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SISTER AND RELATED SOCIETIES

Sister and Related Societies: Reaching Out to ComSoc's Global Community

Interview with Curtis Siller, Director of Sister and Related Societies

By Stefano Bregni, Vice-President for Member and Global Activities, and Curtis Siller, Director of Sister and Related Societies

Following the series of articles published about two years ago during my previous term as Vice-President for Member Relations, with this issue we begin a new series of eight interviews with the Directors of the IEEE ComSoc Member and Global Activities Council, which will be published every month in the Global Communications Newsletter.

In this series of articles, I will introduce the six Directors on the Member and Global Activities Council (namely: Sister and Related Societies; Membership Services; AP, NA, LA, EMEA Regions), and the Chairs of the Women in Communications Engineering (WICE) and Young Professionals (YP) Standing Committees. They will present their sector activities and plans.

Stefano Bregni

Curtis Siller

Opening the series, this month we begin with Curtis Siller, Director of Sister and Related Societies. Curtis has served on the IEEE Communications Society Board of Governors for 18 years. Among his service to our society, he was President (2004–2005), a Director for three terms and a Vice-President for two terms. He was an IEEE Division Director and Editor-in-Chief of IEEE Communications Magazine in 1993-1995. Curtis is an IEEE Life Fellow. He worked for more than 30 years at Bell Labs (where he was named a Bell Labs Fellow), then later in several other high-tech and consulting companies.

Bregni: Curtis, let us begin by explaining what are the Sister and Related Societies of ComSoc.

Siller: The IEEE Communications Society has a long tradition of global outreach. Dating back more than 20 years, ComSoc instituted a novel program of entering into relationships with Sister and Related Societies. Sister Societies are those that have a charter that overlaps ComSoc's technical scope. These are usually national professional societies. Related Societies are those whose focus complements but does not overlap ComSoc's technical orientation.

Bregni: Are Sister and Related Societies important elements in ComSoc's strategy toward globalization?

Siller: They certainly are! Both are important ingredients in ComSoc's international initiative. Allow me a moment to share a few benchmarks. As a robust Society, ComSoc is among IEEE's most prominent Organizational Units, with a membership that exceeds thousands and is experiencing membership growth.

Notably, 2004 was a very significant year. It was then that our Society transitioned to having more international members than those in the United States. Today, less than half of our membership is in the United States. More are international, with especially significant growth in Asia and Southeast Asia. By way of contrast, IEEE, our parent organization, attained a majority of international membership in late 2011/early 2012, nearly eight years later.

Bregni: To how many Sister Societies worldwide is ComSoc linked?

Siller: A full list of Sister and Related Societies is found at **www.comsoc.org/about/sistersocieties** There you will find that ComSoc has reached out to more than 30 Sister Societies worldwide and a variety of Related Societies. Each of those societies adds to our global community! In early 1995, six societies entered into these agreements. Since then, the number has grown several times, as noted above.

Bregni: How does ComSoc reach out to Sister and Related Societies? Are our relationships regulated in some way? And what types of activities are mainly addressed by cooperation?

Siller: There are at least two essential elements that bind us to these societies: conferences and publications. We'll share more about that in a moment. The bases for these relationships are two Memoranda of Understanding (MOUs). Generally, these span two to four years, with the ComSoc President and a corresponding Sister or Related Society president as signatories. Essential ingredients include: submission of papers to ComSoc conferences, journals, transactions, and magazines; discounted participation at our conferences; discounted subscriptions to ComSoc publications; affiliate memberships in ComSoc; streamlined technical co-sponsorship of conferences; participation in ComSoc technical committees; and advertising promotions.

Bregni: Tell us something more about Related Societies.

Siller: In addition to Sister Society agreements, ComSoc enjoys Related Society agreements. These naturally include operational units within IEEE, such as the Signal Processing, Computer, Circuits and Systems, and Power and Energy Societies. Among those outside of the IEEE, let me note the East-West Institute, a "think tank" in New York City that is dedicated to facilitating world harmony, and the Pacific Telecommunications Council.

Bregni: In conclusion, would you share with us your plans going forward as Director of Sister and Related Societies?

Siller: The opportunities are numerous. MOUs that are expiring need to be renewed, and additional societies, not yet among those noted above, need to be identified. Additionally, elements will be added to these agreements to make them more meaningful to the Sister and Related Societies and for ComSoc. Further, in the past I think there has been little direct, personal contact between ComSoc members and individuals in our reciprocal organizations. One way to enhance these contacts is to offer social events at ComSoc's most notable international conference and meeting venues so we can greet each other on a personal level and discuss ideas that would bond us more fully.

ComSoc celebrates all of these relationships. They are essential to our presence in the world community. Please contact me if you know of other societies that might invite our engagement.

CONFERENCE REPORT

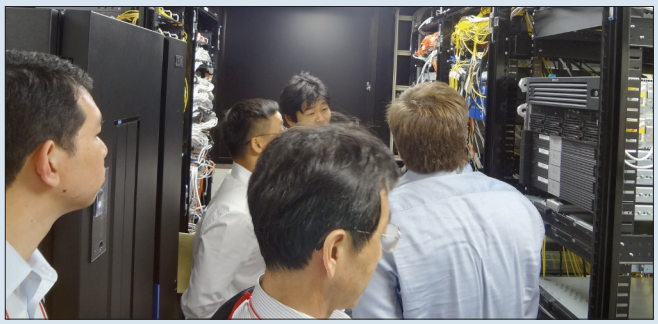
Highlights from IEEE HPSR 2016: 17th International Conference on High Performance Switching and Routing

By Naoaki Yamanaka, General Co-Chair, Keio University, Japan; Eiji Oki, TPC Co-Chair, The University of Electro-Communications, Tokyo, Japan

The IEEE 17th International Conference on High Performance Switching and Routing (HPSR 2016) was held at Keio University, Yokohama, Japan, on 14-17 June, 2016. Yokohama is a major port city to the south of Tokyo. The conference was sponsored by the IEEE Communications Society and the IEICE Communications Society, and was co-located with 12th International Conference on IP+Optical Network (iPOP). The conference was supported by the IEICE Photonic Network Technical Committee, the National Institute of Information and Communications Technology, Japan, the Support Center for the Advanced Telecommunications Technology Research Foundation, Japan, and the Yokohama Convention & Visitors Bureau, Japan.

HPSR addresses numerous challenges of today's data networks, which are being subjected to significant changes driven by cloud computing, the Internet of Things, and other new concepts. As a result, new technologies are needed to efficiently and effectively cope with the resulting traffic demands. This conference brought together researchers from around the world to present the latest advances in the fields of high-performance switching and routing. The participants discussed switching and routing capabilities that ought to be more intelligent, efficient, and reliable than ever before.

The conference program included a rich technical program comprising 31 excellent technical full-paper presentations and eight poster-paper presentations, three keynote speeches, one invited speech, four tutorials, technical tours, and workshop presentations. The number of participants was 101 (including 69 from academia, 26 from industry, and four from government, among others).



Technical visit.

Conference lunch.

HPSR Best Paper Award ceremony at banquet. From left to right: Naoaki Yamanaka, General Co-Chair, Andrew Mundy, Award Recipient, and Eiji Oki, TPC Co-Chair.

Plenary session at Fujiwara Memorial Hall.

Walking tour in Yokohama bay area.

A total of 80 eligible papers were submitted from 26 countries, including Asia, North America, and Europe. The submitted papers were carefully peer-reviewed by our Technical Program Committee (TPC). Each paper received at least three reviews, thus hopefully providing valuable feedback to the authors and ensuring high confidence in the outcome of the review process. In total, the TPC completed 302 reviews, for an average of 3.8 reviews per paper. For each track, the accepted papers were selected based on all the review results, including reviewers' comments.

On Tuesday, three tutorials were offered. Abbas Jamalipour (University of Sydney, Australia) spoke about scaling dense-traffic cellular networks through software defined networking. Noriaki Kamiyama (Osaka University & NTT Network Technology Laboratories, Japan) presented a tutorial on advances in reducing Web response time. Dimitri Papadimitriou (Nokia - Bell Labs, Belgium) reviewed a number of open challenges in network optimization. Each tutorial attracted approximately 70-80 attendees.

On Wednesday afternoon, two keynotes were delivered at the HPSR and iPOP joint plenary session. Before the two keynotes, a piano concert was held. Rutsuko Yamagishi, renowned pianist, played F. Liszt and S. Rachmaninov on the piano at Fujiwara Memorial Hall at Keio University. Ken-ichi Sato (Nagoya University, Japan) gave a keynote on how optical technologies are expected to help mitigate the adverse effects of the imminent demise of Moore's Law. Tarik Taleb (Aalto University, Finland) presented

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CHAPTER REPORT

Talk of Desmond McLernon from Leeds University at IEEE Jordan ComSoc Chapter

By Ala' Khalifeh, IEEE ComSoc Jordan Chapter

The IEEE Jordan Communications Society chapter had a vibrant start in 2016. On Thursday 19 May, 2016, the chapter organized a technical talk by Dr. Desmond McLernon from Leeds University titled "Applications of Mobile Robots and Drones in Future Wireless Communication Systems" at the German Jordan University. The talked was originally geared toward academics and professionals.

Surprisingly, many students attended the talk. As organizers, we felt some unease since the talk's content was technically beyond the B.Sc. level taught to our students. So we expected the students to lose interest and miss the main objective of the talk, which is to engage engineers in serving the community's needs by researching new technologies. However, the talk "engineered" such that all the audience (including us) left the auditorium pleased.

First, the speaker credited the talk to his students. The reaction of our students was memorable when the speaker crossed out his name from the introductory slide and put the name of his student. Furthermore, the mathematical ideas in the talk were presented as logical and intuitive concepts in lieu of rigid equations. Also, to aid in explaining some problems encountered in the research presented, famous mathematical examples were used such as the marriage problem from optimal stopping theory. The interest of the audience, academics and students alike, was evident in the question and answer session after the talk.

A group picture with Dr. Desmond McLernon surrounded by the students who attended the lecture.

In conclusion, we were thrilled by how this talk was received, and we encourage our speakers to engage B.Sc. level students in research oriented events.

About the IEEE Jordan Section

The IEEE Jordan Section was established in 1999. The membership in this section is generally rising and reached more than 1,000 members in 2014. About two thirds of these members are student members. The section has four active chapters, two active affinity groups, and eight active student branches. The four chapters are: Joint Computational Intelligence Society and Computer Society Chapter; Communications Society Chapter; Joint Power and Energy/Dielectrics Society and Electrical Insulation Society Chapter; and the Robotics and Automation Society Chapter. The two affinity groups are the Women in Engineering Affinity Group and the Young Professionals Affinity Group.

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CONFERENCE REPORT

International Symposium on Networks, Computers and Communications (ISNCC): The Flagship Event of the IEEE ComSoc Tunisia Chapter

By Tarek Bejaoui – IEEE ComSoc Tunisia Chapter Chair

The IEEE Communications Society Tunisia Chapter has been in operation since June 2009. From its inception, major steps have been taken to expand its activities, and its outstanding success could not have been achieved without the hard work and persistence of its volunteers.

Currently, the IEEE ComSoc Tunisia Chapter is actively engaged in various actions, including distinguished lecturers tours, technical lecturers, and conferences. This year, the Chapter was pleased to support ISW-5G, a winter school on 5G Networks and Technologies, and ISNCC 2016, the International Symposium on Networks, Computers and Communications, held 11–13 May, 2016 at Hammamet, Tunisia.

This flagship conference, technically co-sponsored by the IEEE and the IEEE Tunisia Section, in addition to the IEEE ComSoc Tunisia Chapter, covered theoretical and practical aspects related to information systems, communication networks, and computing technologies. Its multi-thematic program focused on the major future scientific challenges related to these fields.

The conference featured a strong technical program in the area of networking, communications, and information technology, and the Technical Program Committee members took on the challenging job of evaluating the submitted papers. Their dedicat-

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ISNCC 2016 conference session attendees.

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a keynote on network softwarization toward 5G. On Thursday morning, a keynote was presented by Akihiro Nakao (University of Tokyo, Japan) on the software defined data plane and applications. The joint plenary attracted more than 300 attendees.

The technical program, from Wednesday through Friday, comprised eight regular technical sessions: Data Center Networks, Routing, Optical Switching and Networking, Software Defined Networks, Secure and Green Technologies, Switches/Packet Processors/Traffic Monitoring, Network Virtualization, and Resource Allocation. On Thursday afternoon there was a poster session with eight poster presentations, and a workshop on high performance IP and photonic networks including 18 poster presentations. On Friday morning, Luigi Rizzo (Università di Pisa, Italy) gave an invited talk focusing on how to build efficient network data planes in software, and Dimitri Papadimitriou (Nokia–Bell Labs, Belgium) gave an invited talk on research challenges and perspectives toward Information-driven networks.

As a part of the conference technical program, on Tuesday two technical tours were conducted, one on the Keio K2 Campus to visit advanced science and technical labs, and one of Keio Digital Media Contents (DMC) to emphasize research on digital media and content. The Keio K2 Campus tour, which was guided by Naoaki Yamanaka (Keio University), included three lab visits and technical demonstrations, covering the robotics and artificial technology project dedicated to advance medical sciences; the photonics polymer project for innovative ultra high-definition liquid-crystal displays; and the elastic lambda aggregation project for high-speed future networks. The elastic lambda aggregation project, which is one of the largest Japanese national projects in the area of elastic optical networks, presented the first live demonstration of elastic multi-port wavelength selective switches. The entire tour was enjoyable and the percipients learned new technologies via lectures from top-leading professors and researchers. The Keio DMC tour was guided by Kunitake Kaneko (Keio University). Participants experienced the same content of a testing movie, but taken in different environments. Moreover, the participants experienced a demonstrated 3D movie, which is one of the innovative future high-speed network applications. The participants were allowed to see the server room of the system. This studio is not only doing the testing but also managing the archive of the media. Apart from the studio, researchers of this lab introduced their works. After the two tours were finished, more than 70 participants attended the Get Together Party, which was conducted at the Yagami campus, Keio University.

Before the conference banquet on Tuesday, the Yokohama walking tour was held. The walking tour covered about 2 km in the Yokohama bay area. The walking tour started at Minatomirai station and reached Peking Hanten Restaurant, Chinatown, which was the banquet venue.

During the banquet, the conference best paper award was presented to Andrew Mundy, Jonathan Heathcote, and Jim D. Garside (University of Manchester, United Kingdom) for their paper entitled "On-chip Order-Exploiting Routing Table Minimization for a Multicast Supercomputer Network." Andrew Mundy received the award certificate plaque and Japanese traditional happi coat from Eiji Oki. The best paper was selected by the HPSR 2016 Award Committee based on all the review results, including reviewers' comments and reviews by the Committee.

Malathi Veeraraghavan and Weiqiang Sun, HPSR 2017 TPC Co-Chairs, announced that the next HPSR would be held in Campos do Jordão, Brazil, on 27–30 June, 2017. More information can be found at http://www.ieee-hpsr.org/

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ed and professional work made ISNCC 2016 a very successful event.

The IEEE Communications Society Tunisia Chapter generously sponsored the keynote talks that were at the technical leading edge. The conference attendees fully enjoyed the talk given by Prof. Ashfaq Khokhar from Illinois Institute of Technology, USA, discussing Big Data Challenges related to Electronic Health Record Systems. They benefited tremendously from the speech given by Prof. Giuseppe Bianchi from The University of Roma Tor Vergata, Italy, about Software Defined Networking (SDN), and took full advantage of the experiences and lessons learned about Autonomic Cyberdefense that were shared by Prof. Zonghua Zhang from Telecom Lille, France.,

In addition to the technical program, ISNCC attendees enjoyed the beautiful and attractive Hammamet. It is the major tourist destination in Tunisia, best known for its wide sandy beaches and water sports.

The next edition of this conference (ISNCC 2017) will take place in Marrakesh, the magical "Red City" of Morocco. The Technical Committee is composed of senior researchers with a strong background, and the program will feature highly reputable keynote speakers from the scientific and research community. Stay tuned!

Jordan Chapter/*Continued from page 3*

The eight student branches are in the following Jordanian universities: Hashemite University, The University of Jordan, Yarmouk University, Jordan University of Science and Technology, Princess Sumaya University for Technology, Al-Balqa Applied University, Mutah University, and Al-Hussein Bin Talal University.

The section organizes several activities, including organizing the biannual IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT) conference series, technically co-sponsoring local conferences, conducting technical and professional lectures and workshops, and holding the annual general meetings, in addition to a large variety of student activities.

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