

IEEE Information Theory Society Board of Governors meeting minutes

ICEC, Istanbul, Turkey, 07.07.2013, 1-6pm

Edmund Yeh

Present:

Jeff Andrews, Matthieu Bloch, Helmut Bölcskei, Giuseppe Caire, Robert Calderbank, Stark Draper, Michelle Effros, Abbas El Gamal, Elza Erkip, Andrea Goldsmith, Deniz Gunduz, Siu-Wai Ho, Michael Honig, Sidharth Jaggi, Gerhard Kramer, Yiannis Kontoyiannis, P. Vijay Kumar, Muriel Medard, Urbashi Mitra, Alon Orlitsky, Paul Siegel, Emina Soljanin, Andrew Thangaraj, David Tse, Rüdiger Urbanke, Sergio Verdú, Alex Vardy, Emanuele Viterbo, Edmund Yeh, Aylin Yener, Jacek Zurada.

The meeting was called to order at 1:05pm by the Information Theory Society (ITSoc) President, Gerhard Kramer, who welcomed the Board of Governors (BoG).

1. Dr. Jacek Zurada, Chair Elect of the 2013 IEEE Technical Activities Board (TAB), gave a presentation regarding the strengthening of technical activities at the IEEE. He briefly explained the governance organization at the IEEE, and the role of TAB within the IEEE. He overviewed the key thrusts of TAB, including appeal for industrial practitioners, future technology directions, building technology communities, globalization, and leveraging education in technical activities.

The main focus of Dr. Zurada's presentation is with regards to Open Access. He noted that the classic, journal-centric model is disappearing. Journal subscriptions are being replaced either with package subscriptions by institutions, or by metered downloads by individuals. Many read just PDF/HTML downloads, while new virtual journals are appearing. The IEEE launched its own Open Access program during 2012-2013. Nevertheless, there are many challenges ahead regarding the business model of Open Access. Primarily, there still exists a mismatch between the model for reader consumption on the one side and the model for reviewing and editing on the other side.

Dr. Zurada discussed challenges for the IEEE in delivering content and services to the global body of engineers and researchers when the composition of the latter is rapidly changing. Finally, he discussed efforts to generate, curate, and offer a wide variety of educational products to members and customers. Gerhard Kramer expressed appreciation for the information provided by Dr. Zurada and thanked him for participating in the meeting.

2. **Motion:** The minutes of the BoG Meeting at ITA 2013 held at San Diego, CA, were approved.

3. **Motion:** The agenda was approved.

4. **Resolution:** Gerhard Kramer presented a Resolution for James L. Massey from the 2013 IEEE Information Theory Society Board of Governors. The text states: "RESOLUTION in Memory of James L. Massey: The IEEE Information Theory Society Board of Governors expresses its deep sorrow at the death of James L. Massey, 1988 Shannon Lecturer. It acknowledges Jim's remarkable contributions to our Society, as a scholar, teacher, mentor, and friend."

5. Gerhard presented the President's Report. Gerhard thanked Muriel for her service as President in 2012, Helmut for his service as Editor-in-Chief during 2010-2013, Michelle for organizing the Shannon stamp initiative, Aylin for staying on top of things, Paul for shepherding the renaming of the IEEE Jack Keil Wolf ISIT Student Paper Award and establishing the IEEE Thomas M. Cover Dissertation Award, Alon

for agreeing to chair the External Nominations Committee, and committee chairs Abbas, Deniz, Elza, Giuseppe, Jeff, Joerg, Matthieu, Michelle, Negar, Rob, and Sriram.

Gerhard welcomed Yiannis Kontoyiannis as our new Transactions Editor-in-Chief.

Gerhard summarized news from the recent IEEE TAB meetings Feb. 15-16 (Austin) and June 28-29 (San Diego). It was mentioned that the issue of citation count manipulation is currently being addressed. The IEEE TAB Society Review on February 14 had positive comments in general. Main suggestions include expanding non-academic membership, developing formal strategic planning including milestones, metrics, responsible persons, and resources.

Regarding the IEEE Padovani fund, Gerhard mentioned that the fund has grown to \$70k, and may grow to more than \$110k. Roberto Padovani has mentioned that he prefers the fund to be spent slowly and on North American projects. The Society needs to decide how to spend the funds on projects other than the Padovani Lectures. An ad hoc committee consisting of Mike Honig and Ubli Mitra is now gathering ideas on this issue.

Gerhard mentioned new suggested ITSoc initiatives, including the ITSoc Oscars Video competition and Lunch with the Shannon Award Winner from the Student Committee, and five video interviews from WITHITS. New IT Schools have been proposed for Australia, East Asia, India, and South America. Gerhard mentioned that although the Society can ask IEEE to use 3% of ITSoc reserves (about \$100k), external TAB constraints imply that we may have to spend less than 3% (perhaps \$50k).

Gerhard then discussed significant upcoming issues for the Society. First, due to a new distribution formula at the IEEE (adopted last year, and phased in during 2014-2016), the ITSoc budget will be going into the red for 2014, and sliding even more into the red for 2015 and 2016. The new formula gives small societies with many Xplore clicks less, and gives large societies more. Second, the Transactions is getting too big to handle with the current model. There is a consensus to reduce costs. Third, there are four Schools proposals for 2014. While we hope to fund these for 2014 from the reserves, the new budgetary constraints resulting from the new IEEE formula may limit our options. Fourth, it is likely that we must soon explore an open access option for the Transactions.

6. Aylin presented the Treasurer's report. Aylin first discussed conference closings. The closing process for ISITs, ITWs, and Schools are within the timelines IEEE suggests, and are now being completed swiftly without problems. Healthy surpluses are reported in all of them, e.g. ISIT 2012. On the other hand, 2011 ITW is still not closed. A surplus of \$22,892 was reported, and is partially in possession. For tax reasons, part of the surplus needed to be transferred to the IEEE South Brazil Section. This money needs to be transferred to the IEEE-USA account in order for the society to receive it. This problem is currently being addressed.

Aylin continued onto the 2013 budget. The budget, as finalized in November 2012, was predicting a \$159k surplus. As of May 2013, the predicted end-of-year surplus is \$120k. This is likely because we have not yet received most of the revenue due during the year. We can spend up to 50% of the amount of our operational surplus from 2012 (\$219k) on initiatives. As of Feb 2013, the budget surplus for 2012 is \$219.5k.

Regarding initiatives, Aylin noted that we currently have a \$120k-\$160k expected surplus for 2013. Using the 50% spending rule, we have up to about \$109k to spend on initiatives. We have just implemented a page budget increase (per Helmut's request) to add about \$50k to the expenses. This leaves about \$70k-\$110k for initiatives. Initiatives of less than \$50k does not require IEEE approval. Initiatives for the Student Committee Video Contest and the Lunch with the Shannon Award Winner have already been

approved. Other expected initiatives include the Online Committee initiative, WITHITS video interviews, and new schools. We need to let IEEE know of new initiatives by July 12.

Finally, Aylin noted that for 2014 the IEEE has changed the “algorithm” for calculating publication revenues. As a result, we have been presented with a 2014 budget that is projected to result in a loss (-\$35k). This is primarily due to the new algorithm leading to a significant drop in Xplore revenue.

7. Giuseppe Caire presented the Nominations & Appointments (N&A) Committee report.

Giuseppe presented the list of nominees for the 2013 IEEE Information Theory Society Board of Governors Election for a three-year term ending December 31, 2016: Andrew Barron, Sae-Young Chung, Albert Guillen i Fabregas, Tracey Ho, Amir K. Khandani, J. Nicholas Laneman, Ralf R. Muller, Joachim Rosenthal, Mikael Skoglund, Stephan ten Brink, Alexander Vardy, Emanuele Viterbo.

Motion: Vote to approve the list of nominees for the 2013 IEEE Information Theory Society Board of Governors Election. Motion was passed.

Giuseppe then called for nominations for Second Vice President, First Vice President and President for 2014. Alon Orlitsky and Ubli Mitra were nominated for Second Vice President.

Motion: Vote to approve Alon Orlitsky and Ubli Mitra as nominees for Second Vice President in 2014. Motion was passed.

Michelle Effros was nominated for First Vice President.

Motion: Vote to approve Michelle Effros as the nominee for First Vice President in 2014. Motion was passed.

Gerhard Kramer congratulated Abbas and Michelle on their election.

Motion: Vote to approve Abbas El Gamal as the nominee for President in 2014. Motion was passed.

Gerhard Kramer congratulated Abbas and Michelle on their election.

8. Abbas El Gamal presented the Awards Committee Report, which was previously emailed to BoG members.

The Awards Committee members for the IT Society Paper Award are: Abbas El Gamal (ex-officio, Chair), Michelle Effros (ex-officio), Randall Berry, Merouanne Debbah, Alex Grant, Urbashi Mitra, Young-Han Kim, Vijay Kumar, Emanuele Viterbo, Pascal Vontobel, Aaron Wagner, and Andreas Winter.

Six papers were nominated for the 2013 IT Society Paper Award. Four finalists were selected. The Committee recommends the following paper for the IT Society Paper Award:

S. Kudekar, T. J. Richardson, and R. L. Urbanke, “Threshold Saturation via Spatial Coupling: Why Convolutional LDPC Ensembles Perform So Well over the BEC,” *IEEE Transactions on Information Theory*, Vol. 57, Issue 2, pp. 803-834, Feb. 2011.

Abbas also summarized recent activity for the 2013 ComSoc-ITSoc Joint Paper Award. The committee consisted of Committee: Abbas (chair), Michelle, Emanuele; Aria, Leslie, Constantine. Ten nominations were received from both societies. The award was given to two papers:

A.S. Avestimehr, S.N. Diggavi, and D.N.C. Tse, “Wireless Network Information Flow: A Deterministic Approach,” *IEEE Trans. Inf. Theory*, vol. 57, no. 4, Apr 2011, pp. 1872-1905.

B. Nazer and M. Gastpar, “Compute-and-Forward: Harnessing Interference Through Structured Codes,” *IEEE Trans. Inf. Theory*, vol. 57, no. 10, Oct 2011, pp. 6463-6486.

Motion: Vote to approve the Awards Committee Report. Motion was passed.

Motion: Vote to approve the awarding of the 2013 IT Society Paper Award to the recommended paper by S. Kudekar, T. J. Richardson, and R. L. Urbanke. Motion was passed.

Discussion ensued on the nomination process for the Paper Awards. It was suggested that more efforts should be made, e.g. through advertising, to solicit paper award nominations. It was also suggested that more quantitative measures could be used for determining the paper awards.

9. Michelle Effros presented the Membership & Chapters Committee Report. The committee members are Sae-Young Chung (2012-2013), Michelle Effros (chair, ex-officio), Michael Gastpar (2012-2013), Negar Kiyavash (2013-2014), Joerg Kliever (2013-2014), Andrew Thangarai (2012-2013), and Sriram Vishwanath (2013-2014).

Michelle summarized the ITSoc membership by geographic region. Membership trends currently show a decline in normalized terms, relative to overall IEEE membership. Michelle summarized recent chapter activities, which include Distinguished Lecture events, workshops, and short courses.

The IEEE Information Theory Society Membership and Chapters Committee has selected the Swedish Joint Information Theory, Vehicular Technology, Communications, and Information Theory Chapter as the winner of the 2013 Chapter of the Year Award, with the citation “for promoting Information Theory through an inspiring list of invited speakers, technical workshops, and innovative student awards.” Notably, the chapter has established the new Chapter Best Student Journal Paper Award and Best Student Conference Paper Award.

Emina Soljanin has been selected as the 2013 Padovani Lecturer. Her lecture, titled “The Secret Lives of Codes: From Theory to Practice and Back” was presented at the 2013 North American School of Information Theory on June 5, 2013.

10. Michelle presented the Report of the Ad Hoc Committee on Outreach and Education. The committee was formed in 2011 with the charge “Consider a range of outreach goals / activities; advise BoG on possible roles for the Society.” Current members are Michelle Effros (chair), Gerhard Kramer, Ubli Mitra, Vince Poor, Paul Siegel, and Lizhong Zheng.

Priorities of the committee include funding agency interactions, visibility/recognition, connecting with other communities, and the Shannon Stamp Proposal. Current thrusts include the IT Channel (How Stuff Works, IT Video contest), and the Shannon Stamp Proposal, which has already collected many endorsement letters.

11. Rob Calderbank presented the 2013 IT Fellows Selection Committee report. The committee members are Helmut Boelcskei, Andrea Goldsmith, Alon Orlitsky, Tom Richardson, Raymond Yeung, and Rami Zamir. Fourteen nominees were considered this year. Rob described the procedure used for ranking Fellow candidates.

A discussion followed the report. It was suggested that IT society needed younger nominees for IEEE

Fellow. Many possible candidates are often overlooked, and more nominees would be welcome. Perhaps the committee could find nominators. It was also suggested that the Newsletter feature the new fellows.

12. Elza Erkip presented the Conference Committee Report. Elza pointed to recent ISIT trends (850-900 participants, 9 parallel sessions). ISIT travel grants are strongly supported by the NSF and IBM. It was announced that Andrea Goldsmith has graciously agreed to host an ITW in Napa, CA in Fall 2016.

There are currently two proposals for ISIT 2017, one from Aachen (Rudi Mathar, Gerhard Kramer) and one from Glasgow (Vladimir Stankovic). There is a possible third proposal from Daniela Tuninetti and Randy Berry for an ISIT in Chicago in 2017. Beyond 2017, there is interest in hosting ISIT from Stockholm (Lars Rasmussen), Melbourne (Emanuele Viterbo), and New York (Aaron Wagner, Roy Yates).

A discussion on ISITs followed. It was suggested that conference organization is primarily a volunteer effort, and therefore the BoG should consider submitted proposals before soliciting proposals. Although rotation between North America and elsewhere is no longer a requirement, there were concerns that a significant fraction of IT membership still lies in North America and there are frequently visa issues with students attending ISITs outside North America. At the same time, members and students outside of North America have a similar problem when ISITs are held in North America. It was suggested that decisions on future ISITs be made at one BoG meeting, which is typically at ISIT.

13. ISIT 2017 proposal presentations. Rudolf Mathar presented the proposal for ISIT 2017 in Aachen, Germany. Aachen is located in the heart of Europe, 2-3 hours by train from Frankfurt. Two time slots are available: July 9-14, or July 16-21, 2017. The General co-chairs are Rudolf Mathar and Gerhard Kramer. The TPC co-chairs are Sennur Ulukus, Stephen Hanly, Martin Bossert, Stephan ten Brink. The venue is Eurogress, with the reception held in the Coronation Hall. The registration for IEEE members (advance) will be 600 euros. It is expected that more sponsorship will lower registration costs. The total cost is estimated to be 454,000 euros.

Deniz Gunduz presented the proposal for ISIT 2017 in Glasgow, Scotland, UK, for July 10-14, 2017. Glasgow is an experienced convention city, with easy travel access. The bid is well supported by the local government, with 17,000 pounds support from the city. The organizing committee include Bahram Honary, Zixiang Xiong, Vladimir Stankovic, Deniz Gunduz, and Edmund Yeh. The total estimated conference budget is 418,550 pounds, with a 10% surplus. The IEEE advance registration rate will be 600 pounds. The proposed venue is the Scottish Exhibition and Convention Centre.

Discussion, comments, and questions on the proposals followed. Discussion also took place on whether or not to vote on the proposals at the meeting.

Motion: To approve the proposal for ISIT 2017 from Aachen, Germany. Motion was passed.

14. IT Schools. Stark Draper presented the report on the 7th North American Summer School in Information Theory (NASIT), to be held at the Field Institute in Toronto, Canada, June 18-21, 2014. At the School, Distinguished Lecturers will present long-format (2 1/2 hour) tutorials. Students will present their work in poster sessions, which will be prefaced by one minute madness sessions in which students pitch their poster topics and results in 60 seconds. There will be social events and awards.

The 2014 cost is estimated to be \$50,000 for 120 students. The School organizers (lead: Stark Draper; advisors: Frank Kschischang, Gerhard Kramer, Aylin Yener) request \$20,000 of support from ITSoc.

Motion: To approve \$20,000 as support for the NASIT in Toronto, Canada, 2014. Motion was passed.

Siu-Wai Ho presented the report on the proposed Australian School of Information Theory (AuSIT), 11/9/2014-11/14/2014. The organizing committee consists of Siu-Wai Ho, Roy Timo, Gottfried Lechner, Badri Vellambi. The advisory committee consists of Alex Grant, Terence Chan, Emanuele Viterbo, Stephen Hanly. Four lecturers have been invited, with three confirmed. The format will consist of poster sessions and an open problem workshop. The estimated number of attendees is 120, and the estimated budget is \$22.1k. The School seeks IT Society support of \$20k.

Sidharth Jaggi presented the report on the proposed East Asian School of Information Theory (EASIT 2014), to be held at the Chinese University of Hong Kong (July 6th to 12th, 2014). The organizing committee consists of Sidharth Jaggi, Chandra Nair, Sae-Young Chung, Vincent Tan, Mehul Motani Hsuan-Jung Su, Ning Cai, Wei Kang. The advisory committee consists of Gerhard Kramer, Raymond Yeung. The tentative program consists of four hour morning lectures for five days (Monday-Friday) and student posters/activities in the afternoon. The total cost for the School is estimated to be \$16.3k-22.5k USD (excluding travel grants/dinner). Various sources of support exist in Hong Kong. The School asks for \$20k of support from ITSoc.

Andrew Thangaraj presented the report on the Joint Telematics Group (JTG) Summer School to be held in India in May or June 2014. The organizer committee consists of Rajesh Sundaresan, Navin Kashyap, Vinod Prabhakaran, Sibiraj Bhaskaran Pillai. The advisory committee consists of Prakash Narayan, B. Sundar Rajan, P. Vijay Kumar. The JTG involves six of the leading IITs in India and has held a summer school since 2008. The School focuses on topics at the forefront of research in information theory, communications, networking, signal processing, particularly emerging problem areas. The format involves four days, two topics, two hours of lecture plus one hour discussion in the morning and afternoon. Presentations involve student research and/or open problems. The sessions are advanced, intense, rigorous, and primarily aimed at research students and young faculty. Past summer schools have featured well known members of the IT community. The budget for the 2014 school is estimated to be \$23k. The School asks for \$20k of support from ITSoc. It's noted that the name of the School can be changed if there is sustained funding support from ITSoc.

A discussion on the JTG summer school followed. It was asked how the School will be different after IT Society sponsorship. Will the name of the School change? It was suggested that the School prominently display IT sponsorship. Perhaps student membership in the IT Society can be linked to attendance at the School. Aylin noted that with the change in IEEE revenue formula, additional sponsorship of Schools may put the Society at a disadvantage. It was noted that one of the original purposes of the Schools is to boost society membership, and therefore sponsorship of the Schools should be designed to incentivize membership. Perhaps the Society constitution should be revised to reflect this. It was noted that the constitution will be examined at the officer retreat at ITW in Seville.

Motion: To approve funding at \$10k each for the Australian, East Asian, and JTG Summers Schools for 2014. Subject to IEEE approval, approve the use of reserve funding to fund each of the three Summer Schools at \$20k. Motion was passed.

15. Helmut Boelcskei presented the EiC Emeritus Report on the IEEE Trans. IT. Helmut acknowledged the retired associate editors and presented the current editorial board. Helmut noted that the number of submitted papers continues to climb, to more than 1100 in 2012. The projected page count for 2013 is 8000, with 8500 needed to empty the queue. The average number of pages per paper has grown to about 15. The acceptance rate has gone down to about 37% in 2012.

Motion: Increase 2013 page budget to 8500 pages, at a cost of \$50k. Motion was passed.

Helmut recommended that the page budget for 2014 be set to 8500 pages, at a cost of \$50k. Aylin suggested that a switch to moderate editing of the Transactions can offset this additional cost. It is agreed that the discussion on the page budget for 2014 be postponed until the issue of moderate editing is decided.

Helmut pointed out that the impact factor (IF), eigenfactor (EF), and article influence (AI) of the Transactions have recently gone down, although the total number of citations remains very high.

The pub-to-print time (running average) for the Transactions remains just below 100 weeks. The delays do not seem to be caused by revision time or AE turnaround time. In order to expedite the process, Helmut stated the policy that “in view of its concerns about excessive reviewing delays in the IT Transactions, the BoG authorizes the EiC in his sole judgment to delay publications of papers by authors who are derelict in their reviewing duties.” It was suggested that automatic reminders to reviewers are very important.

Helmut stated the new editorial policy that “submissions in the editorial area of sequences will be accepted for review only if they are clearly outstanding contributions. Else, they will be processed only if their motivation is not primarily mathematical and if they relate to information and/or coding theory.” In addition, “submissions in the editorial area of cryptography will be accepted for review only if they relate to information and/or coding theory or are clearly outstanding contributions to cryptography.” Helmut acknowledges that the number of crypto submissions has gone down, and that the Transaction is not attracting the top papers in this area.

With respect to the production process, Helmut evaluated a number of different editing services for language and style, and suggested that PreMedia Global (recommended by IEEE), costing 45 USD/page, offers good quality services. By switching to moderate editing, the Society would save \$126k per year (assuming 8000 pages). Accepted papers would get screened for inadequate language quality, and authors will bear the cost of editing from PreMedia Global.

Much discussion ensued on the topic of moderate editing. It was suggested that area editors should decide which accepted papers need to be edited for language quality. It was noted that the editors should already be aware of any language deficiencies through the first rounds of editing. On the other hand, this still creates an additional burden for the editors.

Motion: Switch to moderate editing for the Transactions. Authors whose papers require language editing shall pay for the services from PreMedia Global. The mechanism for deciding which papers should be edited is to be left open.

Motion: Switch to moderate editing, with the editing for language quality being at the discretion of the editor, and the language editing not incurring any cost to the Society.

Motion: Table the motions until the next BoG meeting. Motion was passed.

It was suggested that more discussions on moderate editing are clearly needed. Going to moderate editing would free up more financial resources to support new initiatives for the Society. On the other hand, perhaps the Society does not need to stay in the black all the time, with respect to the budget. Some are hesitant to put the burden of the editing charges on the authors.

Helmut ended with some parting thoughts and recommendations. The Transactions are big and growing, while reviewing resources are very limited. This places a huge burden on AEs and the EiC. The key to quality and timeliness is to make no compromises when appointing AEs. We should reappoint excellent AEs and (re-)appoint senior people. We should monitor editorial areas where we no longer get the highest

quality papers. Fast-rejects are indispensable, and we should not let the acceptance rate get out of control. Finally, be very conservative with special issues.

A big round of applause was given to Helmut for his outstanding tenure as EiC.

16. Yiannis Kontoyiannis, the incoming EiC, presented the “Publications Future” report.

Yiannis thanked the EiC Search Committee and Board of Governors, the past and present Executive Editorial Board Members, Sergio Verdu, and Helmut Bolcskei. He presented the vision for the future Transactions: maintain the Transactions’ extremely high quality and keep up with the high number of submissions. At present the editorial process is marginally stable, but there are several possible improvements.

Motion: Approve the proposed Executive Editorial Board for the Transactions, consisting of G. David Forney, Jr., Prakash Narayan, Vincent Poor, and Shlomo Shamai (Shitz). Motion was passed.

Yiannis presented a request for an Administrative Assistant to the Editor-in-Chief of the Transactions. The job description includes part-time, 20-hour/week administrative support, general email and correspondence, maintain historical files on various types on Transactions data (especially those that need to be done by hand), maintain and update the Transactions web page, obtain Pareja back-ups, maintain AE assignment logs, provide general technical/computing support, miscellaneous secretarial and office support. The recommended salary is 850 euros/month [after taxes, social security, university overhead etc.]. The total cost is approximately 20000 euros per year.

Motion: approve \$25,000 per year for an administrative assistant to the EiC, starting immediately. The motion was passed.

17. Jeff Andrews presented the report of the Ad Hoc Committee on New Directions in IT Society Research. The committee members are Jeff Andrews (chair), Andrea Montanari, Michelle Effros, Olga Milenkovic, Alex Dimakis, Lara Dolecek, Muriel Medard, Sriram Vishwanath.

Jeff pointed out that this effort resulted from the IEEE asking its societies to come up with a document detailing “Future Directions.” The outcome report from this effort can be used for various purposes, including seeding agency funding ideas. The plan is to emphasize the generality and universality of IT as a serious scientific discipline, tout its past triumphs and established intersections with and contributions to other fields, provide a concise conjecture on areas for potential growth, new synergies, and articulate exciting open areas.

The committee hopes to develop an updated diagram of existing and future intersections between information theory and other fields (in the manner of Cover and Thomas). These other areas include communications, networking, control theory, signal processing, physics, statistics and learning theory, computer science, genetics and molecular biology, neuroscience, economics and finance. The committee actively seeks input from the BoG and the society at large with regards to this effort.

The meeting was adjourned at 6:10 PM.