiliang Huang	On the Successive Cancellation Decoding of Binary Polar Codes with Medium Kernels
Ting-Yi Wu	Joint Source-Channel Polar Codes



During lunch break, a tour to the residence of Professor Yinke Chen was organized. Professor Yinke Chen was a Chinese historian, classic literature writer, linguist and poet. Besides, lunch and coffee breaks were provided on the day.

The organizing committee and members of the Chapter sincerely hope that this SYSU Workshop can proliferate the research on polar codes within the Guangdong-Hong Kong-Macao Great Bay Area of China and beyond.



Update on ITsoc's New Journal: The IEEE Journal on Selected Areas in Information Theory (JSAIT)

Andrea Goldsmith

JSAIT is the Information Theory Society's first new journal since the inaugural issue of the *IRE Transactions on Information Theory* was published in 1953. The society's desire to expand its technical scope, incubate new research directions, catalyze connections with other disciplines, and highlight new and emerging applications formed the impetus for the new journal. To achieve these goals, JSAIT publishes special issues focusing on the intersections of information theory with fields such as machine learning, statistics, biology, finance, computer science, and physics. There will also be special issues for topics of broad and significant interest that are firmly within Information Theory, such as new types of codes, short-packet

communication, network information theory, quantum information theory, information theoretic security, and other emerging topics. Each special issue will have at least one tutorial aimed to benefit people in our field and to forge connections with people in other fields that information theory has impacted or can impact.

JSAIT has a different structure than our *Transactions*, with a Steering Committee that selects the Editor-in-Chief (EiC) and provides oversight, Senior Editors that help formulate and oversee special issues, and a Guest Editorial Team for each special issue that creates the call for papers, processes submitted papers, and crafts the

final composition of the issue. JSAIT also has an Industrial Advisory Board comprised of prominent industry researchers and practitioners. This Board advises JSAIT on topics of interest and areas where information theoretic results and insights might provide a competitive edge in company products and services. JSAIT has two other important differences with the Transactions: a limit of 15 printed pages for each article (supplementary material may be posted on Xplore), and a tight timeline of five months from paper submission to final decision due to the nature of special issues.

The approval of a new journal by the IEEE is a lengthy and detailed process, requiring both technical and financial justification. The JSAIT Steering Committee, consisting of members Robert Calderbank, Muriel Médard, H. Vincent Poor, and Ruediger Urbanke along with Chair Jeffrey Andrews, deftly navigated this process, resulting in JSAIT's IEEE approval in November 2018. The Steering Committee named me as the inaugural EiC the following month. A stellar and diverse team of Senior Editors and Industrial Advisors signed up to join the new journal by April 2019. JSAIT's Senior Editors are Richard Baraniuk, Giuseppe Caire, Emmanuel Candes, Alex Dimakis, Yonina Eldar, Negar Kiyavash, Rob Nowak, Alon Orlitsky, David Tse, Andreas Winter, Aylin Yener, and Raymond Yeung. It's Industrial Advisory Board consists of Corinna Cortes, Merouane Debbah, Gerhard Fettweis, Kristin Lauter, Nambi Seshadri, Nadia Fawaz, Tom Richardson, and Amin Shokrollahi.

With its managerial structure in place, JSAIT was off to the races to create its first special issue for publication in early 2020. The focus of this inaugural JSAIT issue is deep learning, in particular its mathematical foundations and its application to information science. Lead Guest Editor of this issue is Alex Dimakis with a Guest Editorial Team consisting of Richard Baraniuk, Sewoong Oh, Negar Kiyavash, and Rebecca Willett. The call for papers closed October 15 with a whopping 52 submissions received. This was considered an excellent outcome for a brand new journal. The first round of reviews is near completion at the time of this writing, and the issue is on track to appear in late spring 2020.

JSAIT's second special issue is on quantum information science with a particular focus on communication and computing. Lead

Guest Editors Emina Soljanin and Andreas Winter along with the Guest Editorial Team of Bei Zeng, John Calsamiglia, Mario Berta, Rahul Jain, and Debbie Leung are leading the charge for this special issue. The deadline for papers is in a few weeks, February 15, and we expect an excellent response given the importance and timeliness of this topic. JSAIT's third special issue will be on statistical inference and estimation, with lead Guest Editor Devavrat Shah and Guest Editors Guy Bresler, John Duchi, Po-Ling Loh, Ryan Tibshiran, Yihong Wu, and Christina Lee Yu. The Call for Papers is being drafted now. Papers for this special issue will be due May 1, 2020.

The success of JSAIT depends upon a continuing flow of quality proposals for special issues. Proposals may be developed by anyone having interest and expertise in a technical or interdisciplinary area within the scope of JSAIT. That includes everyone reading this article, so please consider proposing a special issue. Details on how to submit a proposal can be found on JSAIT's website itsoc.org/jsait. The EiC and Senior Editors are happy to answer questions about proposals and help with the preparation.

I would like to take this opportunity to thank the Steering Committee as well as the ITSoc BoG for entrusting me to launch JSAIT. I am an entrepreneur at heart, so launching new things is something I love to do. Launching a new journal for the professional society where I have spent my entire academic career is a great honor. It is also deeply rewarding due to the positive impact I hope it will have on ITSoc. I want to also thank the Steering Committee as well as my Senior Editors and Industrial Advisors for sharing their sage wisdom and deep experience on all issues large and small that the journal has faced in its early days. The Guest Editorial teams for these first special issues have been dream teams; they have been instrumental in JSAIT's successful launch by picking important and timely topics for their respective issues, crafting compelling Calls for Papers, and managing all logistics of paper handling and decision making.

In closing, I would like to solicit your ideas and recommendations for maximizing the impact of JSAIT. I can be reached by email at andrea@ee.stanford.edu.

CALL FOR NOMINATIONS FOR THE FIRST EDITOR IN CHIEF
OF IEEE BITS THE INFORMATION THEORY MAGAZINE

Nomination deadline: April 20, 2020

We are seeking nominations for the first Editor in Chief (EiC) of IEEE BITS, who will, together with the Steering Committee and the Editorial Board, ensure its smooth operation and success. The Magazine is administered by a Steering Committee, whose members are D. Costello, E. Erkip, C. Fragouli, U. Mitra and W. Spankowski.

EiC Appointment: The appointment will be for three years, starting July 1st 2020. The EiC will be selected by the Steering Committee and approved by the Information Theory Society BoG.

EiC Responsibilities: (1) Oversee the operation of the Magazine in line with its proposed scope and provide guidance for special issues, feature articles, and columns. (2) Advocate for the Magazine and coordinate with the Information Theory Society BoG and the IEEE (3) Select Senior Editors and Area Editors (to be approved by Steering Committee), and (4) Approve special issues.

Scope of the Magazine: IEEE BITS the Information Theory Magazine publishes content that includes tutorials and review articles, historical surveys, and columns. The tutorial and review articles cover both traditional and emerging areas associated with Information Theory research and are written in a style accessible to readers outside the specialty of the article. The historical surveys are intended to highlight technological advances of current interest that have been significantly impacted by past Information Theory research. The columns include topics such as perspectives from funding agencies, startups and industry developments, puzzles and cartoons, and reporting on events of interest to our audience. The mission of the Magazine is to increase the visibility of the high quality content associated with the area of Information Theory, make it more accessible to a wide audience of scientists, engineers, researchers, and educators, and highlight the rich interdisciplinary work that leverages Information Theory.

Qualifications: We are seeking a motivated and creative candidate, with a strong record of contributions in Information Theory and related fields and demonstrated excellence in previous leadership and editorial activities.

Nomination Process: Please email your nomination to C. Fragouli (christina.fragouli@ucla.edu), including the nominee's key qualifications and a summary of relevant experience. Self-nominations are encouraged.

IEEE Information Theory Society Board of Governors Meeting

Location: New Brunswick, New Jersey

Date: Date: October 5th, 2019

Time: The meeting convened at 9:00 am EST; the meeting adjourned at 2.45 pm EST.

Meeting Chair: Emina Soljanin

Minutes taken by: Lara Dolecek

Meeting Attendees: Sasha Barg (*), Matthieu Bloch, Suhas Digvavi, Alex Dimakis (*), Lara Dolecek, Stark Draper (*), Elza Erkip, Christina Fragouli, Tara Javidi, Frank Kschischang, Vijay Kumar (*), Matt LaFleur (#), Prakash Narayan (*), Henry Pfister (*), Parastoo Sadeghi (*), Emina Soljanin, Antonia Tulino (*.#), Daniela Tuninetti, Aaron Wagner, Gus Wagner (#), Michelle Wigger (*), Greg Wornell (*), Aylin Yener (*), and Wei Yu.

Remote attendees are denoted by (*); non-voting attendees are denoted by (#).

Business conducted between meetings: The following votes were conducted by email between the Feb. 2019 Information Theory Society (ITSoc) Board of Governors (BoG) meetings and this meeting:

- 1) In August 2019, BoG voted on the new magazine name. After a run off, the following name was elected: *bits: The IEEE Information Theory Magazine*.
- 2) In August 2019, two new AEs for IT Transactions were approved: Miguel Rodrigues and Ronen Talmon.
- 3) In September 2019, Christina Fragouli was elected for the position of the 2020 2nd Vice President, Wei Yu was elected for the positions of the 2020 1st Vice President, and Aylin Yener was elected for the positions of the 2020 President.

At 9:00 am local time, ITSoc president Emina Soljanin called the meeting to order.

Attendees introduced themselves. Emina thanked everyone for coming in person and remotely, and members from Region 10 for dialing in. Emina next went over the agenda and explained why it was in the presented order.

Motion: A motion was made to approve the agenda. The motion passed.

President's Report—Emina Soljanin [item 1]

President Soljanin presented President's Report. First, she discussed Elections & Nominations. She reminded that the BoG elections will close on November 27, 2019. Within term vacancy election will be held, due to resignation of one BoG member. The two candidates for the N&A committee are

Giuseppe Caire and Emanuele Viterbo. Both of these nominations obey the rules on the selection process. Emina next provided updates from various committees, including External Nominations Committee that has arranged a nomination of Katalin Marton for the Emmy Noether Lecture; the Online Committee that now has two new members; and the ad-hoc Movie Committee that now has been working with the Shannon movie director on distribution. The movie already has 4 successful screenings. On behalf of the Online Committee, Brian Kurkoski thanked the Board for recommendations. It was recognized that the Shannon movie screenings have been very popular. The screening in Queens was in the middle of the week and under heavy rain, yet nonetheless, the turnout was excellent. The same was reported for the screening in Switzerland. Andrea Goldsmith reported that the screening in California at the California Science Museum was also outstanding: there were 700 attendees in a room with capacity of 400.

Next, Emina reported on the status of JSAIT. The deadline for the 1st issue on deep learning has been extended to October 15th, 2019 with the expected publication in April/May 2020. The deadline for the second issue on quantum information science is currently set to February 1st, 2020 with the expected publication in July/August 2020. It was recognized that the current timeline is rather optimistic.

Emina concluded her presentation by going over possible topics for further discussion, including best practices for ensuring adequate appearances at conferences and for protecting and defending IT community from cyberbullying.

She also reminded the attendees to submit the travel reimbursement forms from today's meeting to Matt LaFleur.

Schools Subcommittee Report—Stark Draper [item 2]

The next presentation was given by Stark Draper who provided an update on behalf of the ITSoc School Committee. Stark thanked Wei and Parastoo for serving as the other two committee members. Stark stated that there were already 4 ITSoc Schools held this year and that 4 are being planned for 2020, of which 3 are already approved. He added that the India School in 2019 had its first female keynote speaker, Michelle Effros of Caltech. He conveyed that when putting together their proposal (which was approved at the July 2019 BoG meeting) the East Asian IT school asked for clarification regarding providing honoraria for speakers. Stark noted that India has a norm of providing speaker honorarium. A BoG member stated that this has been a topic for a while, and that the IT Society generally does not have funds specially allocated for honoraria. Yet, if this item is deemed essential for the success of the conference, then honoraria can be given as long as the funds for the honoraria come from non-ITSoc sources. Another BoG member suggested that one way to cover the cost would be that the speaker be given a choice of the honorarium or the travel

reimbursement since the latter can be budgeted for using other sources. Some BoG members also stated that at their universities it is common practice to offer the choice of the honorarium or travel reimbursement for invited seminar speakers, and that these are typically capped at 1k\$. Stark concluded that these options will be communicated back to the organizing committee, and conveyed to future organizing committees. Stark then reported on the attendance statistics collected for the 2019 schools to provide deeper insight into attendee profiles. For example, at the Indian School held at IIT Madras, there were 80 attendees. Stark specified the breakdown by faculty vs. students, gender, geographical location, and by how many times have attendees participated in prior IT schools. He also said that the ITSoc contribution to the 2019 India school was 7k\$ and that the plan is to increase it to 10k\$ in the future. At NASIT 2019 held at Boston University, there were 80 attendees as well. Stark provided statistics for this event as well. ITSoc contributed 10k\$ and there was an additional 10k\$ allocated from Padovani Lecturer funds. NASIT 2019 is sending back 11k\$ to ITSoc; treasurer Aaron Wagner explained that this is in part due to having NSF sponsorship and Padovani Lecturer funds, and that typically schools return back less than 1k\$ to ITSoc. Stark also reported on the attendance statistics for the Australia 2019 school, held at the University of Sydney, and the ESIT 2019, held in the French Riviera.

The following motion was issued:

Motion: To support the holding of the JTG/IEEE-ITSoc Summer School at IIT Kanpur, India in the amount of \$10,000 USD.

The motion passed unanimously.

BoG members thanked Stark for organizing and collecting the statistics. It was also suggested that an exit survey be included in future IT schools, with specific survey questions to be discussed at a later time.

Constitution and Bylaws Committee Report—Frank Kschischang and Elza Erkip [item 3]

Next, Frank presented a report on behalf of the Constitution and Bylaws Committee. The following motion was issued.

Motion: To accept all minor revisions en masse.

The motion passed unanimously.

The following items were addressed in detail. Major revision to Article IV.1 regarding nominations and elections. The revised text now provides a formal definition of past junior and past senior president. It was suggested by a BoG member that the wording “email ballot” be changed to “electronic ballot” and change the wording to be consistent everywhere and to allow for future flexibility. Major changes to Article IV.1 are:

- To provide clear definition of “Board-Elected Officers” (this terminology clarifies to the reader, particularly at the IEEE, that the Officers are selected by the Board, not by the Membership);

- To return ballots to Secretary (who acts as Teller), not President—change suggested by the IEEE;
- To provide clear procedures for handling within-term vacancies of Board-Elected Officers;
- To ensure that a second person is copied on email votes.

Motion: to approve these changes.

The motion passed.

Frank next presented proposed changes to Article IV.2 regarding appointed officers of the society, which were as follows:

- Provide clear definition of “Appointed Officers”;
- Make it clear that the President-Elect does the appointments annually;
- Change time-of-appointment to December 1st, thereby smoothing transitions;
- Make the secretary the official society Teller (counter of votes)—change suggested by the IEEE.

It was also noted that a previous proposal to make the Secretary non-voting was withdrawn, as it is in fact unconstitutional.

Motion: to approve these changes.

The motion passed.

Next, Frank discussed changes to Article IV.3 regarding ex-officio members of the board. The changes are summarized as follows:

- New text centralizes the description of ex-officio members of the Board;
- Adds the EiC of the new Journal.

It was noted that a previous proposal to remove Executive Editor as voting BoG member was withdrawn.

Motion: to approve these changes.

The motion passed.

Next, Frank discussed changes to Article IV.4 regarding under-represented regions. It was stated that BoG has 26 members and that the current text specifies an under-represented region (among regions 8, 9, and 10) as the one having at least T% of the electorate with at most one elected board member. It was suggested that the latter text be changed to “fewer than N elected Board members or Board-elected officers.” The current practice is T = 5 and N = 2. A BoG member proposed the following change to have T = 10 and N = 2.

Motion: to set T to 10 and N to 2.

The motion passed.

Proposed changes to Articles IV. 5 and IV. 6 were minor. Next, Frank presented proposed major changes to Article IV.7 regarding election to the board. These were

- To replace “historically under-represented” (which is not defined) with “Regions 8, 9, and 10”;
- To provide a procedure for filling within-term vacancies;
- To make it clear that those filling within-term vacancies, not having been elected by the membership, are not eligible for nomination as a Board-elected Officer. Such members are referred to as “Board-elected Members.”

Motion: to approve these changes.

The motion passed.

Next, Frank presented changes to Article IV.8 regarding removal of officers and committee members. There was some discussion about the wording of the proposed article and Frank clarified that the suggested wording came from the IEEE.

Motion: to approve these changes.

The motion passed.

Next, Frank discussed proposed changes to Article IV.9 regarding removal of Members of the Board Elected by the Membership. He clarified that this was also an IEEE-suggested clause.

Motion: to approve these changes.

The motion passed.

Next, Frank presented changes to Article V.4 subsection B regarding Journal Steering Committee and Editor-In-Chief that will codify the leadership of the new journal.

Motion: to approve these changes.

The motion passed.

Next, Frank discussed proposed changes to Article V.4 Subsection A regarding IT Transactions editors. Two suggestions for the revision were presented. The Constitution and Bylaws Committee was split on whether or not to include the phrase “augmented with the present Transactions Editor-in-Chief and Executive Editor;” if included, the EE/EiC would be given a formal say in choice of the incoming EE, otherwise not. However, the committee was in agreement about the other parts of the revision. Accordingly, the motion before the Board was split into two parts: the first to put forward the parts not in dispute, and the second (if the first motion passes) to put forward the phrase in dispute.

Motion: to approve the changes common to both suggestions.

The motion passed.

A lengthy discussion ensued about the merits of making the Editor-in-Chief and Executive Editor voting members of the N&A committee for the purpose of choosing a new Executive Editor, with some members speaking in favor of and some in opposition to the motion.

Given the discussion, President Emina issued the following motion.

Motion: to change the agenda with Wei and Elza presenting last.

The motion passed.

The following motion was issued:

Motion: to include EiC and EE as voting members of the N&A committee.

The motion failed.

Next, Frank presented changes to Article V.7 regarding Membership Committee, consisting of the following changes that reflect ongoing practice: Membership committee will now consist of five members: 2nd VP, Chairs of two subcommittees, two liaison members; the current three subcommittees now reduced to two. It was noted that this was the only place where WITHITS is mentioned in the bylaws.

Motion: to approve these changes.

The motion passed.

Next, Frank discussed changes to the responsibilities of the subcommittees. Proposed changes to the subsection A regarding the Student and Outreach Activities Subcommittee reflect the merging of the current Student Subcommittee and Outreach Subcommittee into a single subcommittee, with the IEEE Young Professionals Liaison now being a member. It was noted that there was some stream-lining of language, but no change in the responsibilities of the Committee.

Motion: to approve these changes.

The motion passed.

Proposed changes to the subsection B regarding the Schools Subcommittee were to specify the structure of the committee. It was noted that there was some stream-lining of language, but no change in the responsibilities of the Committee.

Motion: to approve these changes.

The motion passed.

Proposed changes to the subsection C regarding additional responsibilities of the Membership Committee included minor reorganization of the description of Committee activities, but no major change in Committee responsibilities,

and the introduction of the Goldsmith Lecturer into the awards selection duties.

Motion: to approve these changes.

The motion passed.

Frank next discussed Article V.8 regarding the formation of the new Diversity and Inclusion Committee.

Motion: to approve these changes.

The motion passed.

After that, Frank presented changes to Article V.9 that codify the practices for awarding the Shannon Award.

Motion: to approve these changes.

The motion passed.

Analogous changes were proposed to Article V.10 that codify the practices for awarding the Wyner award.

Motion: to approve these changes.

The motion passed.

Next, Frank presented proposed changes to Article V.11 on the James L. Massey Research & Teaching Award for Young Scholars Committee. It was clarified that currently, this committee was a subcommittee of the awards committee; this change creates a new standing committee, and that no change in Committee composition or responsibilities was being proposed.

Motion: to approve these changes.

The motion passed.

Then, Frank presented proposed changes to Article V.12 on the Thomas M. Cover Dissertation Award Committee. It was clarified that currently, this committee was a subcommittee of the awards committee; this change creates a new standing committee. It was noted that no change in Committee composition or responsibilities were being proposed.

Motion: to approve these changes.

The motion passed.

It was suggested by a BoG member that up to two awards be issued annually. BoG then suggested that this option could be first done in practice prior to being codified in the bylaws.

Next, Frank presented proposed changes to Article V.13 regarding the Paper Awards Committee.

The proposed changes are to rename the current Awards Committee as Paper Awards Committee, to better reflect its mandate, and to remove the responsibility for Massey and Cover Awards; no other change in Committee composition or responsibilities were proposed.

Motion: to approve these changes.

The motion passed.

The next topic was the proposed revision of Article V.14 in regards to the current Fellows Committee. It was proposed that the name of the committee be changed from "Fellows Committee" to "Fellows Evaluation Committee" as was suggested by the IEEE; wording to include "Recommendation by the President" is an IEEE requirement, as was the five-year term limit.

Motion: to approve these changes.

The motion passed.

The following topic was the proposed revision of the article VII.6 regarding the IEEE Communications Society and Information Theory Society Joint Paper Award. Proposed language changes were made to be in line with current practice.

Motion: to approve these changes.

The motion passed.

A BoG member commented that a potential issue is that since this a joint award between two societies, rules may change from one year to the next.

Next, Frank presented proposed changes to Article VII.9 regarding James L. Massey Research & Teaching Award for Young Scholars. The proposed wording mimics the language used for the Goldsmith Lecturer, and for the consistency with it, criterion of "young" was proposed to be changed from "40 years old or younger" to "within 10 years of Ph.D."

Motion: to approve these changes.

The motion passed.

Next, Frank presented proposed changes to Article VII.10 regarding Distinguished Lecturers. Criteria for the selection of Distinguished Lecturers was codified.

Motion: to approve these changes.

The motion passed.

Next, Frank presented proposed changes to Article VII.11 regarding Padovani Lecturer. Criteria for the selection of Padovani Lecturers was codified.

Motion: to approve these changes.

The motion passed.

Lastly, Frank presented proposed changes to Article VII.12 regarding Goldsmith Lecturer. Criteria for the selection of Goldsmith Lecturers was codified.

Motion: to approve these changes.

The motion passed.

Publications Committee Report—Sasha Barg [item 4]

Next, Sasha Barg presented the candidates for the positions of Associate Editors (AEs) of the IEEE Transactions on Information Theory. Their biographies are available on the website. AE candidates are: Arya Mazumdar, Chao Tian, Marco Tomamichel, and Ligong Wang.

Motion: to appoint the 4 candidates as new AEs.

The motion passed.

Treasurer's Report—Aaron Wagner [item 5]

Aaron Wagner in his capacity as the Society's Treasurer presented his report. He started by recapping the IEEE accounting practices. He reiterated that one key point is that if x \$ is left over from some project in a given year, it cannot just be put in as surplus x \$ budget in the next year, but rather that $x/2$ \$ can be saved for new initiative and $x/2$ \$ go to reserves. He then went over the 2019 general funds. He stated that IT Transactions revenue is slightly higher than expected. He then explained how the surplus can be used towards increasing the number of pages in the IT Transactions. Current length of the publication queue (from acceptance to publication) is 5 months. Officers have previously agreed to increase the annual number of pages from 7600 to 8400, with the cost of 30k\$. The resulting expected surplus is now 60k\$. Aaron next discussed how the estimated surplus for 2019 general fund has increased from 90k\$ in August to 125k\$ in October, due mainly to conference surplus including 2018 events and 2019 NASIT. He then presented IT Transactions trends on a graph, including revenues, costs, and profit, updated from the BoG meeting in July. It was recognized that revenues are going down, but that updated projections may offset this negative trend. Aaron next discussed 2019 special projects. He stated that there were many great ideas and that the projects covered almost what had been budgeted. He also reminded those who contributed to submit the receipts by November. He also provided the list of 2020 Special Projects that were approved, with joint budget of 152k\$. There was nothing to report on 2020 general funds.

The meeting discussion returned to an earlier item regarding N&A Committee membership stated in Article V.4 Subsection A. A BoG member had suggested to change the wording from "augmented with" to "in consultation with."

Motion: to approve this change.

The motion passed.

After a lunch break, the meeting resumed.

Information Theory Magazine Steering Committee Report — Christina Fragouli [item 6]

Christina provided an update on the status of the IT magazine, on behalf of the steering committee. She went over the projected timeline, and then discussed the status of Phase I. Feedback was received from the Proposal Development

Committee (PDC). PDC stated that the title needs to start with "IEEE" to be compliant with IEEE practices. This led to the discussion on the name of the magazine. BoG members noted that having "BITS" in the title would be catchy. There was also some concern amongst the BoG members on the usage of BITS vs. bITs. Another concern was that a vote was already issued via email regarding magazine name, prior to the feedback received from PDC. Emina suggested the following title: IEEE BITS: The Information Theory Magazine.

Motion: to adopt the name of the new magazine as: IEEE BITS: The Information Theory Magazine.

The motion passed.

The second comment from PDC was regarding the Newsletter, as it seemed that there was an overlap in content between the magazine and the newsletter. Christina suggested that the newsletter be focused on the news. It was noted that for example Signal Processing Magazine Area Editor is also Signal Processing Newsletter Editor-in-Charge. It was decided that the role of the newsletter and the separation of the newsletter and the magazine be further discussed at a future BoG meeting.

Christina next went over the next comment from PDC, which was in regards to the number of issues per year. PDC suggested having 4+ issues annually. A BoG member asked how will the impact factor be calculated. Christina clarified that the impact factor will be calculated after 3 years of having 20 papers per year. She also stated that the planned organization is 5 papers per issue, with 4 issues per year.

Christina next described the topics needed to be addressed in Phase II. She first went over the proposed Magazine Oversight chart, and then over the structure of the Steering Committee. It was noted that the minimum number of the magazine oversight leadership can be reduced for practical reasons. She went over the appointment terms and responsibilities of the Editor-in-Chief, Senior Editors, and Area Editors.

The following motion was issued.

Motion: to approve Magazine Oversight structure and submission of Phase II proposal by Dec. 5, 2019.

The motion passed.

Children's Book update—Christina Fragouli [item 7]

Christina next provided an update on the book *Information in Small Bits: Information Theory for Kids*. She went over the Amazon ad campaigns and website renewal; publication advertisements; book fairs and festivals where the book will be displayed; and the status of the paperback copies.

Cover Award Committee—Christina Fragouli [item 8]

Christina next presented Cover Thesis Award Committee update. She stated that number of submissions are steadily increasing, and the submissions are more spread out in terms of areas.

Currently the number of awards is 0 or 1. Proposal is to make it up to 2, since given the increased diversity in represented technical areas, individual contributions may be hard to compare. It was recognized by a BoG member that having a few more awards for the junior members of the IT community would be very beneficial.

Information Theory Society Conference Committee Update—Vijay Kumar [item 9]

Vijay started by thanking the committee members. He then went over the status of the upcoming IT symposia. ISIT 2020 in Los Angeles, ISIT 2021 in Melbourne, and ISIT 2022 in Helsinki have forthcoming updates in today's meeting. ISIT 2023 in Taipei has activities and program details actively added. For ISIT 2024 in New York, potential venues are currently being investigated. Vijay then went over the update for the ISIT 2019 Geographical Diversity Student Travel Grant. There were 27 applicants, of whom 26 have received the grant. Approximately 14k\$ has been distributed. It was suggested by the committee that the surplus from 20k\$ be added to the travel grant program of ISIT 2020.

Aaron, as Treasurer, had a comment to clarify that we cannot move 6k\$ from 2019 to 2020 and also clarified that 25k\$ for 2020 had not been approved yet. He stated that this is a new initiative for the IEEE, so cannot add Canada.

Aaron issue the following motion:

Motion: To authorize 25k\$ for the travel grant for ISIT 2020.

The motion passed.

Vijay then resumed his presentation.

Update for ISIT 2020 in Los Angeles was provided by Salman Avestimehr, and it included the following: banquet at Universal Studios is confirmed; contract for AV is finalized and signed; funding commitments from Intel, Qualcomm, and Google have been received.

Update for ISIT 2021 in Melbourne was provided by Parastoo Sadeghi. These included: second visit to the proposed venue; progress towards the PCO contract with the IEEE; starting venue license process with the IEEE; light lunch accommodations for the awards ceremony. Organizers have taken note of the request to make arrangements for all IT Society events while planning ISIT 2021.

Update for ISIT 2022 in Helsinki was provided by Camilla Hollanti and Themistoklis Charalambous. Organizers have taken note of the request to make arrangements for all IT Society events as an integral part of planning for ISIT 2022. Organizers also plan to introduce a "sustainability chair." A person who would handle the web page for the Conference was yet to be identified. This prompted BoG to briefly discuss the web presence of ISIT conferences in general. It was clarified by a BoG member that CMS was contracted to do ISITs in the past but that it is only until 2021. Vijay suggested that BoG

should make a decision on whether to continue with CMS or try something else.

Next, Vijay went over the Status of Upcoming IT Workshops. ITW 2019 in Sweden had nothing to report. There was an update for ITW 2020 in Riva del Garda, Italy from Marco Dalai: CFP was distributed at ISIT 2019 and ITW 2019; web-site is ready; a contract within next few weeks with the venue is hoped to be signed; and the conference will likely use EDAS for paper submissions.

ITW 2021 in Japan had nothing to report. Next, Vijay presented the pre-proposal of ITW 2022 in Goa, India on behalf of the conference organizing committee. As a part of the motivation for this conference, he stated that last ITW in India was in Bangalore in 2002, and that the IT society is very active in India with JTG/IT Society Summer School, Conferences, and Seminars. He then went over the members of the organizing committee including General Chairs, TPC Co-Chairs, and Local Arrangements Chairs. He stated that Goa is a very popular destination. He described different transportation means to Goa, a variety of activities to do, including many beaches, and other tourist attractions. Proposed workshop dates are late October or early November 2022, with the exact date being a function of participation, weather, other conferences, and cost. He then went over the proposed venues. The two choices are Cidade de Goa and Grand Hyatt. He presented the pros and cons of each. He also presented the proposed night cruise banquet. Vijay then discussed visas and how that issue was handled by some recent conferences. Regarding proposed ITW 2022, budget is planned for 150–160 participants. He also stated that there is record of past successful sponsorship. Regarding the technical program, 3 parallel session are planned with more details to follow in the future. Feedback from the BoG is that the pre-proposal looks great and that more detailed budget needs to be added next.

Arrangements for IT Society Events at ISITs based on the input from Treasure Aaron Wagner were then presented, and the conference code of conduct was stated.

Goldsmith Lecturer Funding Update—Elza Erkip and Wei Yu [item 10]

Elza went over the background of Goldsmith Lecturer Award. She stated that the fundraising had been very successful and it reached 130k\$, with the 10k\$ seed having originated from Andrea Goldsmith's Sumner Award. There are several committed industry sponsors, along with several more outstanding requests, thanks to Andrea's commitment. Elza stated that the IEEE requires 100k\$ in funding for an award to become endowed. It was stated that the current surplus of 30k\$ could be used for new diversity and inclusion activities, which committee will brainstorm in the future.

Padovani/Goldsmith/Distinguished Lecturers Update—Wei Yu [item 11]

Wei went over the timeline and eligibility requirements for nominations for Goldsmith Lecturer and stated that the deadline will be moved to January 1st moving forward. He then went over the list of past DLs, and the newly elected

DLs for 2020–20201, who are: Deniz Gündüz, Lalitha Sankar, Yossef Steinberg, Changho Suh, and Daniela Tuninetti. He stated that David Tse is the 2020 Padovani Lecturer and that Ayfer Ozgur is the 2020 Goldsmith Lecturer. Wei concluded his presentation by thanking other Membership Committee

members: Camilla Hollanti, Tara Javidi, Stark Draper, and Vincent Tan.

New business including cyber bullying was briefly discussed. The meeting was adjourned at 3.00 pm.

In Memoriam: J.P.M. (Pieter) Schalkwijk (1936–2020)

Han Vinck (University Duisburg-Essen, Germany)

On January 30, 2020, the field of information theory lost one of its pioneers, Pieter Schalkwijk, who passed away at his home in Waalre, the Netherlands. After a short stay at the “Dutch Defense Organization RVO-TNO,” Pieter left the Netherlands in 1963 to do a PhD (1965) in Stanford with Tom Kailath. From 1965 to 1968 he worked at GTE-Sylvania in Boston followed by a 4 year period at the University of California at San Diego. In 1972 he joined the University of Eindhoven in the Netherlands as a



full professor in Telecommunications. In Eindhoven he started a group on information- and communication theory. The group was awarded with the qualification “excellent” from an external visitation committee in 1995. He was also one of the founding fathers of the information theory community (WIC) in the Benelux, bringing in his USA experience. Pieter was well known for his clear and inspiring lectures and seminars. Through him, many students got involved in the new exiting field of information theory and its developments. His view on how to do research was exemplary for many of his PhD students. His 1966 paper “A coding scheme for additive noise channels with feedback: No bandwidth constraint,” in the transactions on information theory received the



best paper award from the IEEE IT society. Pieter further contributed fundamentally to concepts and techniques in a multiple of areas such as: convolutional codes; source coding; feedback coding; and the two-way channel. Pieter had a good sense of humor, telling many anecdotes that were information theory related during our coffee breaks. He always had an open ear for the problems of his colleagues and students. He introduced a new view on how to do research at a high

level and opened our eyes to the international community of information and communication theory. In 2016 his students celebrated his 80th birthday in Eindhoven. (see https://www.uni-due.de/imperia/md/content/dc/vinck_schalkwijk_2016.pdf and <https://www.itsoc.org/publications/newsletters/december-2016-issue-1/view>).

Pieter is survived by his wife Susan, his daughters Karin, Lucy, Susanne, and his son Jan.

Messages to the family of Piet Schalkwijk can be placed at <http://www.condoleance.nl/17564/piet-schalkwijk.html>

In Memoriam: Jørn Justesen (1944–2019)

S. Forchhammer, T. Høholdt, K. J. Larsen

Jørn Justesen, a well-known expert in coding theory and communications, passed away on October 27, 2019 in his home in Washington DC at the age of 75.

Jørn Justesen was born on January 31, 1944 in Copenhagen, Denmark. He received the M.Eng. degree in electrical engineering and the Dr.Techn. Degree from the Technical University of Denmark, in 1971 and in 1975 respectively.

From 1971 to 1972, he was at the Institute of Circuit Theory and Telecommunication at the Technical University of Denmark. He was visiting Lecturer at the University of California, Berkeley in 1973



and an Associate Professor at Aalborg University, Denmark from 1974 to 1975. In 1976, he was appointed Professor in Communication Theory at the Institute of Circuit Theory and Telecommunication at the Technical University of Denmark. At that time, the youngest full professor ever. He retired from that position in 2009.

Jørn Justesen has produced seminal results in various branches of Information Theory, among these the construction of low-complexity, asymptotically good error-correcting codes (Justesen Codes) in 1972, a discovery of fast decoding algorithms of Reed-Solomon and

algebraic geometry codes, as well as research into construction and properties of convolutional codes and graph codes. Among his numerous publications are a textbook on coding theory (2004, second revised version 2017, with T. Høholdt) as well as the book "Two-Dimensional Information Theory and Coding" (2009 with S. Forchhammer).

In addition to the theoretical achievements, Jørn Justesen has been very active in setting up cooperation projects with Danish and European companies and organizations especially within the areas of wireless communication and associated error-correction coding and signal processing and in the later years also optical communication. For many years, he was involved in contracts with the European Space Agency (ESA) resulting in design of decoders, some of them still applied in the ground stations by ESA. The first of these projects enabled on-line decoding of the concatenated coding system used by the ESA satellite Giotto visiting the Comet Halley in 1986. Such cooperation

projects have been very stimulating to his research group and interested students.

He also took a great interest in teaching and education. Over the years, he engaged and contributed to the development of the education at DTU by new ways of teaching and in relation to the role of mathematics in the engineering curriculum. Also in these aspects, his profound understanding and ability to focus on the core of the substance came to its right.

Justesen received the 1974 IEEE Browder J. Thompson award and was a co-author of the paper that received the 1991 IEEE Information Theory Society Best Paper Award. He was awarded the title of Professor Honoris Causa by the Institute for Problems of Information Transmission, Moscow, Russia in 2004.

Jørn Justesen was a fantastic friend, extraordinary gifted, and very patient with people he liked.

President's Column *(continued from page 1)*

to the same professional organization came with no obligation to be friends, I have, over the years, come to call many of the society members as my friends. Every year, we welcome new members, and continue our traditions, with an overall collegial and positive environment, and this has not changed, despite the recent challenges. This to me was important, personally too; one's well-being is significantly improved in a positive environment.

In this spirit, we started the new decade, with an effort to involve our membership even more in the way our professional organization is run, and to continue to provide an inclusive and transparent (IT!) culture. Our first board meeting included stimulating discussions on changing times in research, how as a community we can adapt and grow, and how the society governance can provide leadership in this regard. The first day of ITA, we have held a town hall, where members provided a number of excellent suggestions, including adopting the new century's measures of dissemination via social media (bear with us on this yet), and better enabling remote presentation in conferences that may be needed in the new world order (how true, how true!). The rest of ITA was a great success as always, and included an outreach event supported by our society, again affirming our community values.

That brings us to today, where we are now dealing with an unprecedented global crisis. Yes, you have read correctly. I have started this column about six months ago, in a dramatic departure from my usual close to deadline adrenaline rush. I was so very

thrilled about being your president elect, and writing this column well in advance was just part of my enthusiasm. But then life happened. And in a way that I could not have imagined in my wildest dreams. I went back and forth so many times on how to finish this piece, and in the process, the world has arrived at a point that is unseen in my life time. So, here it goes, the ending.

Sometimes it is useful to look back in life in markers, usually a year. A year ago, I definitely could not have imagined that I would be living in a new city, having a new job. Probably many people who know me could not either. One of my favorite quotes is "Change is difficult, but sometimes necessary and always rewarding". So, one should embrace it and go forward. None of us could have imagined in 2019 that we would find ourselves in the year 2020 in a pandemic. Clearly not much is understood about the disease yet. The world is changing in a profound way. Where we are going to go from here is unknown. What is important however is to remember that we are a community. We support one another, and we will together make sure that our scholarship and dissemination of research continues, even if we are all socially distancing from one another. Also, it is kind of great being a theorist, isn't it? We do not need to leave our couch to continue our careers!

Stay well, and please feel free to reach out to me with any suggestions and concerns.

Aylin Yener, Columbus, March 15, 2020.

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2018-2019 IEEE DATA STORAGE TECHNICAL COMMITTEE BEST PAPER AWARD CALL FOR NOMINATIONS

The Data Storage Technical Committee of the IEEE Communications Society (DSTC) invites you to nominate or self-nominate papers for the 2018-2019 DSTC Best Paper Award and the 2018-2019 DSTC Best Student Paper Award. **The nomination deadline is July 31, 2020.**

Eligibility

- The paper must appear in print in a peer-reviewed journal or a peer-reviewed conference proceeding in 2018 or 2019, i.e., from January 1, 2018 to December 31, 2019.
- The specific technical content of the nominated paper is expected to have a clear connection to the general theme of data storage. The nominated paper needs to show originality and substantial technological impact or potential technological impact on both the theory and the practice of the existing/future data storage systems, or on emerging storage technologies that are gaining momentum.
- A paper may be nominated for both awards, but only one will be awarded.
- If awarded, all the co-authors will each receive a plaque.

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The first author must be a student during the time the paper is accepted for publication; or a graduate whose paper is submitted for publication within 6 months of his/her graduation date. The contribution of the first author must be greater than 50%.

Nomination submissions - due by July 31, 2020

Please email your nomination to:

- Bane Vasic vasic@ece.arizona.edu and
- Anxiao (Andrew) Jiang ajiang@cse.tamu.edu



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INFORMATION FOR AUTHORS | Regular papers suitable for presentation in 20 minutes are solicited. Regular papers will be published in full (subject to a maximum length of eight 8.5" x 11" pages, in two column format) in the Conference Proceedings. Only papers that are actually presented at the conference and uploaded as final manuscripts can be included in the proceedings, which will be available after the conference on IEEE Xplore. For reviewing purposes of papers, a title and a five to ten page extended abstract, including references and sufficient detail to permit careful reviewing, are required.

IMPORTANT DATES | 2020

JULY 6 — Submission Deadline

AUGUST 3 — Author Notification Authors will be notified of acceptance via email by August 6, 2018, at which time they will also be sent detailed instructions for the preparation of their papers for the Conference Proceedings

AFTER AUGUST 7 — Registration Opens

SEPTEMBER 29 - OCTOBER 2 — Conference Dates

September 29 — Opening Tutorial Lectures at the Coordinated Science Lab, University of Illinois at Urbana-Champaign: **TBA**

September 30 - October 2 — Conference Sessions at the University of Illinois Allerton Park & Retreat Center. The Allerton House is located 26 miles southwest of the Urbana-Champaign campus of the University of Illinois in a wooded area on the Sangamon River. It is part of the 1,500 acre Robert Allerton Park, a complex of natural and man-made beauty designated as a National natural landmark. Allerton Park has 20 miles of well-maintained trails and a living gallery of formal gardens, studded with sculptures collected from around the world.

Plenary Lecture: TBA

OCTOBER 4 — Final Paper Deadline Final versions of papers that are presented at the conference must be submitted electronically in order to appear in the Conference Proceedings and IEEE Xplore.

PAPERS PRESENTING ORIGINAL RESEARCH ARE SOLICITED IN THE AREAS OF:

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- Coding Techniques and Applications
- Coding Theory
- Data Storage
- Information Theory
- Multiuser Detection and Estimation
- Network Information Theory
- Sensor Networks in Communications
- Wireless Communication Systems
- Intrusion/Anomaly Detection and Diagnosis
- Network Coding
- Network Games and Algorithms
- Performance Analysis
- Pricing and Congestion Control
- Reliability, Security and Trust
- Decentralized Control Systems
- Robust and Nonlinear Control
- Adaptive Control and Automation
- Robotics
- Distributed and Large-Scale Systems
- Complex Networked Systems
- Optimization
- Dynamic Games
- Machine Learning and Learning Theory
- Signal Models and Representations
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 Los Angeles, CA, USA | June 21-26, 2020
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Call for Submissions to the Recent Results Session

Interested authors are encouraged to submit previously unpublished contributions in any area related to information theory, including but not limited to the following topic areas:

Topics

- | | | |
|--|--------------------------------------|--------------------------------------|
| ➤ Communication and Storage Coding | ➤ Distributed Storage | ➤ Network Information Theory |
| ➤ Coding Theory | ➤ Emerging Applications of IT | ➤ Pattern Recognition and ML |
| ➤ Coded and Distributed Computing | ➤ Information Theory and Statistics | ➤ Privacy in Information Processing |
| ➤ Combinatorics and Information Theory | ➤ Information Theory in Biology | ➤ Quantum Information Theory |
| ➤ Communication Theory | ➤ Information Theory in CS | ➤ Shannon Theory |
| ➤ Compressed Sensing and Sparsity | ➤ Information Theory in Data Science | ➤ Signal Processing |
| ➤ Cryptography and Security | ➤ Learning Theory | ➤ Source Coding and Data Compression |
| ➤ Detection and Estimation | ➤ Network Coding and Applications | ➤ Wireless Communication |
| ➤ Deep Learning for Networks | ➤ Network Data Analysis | |

Submissions for Recent Results Session are now being accepted. Authors are encouraged to submit their most recent results in information theory to the **ISIT 2020 Recent Results Session**. If you would like to participate, please submit a poster draft and an abstract explaining the contribution via the link <https://tinyurl.com/ISIT2020>, by **Apr. 16th, 2020**. A committee will screen and select the appropriate contributions submitted to the Recent Results track. Please note that these contributions will not go through a formal peer review process, and will not appear in the published proceedings. The notifications on the acceptance of the posters will be sent on **Apr. 23rd, 2020**.

We look forward to your participation in ISIT 2020!

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<https://2020.ieee-isit.org>



Conference Calendar

DATE	CONFERENCE	LOCATION	WEB PAGE	DUE DATE
March 18–20, 2020	54rd Annual Conference on Information Sciences and Systems (CISS)	Princeton University, NJ, USA	https://ee-ciss.princeton.edu	Passed
April 5–9, 2020	IEEE Wireless Communications and Networking Conference	Seoul, South Korea	http://wcnc2020.ieee-wcnc.org/	Passed
May 25–29, 2020	European School of Information Theory	Stuttgart, Germany	https://www.inue.uni-stuttgart.de/esit2020/	—
New Dates to be Announced	The 3rd Age of Information Workshop	Beijing, China	https://infocom2020.ieee-infocom.org/age-information-workshop	Passed
June 15–19, 2020	The International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless (WiOpt)	Volos, Greece	http://www.wi-opt.org/	Passed
June 21–26, 2020	IEEE International Symposium on Information Theory	Los Angeles, California, USA	https://2020.ieee-isit.org	passed
June 21–26, 2020	ISIT 2020 Recent Result Session	Los Angeles, California, USA	https://tinyurl.com/ISIT2020	April 16, 2020
June 22–26, 2020	52nd Annual ACM Symposium on the Theory of Computing (STOC)	Chicago, IL, USA	http://acm-stoc.org/stoc2020/index.html	Passed
June 29–July 1, 2020	IEEE Conference on Communications and Network Security	Avignon, France	https://cns2020.ieee-cns.org	Passed
July 08–10, 2020	North American School of Information Theory (NASIT)	University of British Columbia, Vancouver, Canada	http://conferences.ece.ubc.ca/nasit2020/	—
September 13–17, 2020	IEEE Information Theory Workshop (ITW) 2020	Riva del Garda, Italy	http://itw2020.it/welcome.html	April 03, 2019
September 29–October 02, 2020	57th Annual Allerton Conference on Communication, Control, and Computing	Allerton, University of Illinois at Urbana-Champaign, USA	https://allerton.csl.illinois.edu/	July 06, 2020

Major COMSOC conferences: <http://www.comsoc.org/confs/index.html>