IEEE Information Theory Society Newsletter

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President's Column

Aylin Yener

A whole year has come and gone and what a year it has been. As winter sets in, we are now experiencing a significant surge in COVID and while hopeful news of viable vaccines is here, there is still a long way until some normalcy returns. Since my last column, we have had to come to the difficult decision that, in at least a significant portion of 2021, we will continue to see one another in 2D in meetings and conferences. Specifically, ITW 2020, which was postponed to April 2021 in hopes of holding a physical meeting, is now going to be virtual. Our flagship conference ISIT 2021 will also be held fully virtual. The ISIT organizers have worked hard over the past few months, examined the alternatives and in the end came to the conclusion that designing an innovative online conference is the best course of action. The chairs of the conference are working on a number of innovations for the next ISIT, including in timing/dates, delivery methods and live Q&A for paper sessions. Though we will not be able to visit Melbourne, I am confident that this will be an outstanding ISIT, and would like to invite the community to submit their best work.

Speaking of best work, research productivity of our community has shown no signs of slowing down despite this challenging year. The foundational and principled thinking that is present in all information theory and coding research makes it easy for the bright minds in our community to contribute seminal results in adjacent and cross-disciplinary fields alike, including communications, computing, learning and inference, information security and privacy, and quantum. In "machine" learning, we see results of significance from information theorists, affirming that, the field has the potential for impact, both through the core expertise and through creative crossover ideas. Information theorists continue to work on a diverse array of problems with societal impact directly or indirectly, including healthcare analytics, epidemiology, and responsible data science. Importantly, the next generation of connectedness, "6G", vision is starting to crystalize: With the convergence of communications, computing, control and sensing, and building on the more adaptable network design that had already started in the current generation, we are in a perfect position to consider the potential to realize information and coding theoretic ideas for connecting everything, and if we are successful, there is a good chance we may see a repeat of the 2000s in the coming decade in our community.

On the flip side, as research dissemination models evolve, we see information theorists also expand their publishing portfolio, not just in communications and signal processing, but also in machine learning communities, reaching out to wider audiences. My own view is that all of these are healthy endeavors that enable us to recognize that there is not one kind of information theorist, and while we are all known for our highest of intellectual standards within academia, there is also merit in demonstrating the reach foundational thinking can have. After all, we all know that separation in system design (not to be confused with physical separation that is necessary) is optimal only in very specific instances, even if it is easier.

More evidence to the potential and influence of the society in the larger professional community of IEEE, despite being quite a bit smaller than the largest two societies (computer and communications), is our society's significant intellectual impact measured by the recognitions. The most recently announced 2021 IEEE medals and technical field awards include a number of information theorists. This year, our society has also done very well in fellow elevations effectively doubling the typical success rate, a first that we hope very much will continue in the coming years.

Overall, we have had a good year despite the pandemic. We have been able to grow our membership significantly. We

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From the Editor

Salim El Rouayheb

With the holiday season drawing near, I want to wish everyone a happy and healthy new year. Our last issue in 2020 opens up with Aylin Yener's final column as President of the IT Society. Please join me in thanking Aylin for her dedication and hard work leading our society during this challenging year. Also, I would like to extend a warm welcome to our incoming president Wei Yu. This issue features a report from the SYSU Workshop on Network Information Theory and Coding which was held in Guangzhou, China in September. We continue with the BoG minutes from the last meeting in the summer. With sadness, we conclude with an in memoriam for Kamil Sh. Zigangirov who passed last March.

This issue of the newsletter is the last issue for me as the Newsletter Editor. For the past three years, I have enjoyed interacting with many of you through the Newsletter and learning more about the vibrant society that we have. I would like to thank everyone who supported me and the Newsletter during the past three years, including the past three presidents, the BoG members, Newsletter Editorial Board, Matt Lafleur, and of course, all those who contributed to the Newsletter. Special thanks also go to my former student Rawad Bitar and current student Ghadir Ayache, for their great assistance in putting together these issues. I want to wish the best for my successor, Changho Suh, and congratulations on his new appointment.

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 Changho Suh at chsuh@kaist.ac.kr with a subject line that includes the words "IT newsletter."

The next few deadlines are:

Jan 30, 2020 for the issue of March 2021.

April 10, 2020 for the issue of June 2021.

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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SYSU Workshop on Network Information Theory and Coding

The Sun Yat-sen University (SYSU) Workshop on Network Information Theory and Coding went well in the University's Guangzhou South Campus in Guangzhou, China on September 26, 2020. This workshop was organized by the IEEE Information Theory Society Guangzhou Chapter, co-sponsored by Sun Yat-sen University and the Chinese Institute of Electronics Information Theory Society. More than 50 scholars and industry partners from mainland China participated the Workshop. A few others from Hong Kong, including the first speaker Raymond Yeung of CUHK, participated online due to travel restrictions. The Guangzhou Chapter experimented resuming the first onsite conference after the outbreak of COVID-19. We were pleased it went well.

Network coding is a technique to improve the throughput of information flow by allowing coding on received data packets, instead of traditional receive-and-forward, at intermediate nodes, which has been widely used in distributed storage, coded caching, etc. This workshop aims to provide a platform for scholars in South China to exchange new research results on network information theory and coding, which will be beneficial for the community, Universities and the graduate students of the area. The workshop was chaired by Li Chen, a Professor of Sun Yat-sen University and also the chair of Guangzhou Chapter.

There were seven invited talks in this workshop, with a coverage of multi-source network coding, distributed storage, coded caching, subspace codes, etc. In the morning session, Raymond Yeung of the Chinese University of Hong Kong presented recent results in symmetric multilevel diversity coding system (SMDCS), in which an explicit

characterization of the superposition coding rate region was obtained. Then, Xiaohu Tang of Southwest Jiaotong University introduced the placement-delivery array (PDA) and its applications in various distributed models. The morning session ended with the talk by Shutao Xia of Tsinghua Shenzhen International Graduate School, which showed some improved bounds and singleton-optimal constructions of locally repairable codes. The afternoon session started with the talk by Hao Chen of Jinan University, with a focus on several constructions of subspace codes. Then, Minquan Cheng of Guangxi Normal University presented in details the coded caching schemes from PDA. Min Ye of Tsinghua-Berkeley Shenzhen Institute presented some new constructions of cooperative MSR codes. The last talk was presented by Congduan Li of Sun Yat-sen University, who shared the latest research results on multi-source multicast network coding rate region.

Finally, Li Chen summarized the workshop and expressed his gratitude to the SYSU team for their efforts in organizing this fruitful event. He advocated holding regular workshops of different themes in future to provide platforms for scholars of the region, in proliferating information theory research and educating younger talents.

Call for Nominations

(ordered by deadline date)

Thomas M. Cover Dissertation Award

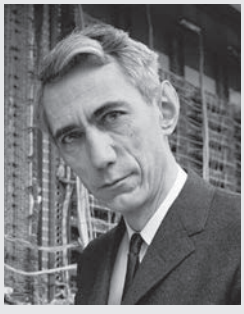
The IEEE Information Theory Society Thomas M. Cover Dissertation Award, established in 2013, is awarded annually to the author of an outstanding doctoral dissertation contributing to the mathematical foundations of any of the information sciences within the purview of the Society including, but not limited to, Shannon theory, source and channel coding theory, data compression, learning theory, quantum information theory and computing, complexity theory, and applications of information theory in probability and statistics. Nomination of underrepresented minorities are encouraged. Eligible dissertations must have been successfully defended during the two calendar years prior to the award year.

NOMINATION PROCEDURE: Nominations and letters of endorsement must be submitted by January 15 using the online form available at https://www.itsoc.org/honors/cover-award

IEEE Joint ComSoc/ITSoc Paper Award

The Communications Society/Information Theory Society Joint Paper Award recognizes outstanding papers that lie at the intersection of communications and information theory. Any paper appearing in a ComSoc or ITSoc publication during the preceding three calendar years is eligible for the award.

NOMINATION PROCEDURE: Nominations and letters of endorsement must be submitted by February 15, 2021. All nominations should be submitted using the online nomination forms. Please see http://www.itsoc.org/honors/comsoc-information-theoryjoint-paper-award/comsoc-itsoc-paper-award-nomination-form for details. Please include a statement outlining the paper's contributions.



IEEE Information Theory Society Claude E. Shannon Award

The IEEE Information Theory Society Claude E. Shannon Award is given annually to honor consistent and profound contributions to the field of information theory.

NOMINATION PROCEDURE: Nominations and letters of endorsement must be submitted by March 1, 2021. All nominations should be submitted using the online nomination forms. Please see http://www.itsoc.org/shannon-award for details.

IEEE Information Theory Society Aaron D. Wyner Distinguished Service Award

The IT Society Aaron D. Wyner Service Award honors individuals who have shown outstanding leadership in, and provided long standing exceptional service to, the Information Theory community.

NOMINATION PROCEDURE: Nominations and letters of endorsement must be submitted by March 1, 2021. All nominations should be submitted using the online nomination forms. Please see http://www.itsoc.org/wyner-award for details.

IEEE Fellow Program

Do you have a colleague who is a senior member of IEEE and is deserving of election to IEEE Fellow status? If so, please submit a nomination on his or her behalf to the IEEE Fellow Committee. The deadline for nominations is March 1, 2021.

IEEE Fellow status is granted to a person with an extraordinary record of accomplishments. The honor is conferred by the IEEE Board of Directors, and the total number of Fellow recommendations in any one year is limited to 0.1% of the IEEE voting membership. For further details on the nomination process please consult: http://www.ieee.org/web/membership/fellows/index.html

IEEE Information Theory Society Paper Award

The Information Theory Society Paper Award is given annually for an outstanding publication in the fields of interest to the Society appearing anywhere during the preceding two calendar years. The purpose of this Award is to recognize exceptional publications in the field and to stimulate interest in and encourage contributions to fields of interest of the Society.

NOMINATION PROCEDURE: Nominations and letters of endorsement must be submitted by March 15, 2021. All nominations should be submitted using the online nomination forms. Please see http://www.itsoc.org/honors/information-theory-paper-award/itsoc-paper-award-nomination-form for details. Please include a statement outlining the paper's contributions.

IEEE Information Theory Society James L. Massey Research & Teaching Award for Young Scholars

The purpose of this award is to recognize outstanding achievement in research and teaching by young scholars in the Information Theory community. The award winner must be 40 years old or younger and a member of the IEEE Information Theory Society on January 1st of the year nominated.

NOMINATION PROCEDURE: The nominee must be a Society member, who on January 1st of the year in which the award is given, is no more than 10 years beyond having their highest degree (up to doctorate) conferred. Nominations and supporting materials must be submitted by March 15, 2021. All nominations should be submitted using the online nomination forms. Please see http://www.itsoc.org/honors/massey-award/nominationform for details.

IEEE Awards

The IEEE Awards program pays tribute to technical professionals whose exceptional achievements and outstanding contributions have made a lasting impact on technology, society and the engineering profession. For information on the Awards program, and for nomination procedures, please refer to http://www.ieee.org/portal/pages/about/awards/index.html

IEEE Information Theory Society Board of Governors Meeting

Location: Zoom Remote Meeting

Date: June 21st, 2020

Time: The meeting convened at 10:00 am EST; the meeting adjourned at 4:00 pm EST

Meeting Chair: Aylin Yener

Minutes taken by: Lara Dolecek

Meeting Attendees: Erik Agrell, Erdal Arıkan, Matthieu Bloch, Suhas Diggavi, Alex Dimakis, Lara Dolecek, Stark Draper, Elza Erkip, Meir Feder, Christina Fragouli, Andrea Goldsmith, Camilla Hollanti, Sid Jaggi, Tara Javidi, Vijay Kumar, Brian Kurkoski (#), Matt LaFleur (#), Olgica Milenkovic, Prakash Narayan, Henry Pfister, Vince Poor, Joachim Rosenthal, Parastoo Sadeghi, Anand Sarwate (#), Igal Sason, Emina Soljanin, Daniela Tuninetti, Emanuele Viterbo (#), Aaron Wagner, Aylin Yener, Wei Yu

All attendees joined remotely via Zoom; non-voting attendees are denoted by (#).

Business conducted between meetings: The following votes were conducted by email between the February 2020 Information Theory Society (ITSoc) Board of Governors (BoG) meetings and this meeting:

1) In February 2020, the following motions were issued:

   a) To approve Richard Dale Wesel as an Associate Editor for Coding Techniques in the IT Transactions.

   b) To approve Achilleas Anastasopoulos as an Associate Editor for Communications in the IT Transactions.

   c) To approve Arian Maleki as an Associate Editor for Signal Processing in the IT Transactions.

   The motions passed.

2) In March 2020, the following motion was issued:

   To approve Martina Cardone as the Chair of the Student and Outreach Activities Subcommittee.

   The motion passed.

3) In March 2020, the following motion was issued:

   To postpone ITW 2020 from September 2020 to Spring 2021 with new dates to be negotiated between the general chairs and the venue.

   The motion passed.

4) In March 2020, the following motion was issued.

   To suspend the Distinguished Lecturer Program effective immediately until further notice, to revisit the suspension decision as soon as the COVID-19 situation starts to improve globally, and to potentially extend the current DLs' terms to offset the suspension of the program.

   The motion passed.

5) In March 2020, the following motion was issued.

   To re-open the nominations for individual society awards until April 6, 2020. The impacted awards are Massey (deadline March 15), Shannon (deadline March 1) and Wyner (deadline March 1).

   The motion passed.

6) In March 2020, the following motion was issued.

   To hold ISIT 2020 as a virtual conference on the same dates (June 21-26), in a manner that resembles the in-person experience as much as possible. The organizers will work towards this goal in consultation with officers and relevant committee chairs (outreach, awards etc.). The organizers will come up with new registration fees to reflect the new financial model.

   The motion passed.

7) In April 2020, the following motions were issued:

   a) To approve the minutes from the February 2020 meeting.

   b) Motion 2: (from the School Subcommittee): "We request the ITSoc BoG allow the holding of the 2020 IEEE North American School for Information Theory, currently scheduled for University of British Columbia in July 2020, to be deferred to the summer of 2021 and for the deferred school to be supported at the same level of $10,000 USD as was originally allocated by the BoG at the BoG meeting in July 2019."

   c) Motion 3: (from the School Subcommittee): "We request the ITSoc BoG allow the holding of the 2020 IEEE East Asian School for Information Theory, currently scheduled for Seoul University in August 2020, to be deferred to the summer of 2021 and for the deferred school to be supported at the same level of $20,000 USD as was originally allocated by the BoG at the BoG meeting in July 2019."

   The motions passed.

8) The following motion was issued in May 2020:

Motion (from the School Subcommittee): "We request the ITSoc BoG allow the holding of the 2020 Joint Technology Group/IEEE School for Information Theory (JTG/ITSoc), currently scheduled to be held at the IIT Kanpur in July 2020, to be deferred to the summer of 2021 and for the deferred school to be supported at the same level of $10,000 USD as was originally allocated by the BoG at the BoG meeting in October 2019."

The motion passed.

9) The following motion was issued in May 2020

To approve Technical Co-sponsorship by the IT Society for the Seventeenth International Workshop on Algebraic and Combinatorial Coding Theory (ACCT 2020) June 9 - 15, 2020, Albena, Bulgaria.

The motion passed.

At 10:00 am EST, ITSoc President Aylin Yener called the meeting to order.

Attendees introduced themselves. President Yener thanked everyone for joining the meeting and especially for joining across different time zones. President Yener explained that the meeting will be run as a webinar.

The following motion was issued.

Motion: A motion was made to approve the agenda.

The motion passed.

President's Report—Aylin Yener

President Yener started by giving big Thank You's to all the committees for all their hard work and for being so diligent, given the current crisis. She then recapped the goals for 2020, focusing on openness and engagement. These goals included member engagement, BoG engagement, improved communication among different volunteer committees, open calls, and improved membership numbers. She stated that being in the IT community means being a member of the IT Society, and that IT also stands for Inclusiveness and Transparency. She next went into more details about the progress towards these goals pre-Covid-19. She stated that in regards to the member engagement, ITA town hall resulted in lots of good ideas, including online presentations, and social media presence. In regards to the BoG engagement, she stated that the ITA meeting included discussions on Fellow nomination and evaluation process, which subsequently resulted in the number of nominations being twice as high this year as last year; discussion on the ISIT submission numbers, which do not appear to be a significant concern at the moments; and the discussion on the need for rebranding. In regards to better communication between society volunteer committees, such as conference committees and conference organization, she stated that this is ongoing and that has in part motivated a new initiative. She also stated that the goal of better informing and equipping volunteer selection is on track.

President Yener then discussed the state of the affairs in the Covid-19-era. She reiterated that the society's goals have remained intact, even yielding to better initiatives. As the world turned virtual, BoG had a record number of motions to address. President Yener thanked BoG for acting fast on several time-sensitive issues. She stated that some motions were passed in the record 24h period.

Next, President Yener discussed changes to the current operations, including virtualization of ISIT, and suspension of the Distinguished Lecturer Program and Information Theory Schools. She stated that ITW 2020 in Italy was the first to move to 2021. The current plan is to hold the workshop in 2021 under the same name, although there is still a possibility that this plan may change. Some IT Schools are postponed to 2021, so that there might not be any schools in 2020 and the schools may all be virtual in 2021.

Next, President Yener shared her thoughts on meetings. She stated that we need to adapt quickly to virtual and hybrid meeting formats, and that we have to be ready to have a stronger virtual presence. She also pointed to the relevant opinion piece written by ComSoc colleagues on the future of technical conferences (Piece is titled "To Be or Not to Be—There in Person: What is the Future of the Technical Conference?").

Next, she went over the activities after the start of the Covid-19 crisis, describing new BoG engagement, membership engagements, and the creation of the new web page dedicated to latest developments in the Society, including event cancelations and postponements.

She then discussed the outcome of the membership campaign aimed at improving membership numbers. Membership fee promotion was used in the campaign. She stated that as of May 2020, there were 734 new members, significantly improving the previous membership scale of about 2800 members. She presented charts showing breakdown by IEEE membership status; most of the new society members are IEEE Members, followed by IEEE Senior Members. She then stated that, as a part of the on-going promotion, the membership fee for 2021 will be lowered to $25 for non-students and $1 for students.

Next, President Yener discussed a new initiative called the Future of Information Theory Society (FITS) Digital Innovations Initiative. FITS will aim to achieve, among other goals: one unified presence; one web platform that has everything; uniform views of the meeting year to year; familiar interface and navigation for all; remote activity support; have all content archived/available through the portal to the members of the IEEE ITSoc; Society's branding of the web presence, and social media presence. FITS Ad hoc committee has been formed and its members are: Erik Agrell, Matthieu Bloch (Chair), Salim El Rouhayeb, Brian Kurkoski, Henry Pfister, Anand Sarwate, Aylin Yener, and Wei Yu.

She stated that there will be a formal presentation later in this meeting followed by a motion to fund activities of the FITS committee.

President Yener concluded her presentation with the outlook. She stated that we are in an excellent position as a society to lead in the post-Covid-19 era. She thanked Matt LaFleur for all the help in organizing the meeting.

BoG members congratulated President Yener on her leadership for increasing society's membership. A BoG member asked, and President clarified, that the number of IEEE Fellows from the Society may also increase with the increase in the membership if we manage to retain the member numbers. A BoG member pointed out that the new IT Magazine can also be an additional member benefit.

Paper Awards Committee—Wei Yu

Next discussed were paper awards, presented by Wei Yu. This part of the meeting was only for the board members who are not conflicted with the paper selection procedures. 2020 Paper Awards Committee is chaired by Wei Yu. The committee prepared a detailed report on their selection criteria and the rationale behind their decisions. Wei acknowledged all the help from the committee members, stating that it was a lot of work to go over the award-worthy papers, especially in the current circumstances. Wei stated that there are 6 paper finalists for the Jack K. Wolf Student Paper Award at ISIT 2020. Information about the finalists is available on the conference website.

Next, Wei presented the paper that was selected to receive the Communications Society & Information Theory Society Joint Paper Award. That paper is K. Lee, M. Lam, R. Pedarsani, D. Papailiopoulos, and K. Ramchandran, "Speeding Up Distributed Machine Learning Using Codes," IEEE Transactions on Information Theory, March 2018.

Afterwards, Wei discussed the IT Society Best Paper Award. He stated that the purpose of the award is to recognize exceptional contributions. He also stated that during the selection process, conflict of interest was carefully managed, and that further details are in the committee's report. In particular, he stated that the two papers put forth by the committee concurrently discovered the same technical result.

The following motion was issued:

> **Motion**: that the committee report be accepted.

The motion passed.

President Yener opened the floor for the discussion. A BoG member asked, and Wei clarified that bylaws state that the best paper award be given to a single paper. It was suggested that bylaws be changed to allow for more than 1 paper. A question was raised about honorable mention, and it was decided that this topic can be discussed at a later time.

The following motions were issued.

> **Motion**: That a 2020 Information Theory Society Paper Award be given to the paper: E. Abbe, A. S. Bandeira, and G. Hall, "Exact Recovery in the Stochastic Block Model", in IEEE Transactions on Information Theory, vol. 62, no. 1, pp. 471–487, Jan. 2016.

> **Motion**: That the 2020 Information Theory Society Paper Award to be given to the paper: E. Mossel, J. Neeman, and A. Sly, "Consistency Thresholds for the Planted Bisection Model", in Electronic Journal of Probability, no. 21, pp. 1–24, 2016.

Both motions passed.

Nominations and Appointments Committee—Elza Erkip

The presentation was given by Elza Erkip as the Chair of the Nominations and Appointments Committee.

Elza went over the committee structure and its duties, which include being responsible for nominating and appointing many ITSoc committee chairs/members and the IT Transactions Executive Editor. She went over the positions on committees that have been filled since the last BoG meeting in February 2020. She also pointed out that there are constraints on who can be a member of a given committee. She reiterated the goals of the committee, which are to diversify the committee memberships and to involve new people in society affairs and enlarge the pool of volunteers. Elza next went over the Fellows Evaluation Committee, which is responsible for evaluating nominations for the IEEE Fellows from the Society. The chair of the committee Antonia Tulino requested more members be added to the committee due to the increased number of Fellow nominations this year. The committee has 9 members, who are Antonia Tulino (chair), Christina Fragouli, Massimo Franceschetti, Senur Ulukus, Kannan Ramchandran, Pramod Viswananth, and Hirosuke Yamamoto, and the two new members are Olgica Milenkovic and Jinhong Yuan.

Next, Elza went over the Paper Awards Committee, including the constraints on who can qualify to be a member of the committee. Current members of the committee are: Wei Yu (chair), Christina Fragouli (ex-officio), and Kannan Ramchandran, and the new members are Matthieu Bloch, Holger Bloche, Jean-Francois Chamberland, Bikash Kumar Dey, Maxim Raginsky, and Daniela Tuninetti. She next presented the slate of 12 candidates as new members of the board. Elza pointed out that there are no continuing members from Region 10, as one member's term is ending and another member of the committee is moving out of that region.

They are: Natasha Devroye, Pingzhi Fan, Massimo Franceschetti, Brian M. Kurkoski, Parastoo Sadeghi, Anand D. Sarwate, Vincent Y. F. Tan, Andrew Thangaraj, Daniela Tuninetti, Bane Vasic, Aaron B. Wagner, and Edmund Yeh.

Based on a question from a BoG member, Elza clarified that this list does not require a vote.

2021 Officer Nominations—Aylin Yener

Next presentation was given by President Yener about 2021 officer nominations. The two candidates for the 2nd VP are Matthieu Bloch and Stark Draper. The candidate for VP is Christina Fragouli, and the candidate for President is Wei Yu. President Yener explained that the request for votes will be sent to BoG after this meeting.

Treasurer's Report—Aaron Wagner

Next presentation was given by Aaron Wagner in his role as the Society's Treasurer. Aaron first went over the IEEE accounting, explaining how surplus from the general funds get split evenly to new initiatives and to reserves. He stated that of the surplus funds, only 50% of it goes to the funds for the following year and the rest goes to hard to touch reserves.

Next, Aaron went over the 2019 general funds. He stated that at the time of ITA 2019, the expected budgeted surplus was $46K, which over the course of the following year gradually got revised to be $573K in April 2020. He explained that the sources of the changes in expectations are due to the following: Transactions revenue increased by $300K, while the costs decreased by $70K; conference publications revenue increased by $92K; ISIT 2019 in Paris had a surplus increase of $63K; IEEE Tax decreased by $35.5K;

newsletter costs decreased by $12K; dues increased by $2.8K; and committees overspent by $5.5K. Aaron next went into more detail regarding the Transactions trends, and explained how at the time of ISIT 2018 in Vail the outlook looked dire, but that the numbers have improved since. He also clarified that this is not an accounting fluke as there is more money across the board in Transactions.

He then went over the Special Projects for 2019, totaling $264.5K in the budget, specifying for each project, the leader of the project and the associated cost. Of the budgeted $264.5K, $175K have been spent, as some ISIT 2019 related projects are still being processed.

Next, Aaron went over the 2020 General Funds. At the time of ITA 2020, the expected budgeted surplus was $243K. As of this meeting, it is $232K. The changes are due to cancelations of certain in-person events that increased the expected surplus, and new operational costs of JSAIT and reduced membership fees that decreased the expected surplus. Regarding the 2020 Special Projects, Aaron stated that some previously approved projects have become inoperative due to the pandemic. As a result, the sum total for the remaining projects is $65K. Aaron encouraged the members to provide additional ideas for 2020 Special Projects and to start thinking about possible projects for 2021.

Next, Aaron discussed the status of the Padovani Fund. He stated that Roberto Padovani generously donated $110K over 5 years, and that the Society is permitted to spend $10K/year on Schools. He asked the Board whether we should think of this as a short-term gift to effect a immediate impact or a self-sustaining endowment. He stated that the IEEE Foundation treats it as a gift to be used until spent, whereas we treat it operationally as an endowment, and that this conflict creates issues. A BoG member suggested that Roberto Padovani be brought into the loop regarding this matter. Another BoG member suggested to make it an endowment for raising visibility. President Yener stated that the detailed discussion is be deferred to the October meeting.

Future of the Information Theory Society (FITS) Initiative—Aylin Yener and Matthieu Bloch

Next presentation was the FITS report provided by President Yener and Matthieu Bloch. President Yener went over the executive summary that included the need for a unified and long-term online presence of ITSoc, unified portal for all our online activities, and calls for renewed investment in web technologies. President Yener thanked the Ad Hoc Committee members: Erik Agrell, Matthieu Bloch, Salim El Rouhayeb, Brian Kurkoski, Henry Pfister, Anand Sarwate, Aylin Yener, and Wei Yu, for their hard work in preparing the report. She went over the current situation and vision, stating that while we won't go back to the business as usual, the current crisis has created an opportunity to think forward and to create a unified FITS vision for the Society.

In terms of realizing the vision, Matthieu then identified four short term goals: 1) IEEE authentication, 2) Hosting multimedia resources, 3) Video conferencing integration, and 4) Support for events. Regarding IEEE authentication, a new Single Sign On was proposed to improve membership value. Regarding hosting of multimedia resources, the proposal was to explore alternative media solutions beyond the currently used YouTube in other to better serve the constituency at large and to provide a unified portal for various materials. It was pointed out that there are already many providers for content delivery networks such as Amazon. Regarding video conferencing integration, it was proposed to replace the current ad-hoc solutions with the integration into our website. It was pointed out the existing grass efforts in this direction, such as Salim's Shannon Seminar Series and online presentations by Distinguished Lecturers, have already been very successful. It was also pointed out that top providers (Zoom, BlueJeans, Webex) now offer APIs. Regarding support for events, it was proposed that the current distributed operation be replaced by easy and user-friendly hosting within unified portal.

Matthieu next presented the arguments for the change which included: easy archiving, reduced burden for organizers, consistent look over time, and the opportunity to invest now, when the funds are available. He also pointed out that larger cost is expected upfront but that the maintenance will be much smaller, compared to starting from scratch each time. Matthieu then went over the estimated cost for each of the proposed items.

The following motion was issued:

> **Motion**: To support the activities of the FITS initiative with a budget of $51K.

President Yener asked for remote meeting support of $10k, and the friendly amendment was issued to increase the requested budget to up to $60K.

There was a brief discussion where a BoG member suggested to go bold in the new initiative, and another BoG member suggested video and tutorial combination for the new magazine. It was asked how does the new initiative relate to the on-going efforts led by Brian Kurkoski and the Online Committee. Matthieu answered that there will be overlap and how much of it will depend on the cost and Brian's work. It was also suggested that to add hardware such as microphone for hybrid events. The motion was then revised to approve the budget of up to $65k.

The following motion was issued:

> **Motion**: To support the activities of the FITS initiative with a budget of $65K.

Motion passed.

Online Committee—Brian Kurkoski

The next presentation was given by Brian Kurkoski as the Chair of the Online Committee. Brian went over the status of the website itsoc.org upgrade, highlighting the high cost up to date; the vendor has been paid $70K for incomplete upgrade thus far and is asking for additional $30K. In light of this situation, the online committee asked for the upgrade of the website and to transfer of the web platform from Plone to Drupal. Brian described planned features for the upgrade and showed what the new page would look like, with various items of interest to current and prospective members. He then went over the quotes provided by different vendors for the upgrade. The following motion was issued.

> **Motion**: The Online Committee requests 1) $73K to develop a new site for itsoc.org and 2) $5K to migrate data from the old site to the new site for a total of $78K.

The motion passed.

Upon a question from a BoG member regarding how long the upgrade will take, Brian stated that 3-4 months is likely feasible.

After a short break, the meeting resumed.

EiC IEEE Transactions on Information Theory—Igal Sason

Next presentation was given by Igal Sason in his capacity as the Editor-in-Chief of the IEEE Transactions on Information Theory. Igal stated that there are currently 60 associate editors, and that there is a need to add more. He then presented the 7 candidates in the needed areas. A BoG member asked about the gender and geographic diversity of the candidates. Igal clarified that among the candidates, 1 is female, 2 are from Asia, 2 are from Europe, 1 is from Israel, and the rest are from the US.

Motion was issued for each of the following candidates.

> **Motion**: To elect Claude Carlet as an Associate Editor for Sequences.
>
> **Motion**: To elect Guang Gong as an Associate Editor for Sequences.
>
> **Motion**: To elect Marco Lops as an Associate Editor for Detection and Estimation.
>
> **Motion**: To elect David Mitchell as an Associate Editor for Coding Theory (emphasis on LDPC codes).
>
> **Motion**: To elect Changho Suh as an Associate Editor for Statistical Learning.
>
> **Motion**: To elect Himanshu Tyagi as an Associate Editor for Shannon Theory.
>
> **Motion**: To elect Eitan Yaakobi as an Associate Editor for Coding Theory (emphasis on coding for storage).

All motions passed.

EiC IEEE Journal on Selected Areas in Information Theory—Andrea Goldsmith

Next presentation was given by Andrea Goldsmith in her capacity as the Editor-in-Chief of the IEEE Journal on Selected Areas in Information Theory (JSAIT). Andrea first went over the executive summary, stating that the first special issue is already published, the second and third issues are on track, and that the CFPs for fourth and fifth are published. She stated that the guest editorial teams are performing well, that startup glitches on Manuscript Central are mostly fixed, that JASIT has received great support from the IEEE staff, and that the launch appears successful so far.

In regards to the first issue, she said that the sub-to-pub time was 6 months. She thanked the guest editorial board, especially the Lead Guest Editor Alex Dimakis for successfully handling the inaugural issue. She stated that this issue had 3 tutorials, and that there will be at least 1 tutorial per issue moving forward.

In regards to the second issue on quantum information theory, Andrea stated that is moving towards completion, and that the final acceptances are undergoing. She thanked the Lead Guest Editors Andreas Winter and Emina Soljanin for leading this effort.

The third special issue is on statistical inference and estimation, and the Lead Guest Editor is Devavrat Shah. The submission deadline was in May 2020. The fourth special issue is on Privacy and Security of Information Systems, and the Lead Guest Editor is H. Vincent Poor. The submission deadline is August 1st, 2020. The fifth special issue is on sequential, active, and reinforcement learning, and the Lead Guest Editors are Vincent Tan and Yao Xie. The submission deadline is October 1st, 2020. Andrea also stated that there will be 4 special issues starting next year.

Andrea next went over the JSAIT Editorial Board and stated that since all Senior Editors were appointed in 2019, some may be staggered for continuity purposes. She then went over the list of members of the Industrial Advisory Board, and stated that they have provided excellent inputs so far. She then went over the list of members of the Steering Committee and thanked them for their service.

Next, Andrea discussed the issues regarding page charges. She stated that submitted papers cannot exceed 35 pages in length, and that some authors seemed unaware of page charges for JSAIT. In regards to the initial issue, she stated that several authors requested to remove content from their accepted paper to reduce the paper to 10 pages rather than pay the page charges, which was in turn handled by Andrea on a case by case basis. Appendices were moved to supplemental material. In the cases where page reduction entailed removing valuable content in the main body of the paper, which degrades the paper and might deter authors from future JSAIT submission, as Andrea explained, she waived the page charges to retain the content and she waived page charges for all tutorials (as EiC prerogative).

Next, Andrea presented page charge recommendations to increase the number of free pages in JSAIT regular papers from 10 to 12, and to have no page charges for tutorial papers.

A short discussion ensued. A BoG member suggested to increase the limit to 14 pages. A BoG member asked and Andrea clarified that there were over 50 submissions for the first issue, and about 20-30 for the next two. She also clarified that the charge per excess page is $200, and that the average length of non-tutorial papers in the first issue was 14.2 pages.

The following motion was issued.

> **Motion**: to increase the number of free pages in JSAIT regular papers from 10 to 12, and to have no page charges for tutorial papers.

The motion passed.

ITSoc Schools Committee—Stark Draper

Next presentation was given by Stark Draper as the Chair of the ITSoc Schools Committee. Stark thanked Parastoo Sadeghi,

Christina Fragouli, for their dedicated service on the committee as well as Aylin Yener for her help.

He then went over the status of the schools. 2019 schools had nothing to report. Four schools were planned for 2020, and are all deferred. ESIT 2020 was deferred to fall, and the organizers are looking into the possibility of making it virtual. The remaining schools, which are NASIT 2020, EASIT 2020, and India 2020, are all deferred to 2021. He then went over the implementation of the virtual ESIT 2020. He stated that the organizers will look to ISIT 2020 plenaries as a model and that they believe it should and can be "more than downloading a few good videos"; he also stated some pros and cons of holding the school virtually. Stark stated that the Schools Committee is in favor of the ESIT'20 organizers exploring the possibility of a virtual ESIT'20, and that the organizers and the School Committee request input from the BoG. In regards of the named lectureships, Stark stated that the Padovani and Goldsmith Lectures are delivered at schools. Padovani was to be delivered at NASIT'20 and Goldsmith at ESIT'20, and that the plan for the named lectureships in 2021 will be discussed as part of the Membership Committee report.

Diversity and Inclusion Committee—Stark Draper

The following presentation was also given by Stark Draper, in his role as the Chair of the Diversity and Inclusion Committee.

Stark started off by thanking all the members of the precursor D&I committee for their service, and going over the procedures from the Bylaws for constituting the committee and adding new members.

The following motion was issued:

> **Motion**: To approve the proposed four members of the Diversity and Inclusion Committee, who are: Todd Coleman, Vinod Prabhakaran, Nihar Shah, and Michele Wigger.

The motion passed.

Next, Stark went over the Committee's mandate and schedule for this year. He stated that the committee is responsible for creating and executing an ongoing diversity and inclusion strategy, presenting progress, plans, data, and metrics annually to the Board. He also stated that the committee is charged with ensuring that Information Theory Society events and processes are inclusive, welcoming and safe for everyone in the field of information theory and with developing and overseeing codes of conduct and best practices for all Society activities, including conferences, schools, and committees. It is anticipated that the committee will provide a report update at the next BoG meeting in October.

Conference Committee—Vijay Kumar

Next presentation was given by Vijay Kumar on the behalf of the Conference Committee. He started off by thanking the committee members for their service. Next, he went over the key status update of ITWs and ISITs. ITW 2020 in Riva del Garda, Italy is postponed to 2021. Format of the ITW 2021 in Kanazawa, Japan will be decided in Sep. 2020. For ITW 2022 to be held in Goa, India, the formal proposal has been submitted and is under review. For ISIT 2024 to be held in New York a proposed formal proposal has been deferred to a future BoG meeting. For ISIT 2021 to be held in Melbourne, Australia, an update will be provided by Parastoo Sadeghi in this meeting.

For ITW 2020, more specifically, Vijay stated that the new dates are Apr. 11-15, 2021, and that all involved people have confirmed their participation. It is not yet decided whether the conference will be in-person, remote, or in a hybrid mode. The current submission window is September 30 to October 30, 2020. Vijay also went over the list of confirmed plenary speakers, organizers of the special sessions, and tutorial organizers. He stated that the permission was granted from the IEEE to keep the "2020" in the name of the conference.

For ITW 2021, Vijay stated that the decision will be made to either postpone the conference or to convert it to online/hybrid format. The current submission window is March to April, 2021. He reiterated that the committee hopes that ITW Kanazawa will happen as planned in Oct 2021.

The committee is monitoring the situation for international travel, worldwide COVID-19 infection, as well as local regulations on social distancing and related events. They are currently discussing three scenarios: onsite, online/hybrid, and postponement, each with its own timeline. The organizing committee plans to re-assess the situation in September, particularly with regard to the venue contract.

Next, Vijay stated that the report on ISIT 2020 Experience will be presented at a future BoG meeting, possibly the Fall 2020 BoG.

Afterwards, Vijay went over the proposal for ITW to be held in Goa, India in 2022. He went over the list of members of the organizing committee, details of the location, and the list of potential topics of interest. He stated that given the current and potentially future world-wide circumstances, this conference, and others, would be held in hybrid or all-virtual mode.

Next, Vijay presented the update for ISIT 2021 in Australia. He went over the timeline of various options, discussing in particular various fees associated with venue cancelations at given points in time. He stated that three major contracts have already been signed with the IEEE. The current focus is to hold ISIT in person (viewed as Plan A). Here, things are on track: monthly organizer meetings are conducted, website is up with fair amount of content: https://2021.ieee-isit.org, and there is a plan to advertise as much as possible at ISIT 2020 and in the next 6-7 months. Organizing committee is also discussing fallback Plan B. In this case ISIT would be held virtually, similar to ISIT 2020, and possibly more interactive. The committee has contacted IEEE Conference Contracts and IEEE Legal to get advice on liabilities, timelines and insurance options. Vijay went over various scenarios and outlined the dollar amount of values and schedules of liabilities and sponsorship. He also presented dollar amounts for base registration estimates to break even (assuming virtualization platform or other costs will be added later to break even) for Virtual ISIT 2021.

There was a brief discussion about the estimated costs in terms of cancelation fees and what aspects of the cost could be

re-negotiated, or potentially have the venues changed to the university setting. Vijay stated that he will communicate back with the committee and will update the board in the near future.

IEEE BITS The Information Theory Magazine—Christina Fragouli

Next presentation was given by Christina Fragouli in her capacity as the Chair of the Steering Committee for the new IT magazine. She started off by thanking committee members for their service. She went over the timeline of the magazine launch, highlighting that in February 2020 Phase II documents were reviewed and a positive TAB decision was made. EiC selection is scheduled for Summer 2020, and the first publication is scheduled for 2021. She stated that the magazine is ready to start and that the goal is to increase the visibility of our field and community.

The following motions were issued:

> **Motion**: To elect Robert Calderbank as the inaugural Editor in Chief of the IT Magazine.

The motion passed.

> **Motion**: To approve $15K for the IT Magazine to start operations such as creating a logo and starts promotions.

The motion passed.

Membership Committee—Christina Fragouli

Next presentation was also given by Christina Fragouli, this time on the behalf of the Membership Committee. Christina stated that upon careful consideration of the membership committee, the Chapter of the Year was awarded to the North Macedonia chapter.

Next, Christina discussed the status of the Distinguished Lecturers (DLs), Padovani and Goldsmith lecturers. She first recalled that a motion was passed on March 23, 2020 to suspend the DL program until further notice.

The following motions were presented.

> **Motion 1**: To extend the current term of the DLs for one year (this would apply to both the 2019-2020 and the 2020–2021 DLs).
>
> **Motion 2**: To require a recorded lecture from each DL (to be uploaded on the society website/youtube channel).
>
> **Motion 3**: To select no new DLs for 2021.
>
> **Motion 4**: To extend the current term of the Padovani lecturer for a year.

Upon further discussion the four motions were withdrawn.

The following motion was then issued by President Yener.

> **Motion:** To extend the meeting by 1 hour.

The motion passed.

Student and Outreach Subcommittee—Martina Cardone

Next presentation was given by Martina Cardone on behalf of the Student and Outreach Subcommittee. First, she went over the Meet the Shannon Lecturer video details and presented a trailer. This video is an exclusive recorded interview—organized into three parts and conducted by Dr. Min-Hsiu Hsieh and Dr. David Sutter—where Dr. Charles H. Bennett shares his past academic experiences, and his insights regarding the past, present, and future of quantum information theory research.

Next, Martina presented a description and a video trailer for online teaching and learning. This was also an exclusive recorded interview—organized into four parts—where the committee reached out to 14 members of the Information Theory community (students, postdocs, faculty) and asked them to share their perspective on online teaching and learning.

Afterwards, Martina went over the student video exposition. In this special online challenge, students registered to ISIT were able to team up with students from other universities to create videos explaining an easy concept related to information theory to high school students. Three winning videos were selected and the students who made them received a $300 award each. It was suggested by BoG that these videos could also be made available publicly for high school student outreach.

Pilot Videos Committee—Matthieu Bloch

Next presentation was given by Matthieu Bloch on the behalf of the Pilot Videos Committee. He went over the current statistics of the available videos that have been made thus far, highlighting that there have already been more than 100,000 views. He then went over the work in progress which included: several meetings with Brit Cruise; discussion around several topics of new videos to be made (synchronization, magnetic recording, and information propagation in graphs). He stated that the objective is to release these new videos by the end of year.

Massey Award—Tara Javidi

Next presentation was given by Tara Javidi in her capacity as the Chair of the Massey Award Committee. Massey Award is given annually to an outstanding young scholar within 10 years of the completion of their highest degree. Tara thanked other committee members: Christina Fragouli, Sid Jaggi, and Ram Zamir for their service. Tara stated that there were 8 highly qualified candidates. Upon very careful deliberations, the committee selected Yuri Polyansky as the recipient of the Massey Award for his outstanding achievements in research and teaching.

Cover Thesis Award—Christina Fragouli

The following presentation was given by Christina Fragouli in her capacity as the Chair of the Cover Thesis Award Committee. Christina thanked the other committee members: Haim Permuter, Michele Wigger, Meir Feder, and Wei Wu for their service on this committee. She then went over the selection process, stating that 6 eligible theses were considered. Based on the detailed discussions amongst the committee members, the committee unanimously agreed to give the Cover Dissertation award to: Pengkun Yang,

for his thesis titled: ``Polynomial Methods in Statistical Inference: Theory and Practice.''

Constitution and Bylaws Committee—Elza Erkip

Next presentation was given by Elza Erkip on behalf of the Constitution and Bylaws Committee whose members are Elza (chair) and Emina Soljanin, as Senior Past President and Junior Past President, respectively. Elza next discussed the status of the bylaws, highlighting that extensive revision of the Bylaws occurred in 2019, and that this year revisions will be relatively minor. She stated that possible changes would be a) regarding the paper awards committee as the condition of AEs serving in the last three years may be too limiting, and the term limit could be lowered to two years, b) introduction to post-humous awards, and c) resolution of conflict of interest in committees. She next stated that the Publications Committee needs to be updated with the introduction of the new IT magazine. There was a brief discussion regarding the membership on the board of governors for the Editors-in-Chief of the main IT publications.

Going Forward as a Community—Aylin Yener

Next topic on the agenda was how do we go forward as a community and was introduced by President Yener. There was a discussion amongst the BoG members regarding what could be some productive ways of strengthening our community. The following motion was issued.

> **Motion**: to support the production of an educational video in the amount of $15K.

The motion passed.

Meeting adjourned at 4 pm EST.

A Tribute to Kamil Sh. Zigangirov

Kamil Shamilivich Zigangirov, Professor Emeritus at Lund University, Lund, Sweden, passed away on March 16, 2020. Since Kamil had been seriously ill for some time this sad message did not come unexpected. Even so losing a good old friend and colleague leads to a time of reflection and recollection of many stimulating discussions and enjoyable moments.

Kamil was born on January 29, 1938, in Ufa in the Ural Mountains. When Kamil was two years old his family moved to Moscow where his father worked as an economist and his mother as a medical doctor and where Kamil got his first ten years of basic education. This was a very successful period and Kamil received a medal for his results. Since his main interests were mathematics and physics Kamil continued his education at Moscow Physico-Technical Institute and obtained the Diploma Engineering Degree in 1962. As a natural next step he joined the Institute of Radio engineering and Electronics, Moscow, and obtained the Candidate of Technical Science degree in 1966. Kamil's education culminated in 1977 when he defended the Doctoral Degree of Technical Sciences from the Council of Cybernetics of the USSR Academy of Sciences. The title of his doctoral thesis is Procedures of Sequential Decoding, published in Russian 1974 by Svjaz, Moscow.

Kamil's professional history started at the Institute for Problems of Information Transmission (IPIT), Moscow, Russia, where during the period 1965–1993 he held positions as a Junior, Senior, Leading, and Main Scientist. During 1988–1991 he held a part time position as Professor. In 1993 he was appointed to the Chair of Telecommunication Theory at Lund University, a position he held until his retirement in 2003 when he became Professor Emeritus at Lund University. After retirement Kamil worked as a Guest Researcher at several universities in many different countries. In particular, he spent five extended visits at the University of Notre Dame, Indiana, USA. During his long career as a Professor and Guest Researcher, he was always very generous in sharing his time and research insights with his colleagues and their graduate students, and in many cases he served as an unofficial dissertation advisor.

Kamil was a driving force in the information theory and error correcting coding research community for more than 50 years. His most profound contributions were to convolutional coding. Through a long series of important papers, he set out much of our modern view of convolutional codes. He pioneered new efficient decoding algorithms for these codes, for example, the stack algorithm, which is both ingenious and simple. He developed back search limits for sequential decoders that establish the length of the code trellis paths that must be stored, the first theoretical estimate of list algorithm storage for convolutional codes that establish the number of paths in storage, the first true *a posteriori probability* (APP) decoder for tailbiting trellis codes, and several of the earliest "one way" APP decoders. Kamil's coauthored textbook "Fundamentals of Convolutional Coding", the 2nd edition of which was published in 2015, contains a comprehensive exposition of all known results in the field and is considered the bible of convolutional coding.

Kamil also pioneered research on low-density parity-check (LDPC) convolutional codes, recently rechristened spatially coupled LDPC codes, a field of study that has captured the

attention of researchers throughout the world due to their capacity-approaching performance. Consistent with his reputation for ingenuity and simplicity, Kamil achieved his remarkable results on LDPC convolutional codes by a clever, but non-obvious, "unwrapping" of the parity-check matrix of an LDPC block code into a diagonal (convolutional) form, in the process achieving a substantial "convolutional gain" in performance without added decoding complexity. In recognition of his contributions to this area, Kamil and his co-authors were awarded the 2012 IEEE Information Theory Society and Communication Society Joint Paper Award.

Characteristic of all Kamil's work was that his code constructions and decoding algorithms were novel and simpler than earlier ones. They have played a major role in forming the present theoretical understanding of encoding and decoding processes. Kamil was also a stickler for mathematical precision, often offering constructive criticism of results that made claims without rigorous proof. In this respect, he sometimes displayed a playful sense of humor by drawing distinctions between "strong proofs" and "weak proofs".

Kamil played a major role in guiding Soviet communication theory. During his 28 years at the IPIT he worked with most of its major players. At the same time he maintained liaisons with Western scientists through trips and correspondence.

Kamil showed professional leadership in his role as the instrumental organizer from the Russian side of the Joint Swedish-Soviet Workshops on Information Theory. This series, totaling seven altogether, began in 1983, and alternated between sites in Russia and Sweden. These workshops were of exceptionally high quality and attracted first class researchers from all over the world. They were the largest single interaction between Soviet and Western communication theorists during the Cold War period.

Kamil is survived by his widow Ira along with his two children, Dima and Valja, and their families.

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Michael Lentmaier, Assoc. Professor, Lund Univ., Sweden, michael .lentmaier@eit.lth.se

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

have been able to start a number of initiatives, particularly in the digital domain, that will continue to flourish in the coming years and have long-term positive impact in our community. All indications are that the society is in a better place than it was at the beginning of the year, and that is the best outcome any president can hope for.

As I proudly hand over the leadership to Wei, I would like to conclude my last column with a few personal notes. I remain enthusiastic about serving our society and the profession both, and will continue to do so in my roles as past president and in others including digital initiatives and technical posts such as editorships, conferences and evaluations. I continue to believe that professional service is not about building resume, but about building community, and should be taken on with that understanding. For me, this year was a departure from the past, in that, in contrast to my previous posts where I have been able to balance my day job and volunteer service, this year, most of my awake moments needed to be focused on our society. I took it in stride with the understanding of an unusual year and aimed at continuing our positive slope. As Camus says "In the middle of winter, I at least discovered that there was in me an invincible summer"[1]. And I remain optimistic that 2021 will be even better. I am grateful to the board of governors and the officers for their hard work and support throughout this year. Despite some challenges, the community remains strong and will get stronger, and there is cause for continued optimism. All of that said, as we near the end of the year, I find myself looking forward to next year, and being able to focus on research again. In that regard, I would like to acknowledge my collaborators and my current and recently graduated students for being so patient with me this year and in a sense sharing my sacrifice, as well as my colleagues at my home institution for the same. Finally I would like to thank all of you, our members, for your support of the society, and members and research community at large who choose IEEE Information Theory Society outlets for dissemination of their research.

Stay well and healthy.

[1]Return to Tipasa (1952), The Myth of Sisyphus and Other Essays, Albert Camus, Vintage International.

Recent Publications

IEEE Transactions on Information Theory

Table of content for volumes 66(9), 66(10), 66(11), 66(12)

Vol. 66(9): Sep. 2020.

Vol. 66(10): Oct. 2020.

Vol. 66(11): Nov. 2020.

Vol. 66(12): Dec. 2020.

Information-Theoretic Cryptography (ITC)

We are happy to announce the second edition of the recently created conference on *Information-Theoretic Cryptography (ITC)*. Information-theoretic cryptography studies security in the presence of computationally unbounded adversaries and covers a wide array of topics at the intersection of cryptography, coding theory, information-theory and theory of computation. Notable examples include randomness extraction and privacy amplification, secret sharing, secure multiparty computation and proof systems, private-information retrieval and locally decodable codes, authentication codes and non-malleable codes, differential privacy, quantum information processing, and information-theoretic foundations of physical-layer security. See https://itcrypto.github.io for more information.

ITC replaces the International Conference on Information Theoretic Security (ICITS), which was dedicated to the same topic and ran 2005-2017. ITC can be seen as a reboot of ICITS with a new name, a new steering committee and a renewed excitement.

The conference will have two tracks: a conference track and a spotlight track.

The conference track will operate like a traditional conference with the usual review process and published proceedings. The spotlight track consists of invited talks (not included in the proceedings) that highlight the most exciting recent advances in the area. We solicit nominations for spotlight talks from the community. (See the Call for Papers.)

The second ITC conference will take place in Bertinoro, Italy on July 23–26, 2021. (We may turn the conference into an online-only event depending on the progression of the COVID-19 pandemic, and we will allow online participation even if the conference will take place in person.) The submission deadline for ITC 2021 is Feb 1, 2021 and the call for papers (including a nomination procedure for the greatest hits track) is available here: https://itcrypto.github.io/2021/.

Please submit your best work to ITC 2021! We hope to see many of you there!

Call for Papers

General Co-Chairs
Parastoo Sadeghi
Emanuele Viterbo

TPC Co-Chairs
Michael Gastpar
Stephen Hanly
Henry Pfister
Emina Soljanin

Publications
Bikash Dey

Finance
Sarah Johnson

Local Arrangements
Margreta Kuijper
James Saunderson

Publicity
Brian M. Kurkoski

Tutorials
Yi Hong

Recent Results
Neda Aboutorab

Student Travel Grants
Lawrence Ong

Sponsorship
Girish Nair

Social Media
Mahyar Shirvanimoghaddam
Jingge Zhu

Fair dinkum, ISIT returns to Australia. In 2021, the IEEE International Symposium on Information Theory (ISIT) is currently scheduled to run at the Melbourne Convention and Exhibition Centre in Melbourne, Victoria, Australia, from July 11–16, 2021. ISIT was last held in Australia in 2005, in Adelaide.

Interested authors are encouraged to submit previously unpublished contributions from a broad range of topics related to information theory, including but not limited to the following areas:

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

Submitted and published manuscripts should not exceed 5 pages in length plus an optional extra page containing references only. Submitted manuscripts should be of sufficient detail to be evaluated by expert reviewers in the field. Full information about paper submission will be posted on the conference website.

http://isit2021.org/

Paper submission deadline: **January 10, 2021**

Notification of acceptance: March 26, 2021

In case of a fully online or hybrid event, adjustments will be made to deliver a cutting-edge scholarly and networking experience to all participants regardless of their mode of participation. For the most recent information, visit the website and follow us on Twitter @ieee_itsoc, Facebook and LinkedIn.

The organizing committee looks forward to your scholarly contributions and participation in ISIT 2021.

11th International Symposium on Topics in Coding

Montréal, Québec, Canada, August 30th – September 3rd, 2021

Co-sponsored by the
IEEE Information Theory Society

Call for Papers

The 11th International Symposium on Topics in Coding* will be held from Monday August 30th to Friday September 3rd, 2021, in Montréal, Québec, Canada. The symposium will be an opportunity to acquire a broad overview of the current status of advanced research in all areas of coding theory and its applications. All original contributions will be considered, in both theoretical and applied fields. Topics for submission include, but are not limited to, the following:

- Error-control coding
- Turbo, LDPC, polar, and product-like codes
- Bit-interleaved coded modulation
- High-throughput decoding
- Hardware and software implementations
- Performance bounds
- Iterative equalization and detection
- Message-passing algorithms
- Joint source-channel coding
- FEC for optical communications
- Coding for wireless communications
- Coding for storage
- Coding for distributed computation

In addition, papers that broaden the reach of coding, including emerging fields and novel applications of coding, are encouraged. The symposium will include regular papers for oral and poster sessions as well as invited papers. Accepted and presented papers/posters will appear in the symposium proceedings and in IEEEXplore.

Submissions

Authors are invited to submit a full manuscript (not exceeding 5 pages in double-column format) via the symposium website:

http://www.istc2021.org

Important Dates

Paper submission deadline: ..... **April 25th, 2021**
Notification of acceptance: ..... **July 5th, 2021**
Camera-ready paper due: ..... **August 1st, 2021**

For further information regarding paper submission, registration, accommodation, and travel, please consult the symposium website.

* Formerly the International Symposium on Turbo Codes & Iterative Information Processing.

Symposium Committee

General Co-Chairs
Brian M. Kurkoski JAIST
Tadashi Wadayama Nagoya Inst. of Tech.
Shun Watanabe Tokyo Univ. of A&T

Finance
Shigeaki Kuzuoka Wakayama Univ.

Local Arrangement
Hiroshi Fujisaki Kanazawa University

Publicity
Elsa Dupraz IMT Atlantique
Takayuki Nozaki Yamaguchi Univ.

Publications
Kazushi Mimura Hiroshima City Univ.

Registration
Akiko Manada Shonan Inst. of Tech.

Technical Program Committee

TPC Co-Chairs
Jakob Hoydis Nokia Bell Lab.
Mitsugu Iwamoto The Univ. of Electro-Comm.
Krishna Narayanan Texas A&M Univ.
Vincent Y.F. Tan National Univ. of Singapore

Secretary
Hideki Yagi The Univ. of Electro-Comm.

IEEE Information Theory Society

ITW2021

October 17–21, 2021 in Kanazawa, Japan

The 2021 IEEE Information Theory Workshop (ITW2021) will be held October 17-21 at Kanazawa Bunka Hall, Kanazawa, Japan. Kanazawa is located in the middle of Honshu, the main island of Japan, and can conveniently be reached by train or airplane from Tokyo. Bordered by the Sea of Japan and the Japanese Alps, Kanazawa was also recognized as the world's first UNESCO Creative City in the field of crafts and folk art. As a traditional city, Kanazawa hosts many historical places such as the Kenrokuen Garden, one of the "Three Great Gardens of Japan"; the Myoruji "Nijna Temple" with its many secret passages and hidden doors; and the Higashi Tea House District surrounded by historical shops and homes. The Kanazawa Bunka Hall venue is centrally located in Kanazawa. While admiring the traditional architecture, attendees will be able to enjoy the delicate gold leaf arts and lacquerware, as well as the delicious seafood.

Call for Papers

Interested authors are invited to submit papers describing novel and previously unpublished results on all areas on coding and information theory, including but not limited to the focus topics below:

- Low-Latency Communications
  - Low-latency communications in multi-user information theory
  - Low-latency communications for wireless applications
  - Application of low-latency communications techniques
- Information-Theoretic Security
  - Physical layer security
  - Secure computation under information-theoretic security
  - Information-theoretic security for privacy
- Machine Learning for Communications
  - Neural networks for communication systems
  - Machine learning-based transceiver algorithms
  - Information-theoretical understanding of deep learning
- Codes in the Cloud
  - Coded computation
  - Private information retrieval
  - Distributed storage

Paper Submission

Authors should submit papers according to the guidelines which will later appear at:

http://itw2021.org

Accepted papers will appear in the symposium proceedings. To be published in IEEE Xplore, an author of an accepted paper must register and present the paper. IEEE does not guarantee inclusion in IEEE Xplore.

Paper submission deadline	April 2021
Acceptance notification	July 2021

Further information will be posted on the symposium web site as it becomes available.

Photo: Max Pixel

Conference Calendar

DATE	CONFERENCE	LOCATION	WEB PAGE	DUE DATE
December 08–11, 2020	IEEE Global Communications (GLOBECOM)	8–10 December 2020: In-person (Taipei, Taiwan) 7–11 December 2020: Virtual	https://globecom2020.ieee-globecom.org	Passed
January 10–13, 2021	ACM-SIAM Symposium on Discrete Algorithms (SODA21)	Virtual Conference	https://www.siam.org/conferences/cm/conference/soda21	Passed
February 7–12, 2021	The Information Theory and its Applications Workshop (ITA)	San Diego, California	https://ita.ucsd.edu/workshop/#location	—
March 24–26, 2021	55th Annual Conference on Information Sciences and Systems (CISS)	Virtual	https://ciss.jhu.edu/	December 14, 2020
March 29–April 1, 2021	IEEE Wireless Communications and Networking Conference	Nanjing, China	https://wcnc2021.ieee-wcnc.org	Passed
April 11–15, 2021	IEEE Information Theory Workshop (ITW) 2020	Riva Del Garda, Italy	http://itw2020.it/welcome.html	Passed
May 10, 2021	The 4th Age of Information Workshop (AoI'21)	Virtual	https://infocom2021.ieee-infocom.org/age-information-workshop	Passed
June 21–25, 2021	51st Annual ACM Symposium on the Theory of Computing (STOC)	Rome, Italy	http://acm-stoc.org/stoc2021/visa.html	Passed
June 28–30, 2021	North American School of Information Theory (NASIT)	Vancouver, Canada	https://www.itsoc.org/conferences/schools/nasit2019	—
July 11–16, 2021	IEEE International Symposium on Information Theory	Melbourne, Australia	https://2021.ieee-isit.org	January 10, 2021

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