IEEE Information Theory Society Newsletter

President's Column

Emina Soljanin

Spring for me got to mean awards time. That is because for many years now, I spend a substantial amount of my "free" Spring time sitting in or chairing various awards committees of the Information Theory Society (ex officio), and at the IEEE level. The work includes reading nominations, endorsement letters, dissertations, and papers, as well as organizing, leading, or participating in meetings where the winners get selected. Each year, I get newly impressed by the apparently increasing creativity and hard work of nominated teams and individuals. This year, I am looking forward to congratulate many winners in person at the ISIT award ceremony, as they get handed over their well deserved plaques. Just thinking about that makes me feel proud and happy to be a part of our scientific community, and this year, that gives me a solace as well. And yet, like the physicist David Mermin did many years ago, I ask myself whether *the system of prizes, honors, and awards has run completely amok, absorbing far too much of the time and energy of the community in proportion to the benefits conferred [1].*

Spring is also the time when many of us receive reviews for the papers we submitted to conferences with winter-time deadlines, such as our own ISIT, as well as, not exactly ours (yet), ICML, PODC, SIGMETRICS. Upon reading the reviews, we often get happy, but more often, we get disappointed. And as I try to listen, with forbearance, to my colleagues and students, I observe how their reactions get unevenly polarized into anger and disillusionment on one side and euphoria and approval on the other. But the reality, as always, exists in between or (depending on whether you have classical or quantum upbringing) as a superposition of the two extremes. For my colleagues, I know that *this too shall pass*. But for my students, I ask myself whether I imparted on them (what my father read to me a half a century ago on a different continent [2]) that science is the Red Queen Race and that, if you venture into someone else's land, then *it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!*

But, are there really our and their lands in science (and in life)? Is there really a place where one truly belongs? As I was pondering this question, the sad news about the passing of Elwyn Berlekamp reached me, and in that instant, I knew the answer. If you have taken a coding theory class, you know who Elwyn Berlekamp was. You can read a few formal words about him in this issue and on the web, and I hope, much more later this year in the newsletter and elsewhere. I will here tell you something personal.

Berlekamp's was the first Shannon Lecture I attended. It was at the ISIT in San Antonio in 1993, where I worked as a student helper but did not have an ISIT paper yet, and, no wonder, that will forever stay in my mind. But what I remember even more clearly is a conversation with him at the ITW in Svalbard in 1997. I was working at Bell Labs then, in the department called *Mathematics of Communications* whose internal number was 11217. Berlekamp told me he did his time at Bell Labs too, in the department whose number was n and $2^n - 1$ was the largest known Mersenne prime then. Just a few years ago, he called me in connection with the 2016 Shannon centennial celebration at Bell Labs. He told me he had been invited to participate in the program, but worried that the place had changed, and perhaps, it would not even matter to anyone that someone like him was there. I reassured him that his presence would mean a lot in different ways to very many people at different (personal and professional) levels.

Over the years, I saw Elwyn Berlecamp several times, mostly at various Berkeley institutions, participating at both engineering and math events, always well received by many different groups and individuals. Berlekamp was a giant of Coding Theory. Or was that Mathematics? Or Economics? Perhaps he was 30% a Coding Theorist, and 45% a Mathematician, and 25% an Economist. As these numbers were popping up in my head, I remembered the words of the journalist Amin Maalouf

IEEE

From the Editor

Salim El Rouayheb

This issue of the newsletter starts with the regular column by the president our society. We continue with a report on the 2019 Oberpfaffenhofen Workshop on High Throughput Coding (OWHTC 2019). We also have the minutes from the Board of Governors meeting in San Diego this past February. With sadness, we conclude this issue with an in memoriam for Hendrik Christoffel Ferreira who passed away last November and a short obituary to Elwyn Berlekamp who recently passed away on April 9th at the age of 78. A full in memoriam of Elwyn Berlekamp will appear in a forthcoming issue.

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:

July 10, 2019 for the issue of September 2019.

October 10, 2019 for the issue of December 2019.

January 10, 2020 for the issue of March 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

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Table of Contents

Report on the 2019 Oberpfaffenhofen Workshop on High Throughput Coding (OWHTC 2019)

Organizers: Gianluigi Liva, Alexandre Graell i Amat, Fabian Steiner, and Gerhard Kramer

The first **Oberpfaffenhofen Workshop on High Throughput Coding** (OWHTC 2019) was held at the German Aerospace Center (DLR) in Oberpfaffenhofen, Germany, on February 27–28, 2019. The event was organized by DLR, Chalmers University, and the Institute for Communications Engineering of the Technical University of Munich (TUM). The workshop had over 70 registered participants.

The technical program included 26 invited talks. On Wednesday, February 27, the speakers were Guido Montorsi (Politecnico di Milano), Rainer Strobel (Intel), Gerhard Kramer (TUM), Søren Forchhammer (DTU), Maxim Kuschnerov (Huawei), Norbert Wehn (TU Kaiserslautern), Emmanuel Boutillon (Universite de Bretagne Sud), Catherine Douillard (IMT Atlantique), Georg Böcherer (Huawei), Andreas Burg (EPFL), Krishna Narayanan (Texas A&M), Marco Ferrari (Politecnico di Milano), and Richard Wesel (UCLA). On Thursday, February 28, the speakers were Fabian Steiner (TUM), Alexandre Graell i Amat (Chalmers), Frank Kschischang (University of Toronto), Stephan ten Brink (University of Stuttgart), Gerhard Bauch (TU Hamburg), Ramon Mata Calvo

(DLR), Bane Vasic (University of Arizona), Tommaso Foggi (Università degli Studi di Parma), Laurent Schmalen (Nokia), Joachim Neu (Stanford), Hongchen Yu (Huawei), Stefan Dierks (Rohde & Schwarz), and Balazs Matuz (DLR). The talk topics included hard and soft decoding, quantized message passing, circuit implementations, and other topics with applications to high-speed decoding (Tbps) for fiber optic communications (PON, DCN, DCI, longhaul). Doctoral candidates from several academic and industrial institutions presented posters.

The social program included lunches, refreshments, and a dinner. The organizers would like to thank Ms. Irmgard Völl-Elias for administrative support, and the DLR Satellite Networks Department for organizational support and funding. Funding was also provided by the TUM Institute for Communications Engineering. The program, presentations, and photos are available at the web address:

http://www.lnt.ei.tum.de/en/events/2019-oberpfaffenhofen-workshop-on-high-throughput-coding-owhtc/

Frank Kschischang emphasizing the global impact of research on high throughput coding.

Gianluigi Liva pointing the way.

Group photo of OWHTC 2019 participants.

IEEE Information Theory Society Board of Governors Meeting

Location: Catamaran Resort, San Diego, USA

Date: 10 February 2019

Time: The meeting convened at 1:00pm PST (GMT-7); the meeting adjourned at 5:55 pm PST (GMT-7).

Meeting Chair: Emina Soljanin

Minutes taken by: Lara Dolecek

Meeting Attendees: Alexander Barg (∗), Andrew Barron, Matthieu Bloch, Po-ning Chen (#), Suhas Diggavi, Alex Dimakis (∗), Lara Dolecek, Salim El Rouayheb (∗), Elza Erkip, Christina Fragouli, Andrea Goldsmith (#), Tara Javidi, Frank Kschischang, Vijay Kumar, Matt LaFleur (#), Olgica Milenkovic, Henry Pfister, Vincent Poor (∗), Stefano Rini (#), Parastoo Sadeghi (#), Anand Sarwate, Emina Soljanin, Wojtek Szpankowski, Daniela Tuninetti, David Tse (#), Aaron Wagner, I-Hsiang Wang (#), Michelle Wigger (∗), Aylin Yener, 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 Oct. 2018 Information Theory Society (ITSoc) Board of Governors (BoG) meetings and this meeting:

1) In late October 2018, elections were held and the results were as follows: Wei Yu was elected 2nd Vice President, Aylin Yener was elected 1st Vice President, and Emina Soljanin was elected President.

2) In early December 2018: Michelle Effros was elected to the N&A committee.

3) In early December 2018: October 2018 BoG meeting minutes were approved.

4) In late December 2018: Andrea Goldsmith was elected the editor in chief of the new IT society journal.

5) In January 2019: Votes were conducted for the positions appointed by the president: Aaron Wagner was elected the treasurer (which is an ex-officio voting BoG member appointment), and Lara Dolecek was elected the secretary (which is ex-officio voting BoG member appointment).

6) In January 2019: Votes were conducted for the positions appointed by the N&A committee: Vijay Kumar was elected conference committee chair, ex-officio voting BoG member (appointment duration is 3 years), and Antonia Tulino was elected fellows committee chair (appointment duration is 2 years).

At 1:00pm local time, ITSoc president Emina Soljanin called the meeting to order. She started by reviewing the agenda.

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

The first item on the agenda was President's Report. President of the Information Theory Society, Emina Soljanin presented this report. She welcomed (new) BoG members: Matthieu Bloch, Suhas Diggavi, Stark Draper, Olgica Milenkovic, Prakash Narayan, and Henry D. Pfister. She thanked retired BoG members: Jeffrey G. Andrews, Pierre Moulin, Krishna Narayanan, Emanuel Viterbo, and Tsachy Weissman. She also thanked Alon Orlitsky, Elza Erkip, Rüdiger Urbanke, and Helmut Bölcskei for their service; she welcomed new presidents: Frank Kschischang, Aylin Yener, and Wei Yu, as well as new BoG (re)appointments: Aaron Wagner, Lara Dolecek, and Vijay Kumar. She welcomed new WIE representatives and WITHITS leaders: Yingbin Liang, Christina Lee, and Gireeja Ranade , and she thanked outgoing WIE representatives and WITHITS leaders: Lalitha Sankar and Natasha Devroye. She also congratulated 2019 Class of IEEE fellows with Information Theory Society affiliations. There were 13 such fellows. She also congratulated the following researchers on their new IEEE Technical Field Awards: Herman Ney, Gregory Wornell, Rayadurgam Srikant, Andrea J. Goldsmith, Jeffrey G. Andrews and Robert W. Heath as well as David Tse and Allan Wilsky on their IEEE Medals. At the end of the presentation, she explained that the state of the society agenda will be presented at Monday's luncheon at ITA.

It was next decided that the consent agenda for ISIT will be voted upon at a later time.

Treasurer's report was presented by the treasurer Aaron Wagner. Aaron presented how IEEE accounting works and explained the flow of funds: there are general funds whose surplus is split 50%-50% between reserves (endowment) and the following year's special projects (new initiatives). Additionally, 3% of reserves can be allocated to special projects.

Aaron described that the surplus in the general funds went from −$67k to +$88k due to an approximate $180k surplus from ISIT 2018. He explained that this surplus money goes into reserves and new initiatives for 2019, and that it is not a direct carryover to the 2019 general funds. He also stated that the projected surplus for 2018 is around $88k, but despite the upward trend, revenues are declining. A member of BoG expressed a sentiment to not have surplus as then this surplus goes to reserves that cannot be touched. Aaron explained that there are other challenges in operating close to net zero.

Aaron next described special projects for 2018 and their associated costs: publication of children's book on Shannon at $8k; creation of educational YouTube videos at $30k; webserver upgrade at $48k, with the total of $86k. He also clarified the 3% rule on what can be used for special projects and that the proposals for these projects need to be submitted ahead of time to IEEE, whereas for the projects funded from the 50% allotment it is sufficient to inform IEEE.

A member of BoG asked about a possible revenue loss in IT due to publications, and whether bringing deep learning experts to boost audience for the current IT journal would qualify as a special project.

Aaron clarified what is a new initiative, and that in particular, an existing journal no matter content cannot be considered as a new initiative.

BoG suggested that the new IT magazine can include tutorials, including those by machine learning experts, as appropriate. President Soljanin recommended that BoG members send thoughts on new initiatives and ideas to Aaron.

BoG brainstormed further ideas on how to increase revenue including reprinting key papers in information and coding theory and to solicit ideas from a broader research community on what would be appropriate new initiatives.

Having answered the questions from BoG, Aaron continued with his presentation. He next explained that IEEE is projecting $45k (6%) decline in the revenue from the IT transactions, yet the final budget has a surplus of $46k due to IEEE's expectation of lowering IT transactions cost. It was decided that this surplus will be devoted to the distinguished lecturer program and society membership activities.

Aaron next described budget line items for the discretionary expenditures, and the budget source breakdown for the new initiatives. A BoG member asked how will the open access ruling in EU impact IEEE and the society. Aaron clarified that the society has decided to adopt a "wait-and-see" recommendation by IEEE regarding this matter. A BoG member suggested that the new journal could be split into two parts: traditional and open-access, to address the new laws. Another BoG member asked what would happen if the society goes into negative operating cost? Aaron explained that if an IEEE society operates in the negative in 2 out of 3 years, it can be placed on the IEEE watchlist with the purpose of ensuring that the society engages in more revenue generating activities. He further explained that in relative terms, the IT society is small and that temporary small decifits won't seriously affect IEEE's finances. A BoG member pointed out that IT society was on a watchlist in the past. Another BoG member said that it is expected that the society will be in a deficit for the time being due to initiations of new IT publications.

Aaron also described in detail and quoted IEEE financial operations manual what qualifies as a new initiative. After Aaron concluded the presentation on the society's budget, Frank, representing constitution and bylaws committee, discussed the current status and planned activities of the committee.

Frank first stated Bylaws Article V, Section 3: The Constitution and Bylaws Committee shall consist of the two most recent past Presidents of the Board. The senior past President shall be the chairperson of the Committee. This Committee is charged with preparing suitable revisions to keep the Constitution and Bylaws up to date and with insuring that the Board is made aware of those sections of these documents pertinent to proposed actions. He then went over the current status and explained that the constitution and the bylaws of the society dating back to October 2016 are posted online. More recent updates, from 2017 onwards are currently under consideration for approval by the IEEE Technical Activities governance. Frank further clarified that the Constitution and Bylaws Committee will make appropriate updates to the bylaws regarding the following: Membership Committee re-organization; creation of the Diversity and Inclusion Committee; creation of a Publications Committee; re-organization of the Cover and Massey Awards Committees; and re-evaluation of dates for appointments and nominations. Frank concluded his presenta-

tion by stating that these planned activities will require a substantial overhaul and will make the IT society more aligned with IEEE "must haves" and best practices for governing documents.

Next, President Soljanin brought a motion to the BoG's attention regarding the following appointment.

> **Motion:** To approve Brian Kurkoski as the On-Line Committee Chair. The motion passed unanimously.

Next, Vijay Kumar provided the update by the Information Theory Society Conference Committee. He went over the list of members of this committee, and he provided the list of recent and forthcoming ISIT conferences along with their status. Specifically, he stated that ISIT 2019 to be held in Paris has nothing to report at this time, and that ISIT 2020 in Los Angeles had a venue change to Westin Bonaventura in downtown Los Angeles. ISIT 2021 to be held in Melbourne and ISIT 2022 to be held in Helsinki have nothing to report at this time.

There was a proposal to hold ISIT 2023 in New York and a preliminary proposal was going to be made at the present meeting. There was also a proposal to hold ISIT 2024 in Taipei and a preliminary proposal was going to be made at the present meeting. While the BoG was appreciative of both preliminary proposals, the comment was made that in the IT Society, the practice was not to approve an ISIT for the year that is more than 4 years into the future. Thus the decision in 2019 would be restricted to a decision on the location of ISIT 2023 since the venues for ISIT 2020, 2021 and 2022 have already been decided.

Vijay also stated that ITW 2018 held in Guangzhou, China, and ITW 2019 to be held in Gotland, Sweden have nothing to report at this time. He also said that the update from ITW 2020 to be held in Riva del Garda, Italy will be given to BoG during the present meeting.

Next, Vijay reviewed a code of conduct for workshops and conferences that had been drafted in particular for ISIT 2019 and that all registered attendees need to agree to. This code of conduct is compliant with IEEE practices. Vijay explained that this code of conduct can also be used for IT schools.

Vijay next moved on to the next presentation and summarized the status of ITW 2020 to be held in Riva del Garda, Italy. Conference dates have been moved up by a week to Sept. 14 – Sept. 17 to avoid overlap with other conferences and the start of the academic term in several countries. Conference center has already been booked for these dates and the hotel costs remain the same. Vijay next went over the organizing committee and current and next steps, and summarized by stating that the conference organization is on track.

Next, Anand presented a preliminary proposal for ISIT 2023 to be held in New York City. He motivated the choice of New York City and presented the list of people in the organizing committee. He next presented potential conference venues, including NYU Kimmel, Javits Convention Center, and Marriott Hotel in Times Square. NYU Kimmel was considered for its central location and to keep the cost down although a concern was that the auditorium there may not be big enough. Anand clarified that another auditorium could be found elsewhere on campus. Javits Convention Center was considered a good choice, but with a potential downside of being expensive and having hotel availability issue. Lastly,

Marriott Hotel in Times Square was briefly discussed as an option as this hotel already hosted other IEEE conferences (such as ICC) but the cost was also a potential issue. A BoG member suggested Marriott Hotel in Brooklyn, located next to NYU. Anand responded that he will look into this option and clarified that the biggest challenge is high cost of being in New York City in summertime. He also said that he is soliciting suggestions offline. He concluded the presentation by stating that considering the current planning status of this and other ISIT conferences being considered, the full report may be presented at the next meeting.

The discussion next moved to the presentation of ISIT 2024 to be held in Taipei, Taiwan. Po-Ning Chen, on the behalf of the organizing committee for the proposed conference summarized the reasoning for choosing Taipei for ISIT 2024. Stefano Rini next went over the details of the conference. He went over the long standing legacy in IT of the Taiwanese academic community, conference regional presence in the past and near future, and explained that Taipei compares favorably in terms of attendance cost to recent ISITs in Barcelona, Aachen, and Vail. He also highlighted many attractions in Taipei, summer seasonal activities, and the convenient public transportation system. Stefano stated that the conference dates of June 30–July 4, 2024 are set, and that all organizing committee members have all been confirmed. He also said that the conference program proposal is fully mapped out. Next, he presented 2 choices for the conference venue. The first venue, NTHCC (National Taiwan University Hospital International Convention Center), is more intimate, urban, and cheaper, whereas the second venue, TNEC (Taipei Nangang Exhibition Center) Hall 2, is more modern, professional, but more expensive. Stefano said that the organizing committee plans to take a final decision, taking into account the BoG input, by mid-2019. Both options were presented in detail with budget line breakdowns. It was discussed that the second option, while slightly more expensive ($12k), has the advantage of having all conference rooms on the same level. A member of BoG inquired whether Chinese citizens can attend a conference held in Taiwan. Po-ning explained that the organizing committee is aware of this possible issue and is developing the right approach to address it. It was briefly discussed whether Taipei and New York should swap for 2023 and 2024, in light of the more advanced preparation status of the former, but this raised a concern about the locations of US vs. non-US locations in close years. No final decision on this issue was taken, the issue was left to the Conference Committee to pursue as appropriate.

After the ISIT 2024 organizing committee concluded their presentation on the status of the preparations for the conference, next Parastoo Sadeghi presented, on behalf of Stark Draper, the update from the ITSoc Schools Committee. She summarized the committee memberships, and the 4 Schools planned for 2019, The 4 schools (Australia, European School of Information Theory, North American School of Information Theory, and India) are already approved, and the one in Australia already took place in the preceding week. She next discussed the proposal for the European School of Information Theory in 2020 to be held in Stuttgart, Germany. She also mentioned that new proposals for future schools are expected soon, and that she will keep BoG updated as they become available. Regarding the proposal for the European School of Information Theory in Stuttgart, she went over the logistics, including proposed dates, organizers, things to do in Stuttgart, schedule and topics of interest, venue, accommodations, and expenses and revenues.

Next, the presenter asked for the motion to support the school for 15000$ by the society. It was clarified that the requested amount needs to be specified in USD and not in Euros.

> **Motion:** To support the European School of Information Theory in Stuttgart in 2020 by up to $15000. Motion passed unanimously.

After a short break, the meeting continued. Sasha Barg in his capacity of the Editor-in-Chief (EiC) of the IEEE Transactions on Information Theory provided the state of the journal, reporting remotely. He summarized that there are no major issues to be addressed. Regarding the statistics, he then explained that there are 500–600 papers being published annually with the 55% acceptance rate, and that most papers appear in print 5–6 months after acceptance. He also explained that while there are currently 4 full issues waiting to be printed, accepted paper are available online immediately and are considered published from that point on.

Sasha went over the impact factor statistics, whose variations are going up and down from one year to the next. He stated that the impact factor can be improved by making an effort to cite published Transactions papers instead of their ArXiv versions. Sasha explained that the median half-life age for the Transactions papers is over 10 years, whereas some other journals in the same peer group have this age of around 3.5 years so the Transactions is doing really well in this metric. Regarding the average submission to online publication time, the goal is to bring it down to 12 months (currently it is at about 66 weeks). Sasha next presented the update from the ex-EiC Prakash Narayan regarding contributions in the cross-cutting areas. He stated that there are 4 invited papers in cross cutting areas that are being reviewed. Sasha next presented the candidates for the Associate Editor positions. He stated that there are typically 50–53 associate editors and that many replacements needed this year are due to the ending of 3-year terms of current editors this year. The bios of the 12 candidates for the Associate Editor positions were provided to BoG members prior to the meeting. As the last item, Sasha discussed the initiative of IEEE Access started in response to the EU shift to open access journals. He also stated that IEEE wants a multidisciplinary journal with the goal of 4 weeks to decision and a very large editorial board. He concluded by saying that the stance of the IT society is that of "wait-and-see" as the society is currently not requesting sections in this journal.

There was a discussion regarding how the impact factor and the sub-to-pub time of the Transactions can be improved. A member of BoG pointed out that a potentially low impact factor of the Transactions can adversely impact promotions and may result in researchers choosing other venues to publish their results. The long wait to print was also discussed. Sasha explained that the queue went up but that the arrival rate is fixed, and that the issue is in the fixed total number of printed pages. A BoG member inquired about the possibility of increasing the number of pages. Sasha clarified that the page budget is set one year in advance, and that the primary cost is in editing. He concluded by saying that the current goal is to reduce this wait to 2 months.

Next, the discussion moved to the approval of new Associate Editors. The list of candidates was reviewed. The president invited questions from the BoG. One BoG member asked if all of the nominees hold tenured or equivalent positions. The EiC said that all do,

and indeed that this was an important consideration in the selection of the nominees. Another BoG member asked if the nominees had served as editors previously. The EiC said that they all had. There was some discussion of the prior experience and merits of individual nominees. The president then called the following vote.

> **Motion:** To vote on the election of the new 12 associate editors for the IT transactions. The motion passed unanimously.

The next topic of the meeting was the update on the new information theory magazine on behalf of the Magazine Ad-Hoc Committee. The update was given by Wojtek Szpankowski. Wojtek first presented proposed names for the new magazine. He stated that there were 150 different submissions and that 8 were chosen as finalists by the Ad-Hoc Committee. He then outlined the three steps needed to be undertaken to establish an IEEE magazine. The first step is the creation of the Letter of Intent. This step is already done for the new information theory magazine. The next two steps are the Phase I Proposal, which if completed successfully, will lead to the Phase II Proposal. Wojtek summarized what needs to be done by the committee in each of these two steps, and in particular the sequence of steps to be undertaken by the committee and BoG to achieve the final approval of the magazine. He next described the intended content of the magazine and the organization of the editorial board. He concluded the presentation by presenting the breakdown of the operating budget, with the expected deficit of initial years to wane over time. BoG members had some questions for Wojtek and Christina as members of the Ad-Hoc Magazine committee, which they clarified. A BoG member commented that the primary purpose of the magazine was not to be revenue generating for now, but to serve IT community members and improve recognitions.

Committee was asked to help BoG understand how much the magazine will cost, through a detailed analysis. A BoG member clarified based on prior experience that the plan is to go with Phase I now, and that once IEEE performs its financial analysis to proceed to Phase II. It was decided that the Phase I proposal will be presented to BoG in the next meeting. Another BoG member made a point that the name of the magazine needs to be informative from outside the society.

BoG next voted on the following.

> **Motion:** To have Christina Fragouli replace Wojtek Szpankowski as the committee chair for the new magazine. The motion passed unanimously.

Next presentation was given by Andrea Goldsmith in her capacity as the inaugural Editor-in-Chief of the new IEEE journal titled "Journal on Selected Areas in Information Theory" (JSAIT). She first summarized that Phase II of the journal proposal, which had been put together by the steering committee, was approved by ITSoc BoG in Oct. 2018 and by IEEE in Nov. 2018, and that the first issue is targeted to appear in the first quarter of 2020. She next explained that her EiC role had been approved by the BoG in December and that the editorial board consisting of 12–14 senior editors is being assembled now. She went over a working list of current topics to be covered in Y1 through Y3. She next presented the launch plans and the financial projections of the journal and stated that the expectation is that the journal will get into black very quickly. Andrea also stated that the input on the new journal is most welcome from the members of the community. There was some discussion regarding the page limits for the papers in JSAIT. One BoG member suggested that the papers be allowed up to 10 pages of an appendix that would be posted but not appear as part of the paper and that would not count towards the page limit. It was noted that the current submission guideline of 30 page limit for submissions in the single column, double space format, and with 10 free pages for published papers and the cost of $220/page for pages 11 and up, is comparable to JSTSP and JSAC, both established IEEE journals on special topics. There was some discussion of increasing the page limit to 35 and to allow for one additional page of references that did not count towards the page count. There was also a comment from a BoG member whether it would be appropriate to include "coding" in the name of the journal. It was clarified that such a name change would have to be approved at various levels.

Next presentation was given by Salim el Rouayheb who was reporting on the behalf of the ad-hoc committee for the newsletter. He discussed the Report of the Ad-hoc Committee on the Historian Column, and stated that there were differing opinions in the community on the role of the historian's column in the newsletter, and asked for input from BoG on how to address this. This discussion was left for later in the meeting.

Next, Elza Erkip presented the report from the Committee on Diversity and Inclusion. She explained that the committee was formed at ITA 2018 and summarized the intent of organizing an event at ISIT 2019. She stated that the details of the event are being worked out, and the ideas about the speakers and panel organization are being discussed. She next presented the report on sexual harassment she previously gave at the November 2018 IEEE TAB meeting. She went over the definitions of culture and climate of an organization, the role of culture and climate in reporting sexual harassment, showed on a histogram chart that female students in engineering report high percentage of hostile sexism, described the forms of sexual harassment, and summarized women's experience in tech industry. She next discussed what professional organizations can do to address sexual harassment. She clarified that IEEE is aware of the issues surrounding the climate of reporting. It was also clarified that the IEEE organization is not under Title IX rules. Elza explained the two reporting mechanisms that exist with IEEE: 1) Member Conduct Complaints, and 2) Warning System for Repetitive Unprofessional Behaviors, a.k.a "Yellow Card Policy". BoG raised a question regarding the code of conduct if two people reside at different universities and the clarification was made that there can be a university policy separate from the society policy. A member of BoG suggested that the code of conduct be available at conferences. BoG also asked about the policies of other societies and it was stated that many professional societies do not even have a code of conduct. In summary, the two reporting mechanisms listed above were reviewed although it was not readily apparent how easy and effective these are in practice. Elza Erkip and Andrea Goldsmith said they will each be looking more into this matter at the IEEE level, in case of Andrea Goldsmith through the IEEE Diversity and Inclusion committee she is chairing. It was also clarified by Elza that this presentation was made in response to the previous BoG request for more information regarding IEEE policies for reporting sexual harassment.

The next item on the agenda was the Proposal for a New IT Society Lecturer Award, prepared by Elza Erkip and Wei Yu. Andrea Goldsmith previously won the 2019 IEEE Eric E. Sumner Award. She wants to support the community by donating money from this prize to endow an award for outstanding junior women researchers working in information theory. Current IEEE awards for women were reviewed. Next, Elza presented the proposal to use Andrea's endowment to create a "Goldsmith Lecturer", inspired in part by

the history and purpose of the Padovani Lecturer. This proposal was discussed in detail and endorsed by the officers. Eligibility for the award, nomination, and the selection process were discussed. Elza clarified that the Goldsmith Lecturer is expected to give a talk at an IT School, and do so at different schools and in coordination with Padovani Lecturers. She concluded by discussing the benefits of the award and the timeline. Details will be finalized by the ISIT 2019 BoG meeting, and presented for a BoG vote, first open call will be in early Fall 2019, and the first lecture will be in 2020.

Next, the discussion returned to the topic of the newsletter. Three motions were presented.

> **Motion:** The BoG creates a formal process for the selection and the appointment of the newsletter editorial board according to established academic standards and best practices. Motion passed unanimously.

> **Motion:** The BoG guides the newly formed newsletter editorial committee to institute a formal set of guidelines for columns, including appointment procedures, column contents, and term limits. Motion passed unanimously.

> **Motion:** The newsletter stops the publication of the historian column until the formal guidelines are in place. 1 member of BoG abstained. Motion passed.

Next update was on the Bit Player movie, and was given by Alon Orlitsky. He showed the movie trailer. He asked if anyone is interested in helping or being involved, and to contact him if that is the case. He said that help is needed with improving the online presence, and in particular with the website and social media, such as Twitter and Facebook. BoG had some questions regarding the donor screening. Alon clarified that we are waiting to hear about the results of several festival submissions, and these results will help us decide about the screenings. He also suggested a possible screening around Shannon's Birthday. A BoG member added that a screening could also take place at the Computer History Museum in Silicon Valley.

The meeting next moved to the Membership Committee report prepared by Aylin Yener and Wei Yu. First, Aylin presented the activities in 2018, she thanked the 2018 members of the committee, summarized the 2018 Information Theory Schools, presented student and outreach events in 2018, including the one held at ITA 2018, and discussed the distinguished lecturers program. She concluded with thoughts moving forward regarding the membership outreach, creation of new chapters, impact of budget limitations, the role of the new Ad-Hoc Finance Committee, and the re-organization of the Membership Committee.

Next, Wei went over the Membership Committee re-organization in more detail. First, he reviewed the current structure and then went over the new structure. Wei also stated that in particular, the student and outreach subcommittees will merge. It was clarified that "sub" in "subcommittee" means "subordinate", not "subset". Wei concluded by presenting the budget of the Membership Committee.

With this discussion concluded, the meeting adjourned at 5:55 pm local time.

In Memoriam: Hendrik Christoffel Ferreira (1954–2018)

On November 30, 2018, Professor Hendrik Christoffel (H.C.) Ferreira (1954) passed away after suffering from a wasting disease. He was a Research Professor in the Centre for Telecommunications in the Electrical and Electronic Engineering department of the University of Johannesburg (Previously known as RAU). He started his career at the Rand Afrikaanse University in 1983, where he was promoted to full professor in 1989. He was instrumental in developing a research group on digital communications, with Information theory as its center point of focus. Prof. Ferreira has been a pioneering initiator and stimulator of coding for data storage systems such as deletion correcting codes, DC free codes and runlength constrained codes. He was a pioneer in powerline communications. The IEEE Communications Society awarded the 2013 ISPLC Award to him with citation "For his contributions towards Research and Education in Power Line Communications." During 2013, the NRF awarded him the coveted A-Rating for researchers who after independent peer evaluation are recognized by a majority of peers as "Leading international Researcher. In recognition of his excellence in research and educating post-graduate students, he has been appointed as a research professor at the University of Johannesburg in 2007.

Hendrik contributed at the university to the transformation of South Africa from an "Apartheid" state into a multicultural nation. In contrast to many other professors, Hendrik stayed in South Africa under difficult circumstances, his enthusiasm never wavered and he continued to make contributions to our field. To solve the problem of isolation, he invited many foreign scientists to visit the University of Johannesburg and in this way played an important role in creating international projects for his PhD students. Hendrik was the chairman for the 1999 Information theory workshop in the Kruger Park, the first Winter 'School on Information Theory in Africa in 2010, the 2013 International Symposium on Powerline Communications, and many more.

Hendrik was a well respected tennis player at the ISIT. His greatest hobby was photography, where he reached a professional level. In 2004 he was awarded the cover photograph of the coffee table book "Getaway Gallery". Hendrik survived his beloved wife Hester by more than 10 years.

In Memoriam: Elwyn Berlekamp (1940–2019)

Emina Soljanin and Alexander Barg

Shannon Award winner Elwyn Berlekamp passed away on April 9, 2019 at the age of 78.

Elwyn Ralph Berlekamp (September 6, 1940–April 9, 2019) was the 1993 Shannon Lecturer known for his work in coding theory and other disciplines. He was a professor emeritus of mathematics and EECS at the University of California, Berkeley. Berlekamp was co-inventor of the Berlekamp–Welch algorithm and the Berlekamp–Massey algorithms, which are used for efficient decoding of Reed–Solomon codes. He was also known for using information theory in money management.
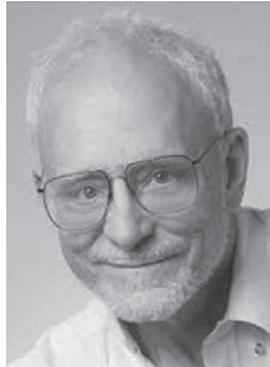
Elwyn Berlekamp also discovered an algorithm for factoring polynomials over finite fields, which is included in computer algebra systems such as Pari. He wrote a classic 1968 monograph on Algebraic Coding Theory, which is still in use, as well as a well-known two-volume set "Winning Ways for Your Mathematical Plays" (with John H. Conway and Richard Guy).

Read Elwyn's obituary at *Berkeley News and Wall Street Journal.*

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

[3]: *The identity cannot be compartmentalized; it cannot be split in halves or thirds, nor have any clearly defined set of boundaries. I do not have several identities, I only have one, made of all the elements that have shaped its unique proportions.*

You can reach me at emina.soljanin@rutgers.edu, but I will respond to your message only if you tell me the solution for the n above. Here is another hint. Berlekamp, actually told me his Bell Labs department name and number, but I still wanted to check, and I found out that when he moved to Berkely, the world had a new largest Mersenne prime.

References

[1] D. Mermin, "What's Wrong With These Prizes?" *Physics Today* 42, 1, 9 (1989).

[2] L. Carroll. *Through the Looking-Glass and What Alice Found There,* Chapter 2.

[3] A. Maalouf. *In the Name of Identity: Violence and the Need to Belong,* Introduction.

Recent Publications

IEEE Transactions on Information Theory

Table of content for volumes 65(3), 65(4)

Vol. 65(3): Mar. 2019.

Vol. 65(4): Apr. 2019.

Call for Papers

IEEE TRANSACTIONS ON INFORMATION THEORY: SPECIAL ISSUE DEDICATED TO THE MEMORY OF VLADIMIR I. LEVENSHTEIN

O. Milenkovic, UIUC
Guest Editor-in-Chief

Guest Associate Editors

A. Barg, University of Maryland   **J. Körner**, Sapienza Università di Roma
L. Dolecek, UCLA   **A. McGregor**, UMass Amherst
R. Gabrys, UCSD   **S. Mesnager**, University of Paris
G. O. H. Katona, Rényi Institute, Budapest   **G. Zémor**, University of Bordeaux

From Deletion Correction to Graph Reconstruction

This special issue of the IEEE Transactions on Information Theory is devoted to the memory of Vladimir I. Levenshtein who made seminal contributions to many fields of coding theory and combinatorics. Topics of interest include, but are not limited to

- Algebraic codes
- Codes in the Cayley, Kendall tau, and Ulam distance
- Combinatorial designs
- Indel Channels: Capacity Bounds, Code Designs, Applications
- Interactive communication protocols
- Sequence alignment algorithms
- Topics in sequence design and analysis
- Trace and graph reconstruction

Important Dates:

Manuscript submission: October 15, 2019
First round of reviews: January 31, 2020
Revised manuscript submission: March 31, 2020
Notification of final decision: May 1, 2020
Final manuscript submission: June 15, 2020
Publication: Fall 2020

Prospective authors should prepare their papers following regular submission procedures of the IEEE Transactions on Information Theory (see https://ece.umd.edu/trans-it/submissions.html)

Welcome to the Munich Workshop on Coding and Cryptography (MWCC) 2019!

Location: Institute for Communications Engineering, Department of Electrical and Computer Engineering, Technical University of Munich, Germany.
Dates: **July 15-16, 2019**.

The workshop consists of invited talks and poster sessions.

Topics of interest

- Coding theory
- Cryptography

We look forward to seeing you in Munich!

Workshop Chairs: Sven Puchinger, Vladimir Sidorenko, Antonia Wachter-Zeh
Local Organization: Haider Alkim, Lukas Holzbaur, Hedongliang Liu, Georg Maringer, Julian Renner, Nicole Rossmann, Lorenz Welter

Confirmed Invited Speakers

- Peter Beelen, Technical University of Denmark, Denmark
- Tuvi Etzion, Technion, Israel
- Alexey Frolov, Skolkovo Institute of Science and Technology (Skoltech), Russia
- Tim Güneysu, Ruhr-Universität Bochum, Germany
- Bernhard Haeupler, Carnegie Mellon University, USA
- Camilla Hollanti, Aalto University, Finnland
- Grigory Kabatyansky, Skolkovo Institute of Science and Technology (Skoltech), Russia
- Tanja Lange, Eindhoven University of Technology, Netherlands
- Pierre Loidreau, IRMAR, France
- Joachim Rosenthal, University of Zurich, Switzerland
- John Sheekey, University College Dublin, Ireland
- Paul H. Siegel, University of California, San Diego, USA
- Jean-Pierre Tillich, INRIA, France
- Eitan Yaakobi, Technion, Israel

Registration

Registration is **free**. **The deadline for registrations is July 1, 2019.**

See details at https://www.lnt.ei.tum.de/en/events/2019-munich-workshop-on-coding-and-cryptography-mwcc/.

Call for Papers

2020 International Zurich Seminar on Information and Communication

February 26 − 28, 2020

The 2020 International Zurich Seminar on Information and Communication will be held at the Hotel Zürichberg in Zurich, Switzerland, from Wednesday, February 26, through Friday, February 28, 2020.

High-quality original contributions of both applied and theoretical nature in the following areas are solicited:

Wireless Communication	Optical Communication
Information Theory	Fundamental Hardware Issues
Coding Theory and its Applications	Information Theory and Statistics
Detection and Estimation	Network Information Theory and Coding
Data Storage	Cryptography and Data Security

Invited speakers will account for roughly half of the talks. In order to afford the opportunity to learn from and communicate with leading experts in areas beyond one's own specialty, no parallel sessions are anticipated. All papers should be presented with a wide audience in mind.

Papers will be reviewed on the basis of a manuscript (A4, not exceeding 5 pages) of sufficient detail to permit reasonable evaluation. Authors of accepted papers will be asked to produce a manuscript not exceeding 5 pages in A4 double-column format that will be published in the proceedings. Authors will be allowed twenty minutes for presentation.

The deadline for submission is **September 15, 2019**. Additional information will be posted at

http://www.izs.ethz.ch/

We look forward to seeing you at IZS.

Amos Lapidoth and Stefan M. Moser, Co-Chairs

Conference Calendar

DATE	CONFERENCE	LOCATION	WEB PAGE	DUE DATE
June 02–05, 2019	Canadian Workshop on Information Theory (CWIT)	Ontario, Canada	http://cwit.ca/2019/	Passed
June 03–07, 2019	The International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless (WiOpt)	Avignon, France	http://www.wi-opt.org/	Passed
June 10–12, 2019	IEEE Conference on Communications and Network Security	Washington, D.C., USA	https://cns2019.ieee-cns.org/	Passed
June 23–26, 2019	51st Annual ACM Symposium on the Theory of Computing (STOC)	Phoenix, Arizona, USA	http://acm-stoc.org/stoc2019/	Passed
July 02–05, 2019	North American School of Information Theory (NASIT)	Boston, Massachusetts, USA	https://www.itsoc.org/conferences/schools/nasit2019	—
July 07–12, 2019	IEEE International Symposium on Information Theory	Paris, France	https://2019.ieee-isit.org/	passed
July, 15–16, 2019	Munich Workshop on Coding and Cryptography (MWCC) 2019	Technical University of Munich, Germany	https://www.lnt.ei.tum.de/en/events/2019-munich-workshop-on-coding-and-cryptography-mwcc/	July 01, 2019
August 25–28, 2019	IEEE Information Theory Workshop (ITW) 2019	Visby, Gotland, Sweden	http://itw2019.org/	Passed
September 24–27, 2019	57th Annual Allerton Conference on Communication, Control, and Computing	Allerton, University of Illinois at Urbana-Champaign, Illinois, USA	https://allerton.csl.illinois.edu/	July 08, 2019
November 9–12, 2019	60th Annual IEEE Symposium on Foundations of Computer Science (FOCS)	Baltimore, Maryland, USA	http://focs2019.cs.jhu.edu/	Passed
November 11–14, 2019	IEEE Global Conference on Signal and Information Processing (GlobalSIP)	Shaw Center, Ottawa, Canada	http://2019.ieeeglobalsip.org/	June 17, 2019
December 9–13, 2019	IEEE Global Communications Conference (GLOBECOM)	Waikoloa, Hawaii, USA	https://globecom2019.ieee-globecom.org/	Passed
February 26–28, 2020	International Zurich Seminar on Information and Communication	Zurich, Switzerland	https://www.izs.ethz.ch/	September 15, 2019

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