GCN GLOBAL COMMUNICATIONS NEWSLETTER

January 2019
ISSN 2374-1082

INTERVIEW

ComSoc North America Region

Interview with Wahab Almuhtadi, Director of the NA Region

By Stefano Bregni, Global Communications Newsletter Editor in Chief, Vice-President for Conferences, and Wahab Almuhtadi, Director of the NA Region

This is the seventh article in the series of eight, started in May 2018 and published monthly in the IEEE ComSoc *Global Communications Newsletter*, which covers all areas of IEEE ComSoc Member and Global Activities. In this series of articles, I introduce the Vice-President and six Directors on the Member and Global Activities Council (namely: Sister and Related Societies; Membership Services; AP, NA, LA, EMEA Regions) and the two Chairs of the Women in Communications Engineering (WICE) and Young Professionals (YP) Standing Committees. In each article, one by one they present their sector activities and plans.

In this issue, I interview Wahab Almuhtadi, Director of the North America Region (NA). Wahab is a professor and coordinator of the Algonquin College/Carleton University Joint Degree Program "Bachelor of Information Technology/BIT-PLT." He is also R&D Coordinator for the Algonquin Faculty of Technology and Trades. Prior to that, he worked with Nortel as a Team Leader and Senior System Engineer in Optical Solutions R&D.

Stefano Bregni

Wahab Almuhtadi

He is the Algonquin Applied Research founder leading to $10.5M in funding from various Canadian agencies, and the founder/designer of the $5M leading-edge Optophotonics Lab/Optical Transport Network. He is an EIC Fellow. He has served at various office levels of IEEE for more than 24 years.

His most important positions in IEEE include ComSoc-North America Board Director (2018-2019), President of the IEEE Consumer Electronics Society (CESoc) (2019-2020), Vice President for Education of IEEE CESoc (2017-2018), and Chair of the ComSoc/CESoc/BTS Ottawa Joint Chapter (2008-present). He has chaired and organized more than 29 conferences. He is the Executive Chair of the IEEE ICC 2021-Montreal, and was the Executive Chair of IEEE ICC 2012-Ottawa.

Today, it is a true honor and pleasure for me to interview Wahab and offer him this opportunity to outline his current activities and plans as Director of the North America Region.

Stefano: Wahab, we might begin by outlining the main characteristics of the ComSoc North America Region.

Wahab: The ComSoc NA Region (http://na.regions.comsoc.org) covers a huge geographical area that consists of the United States and Canada. Based on IEEE MGA distribution, the NA Region covers 11 IEEE Regions (Region 1-6 in the United States, and Region 7 in Canada). ComSoc has 216 Chapters (NA: 95, EMA: 51, SA: 25, and AP: 45). As you can see, the NA Region has 95 local chapters, which means almost half of the total number of ComSoc chapters worldwide are in the NA Region.

NAR is a community comprised of a diverse group of industry professionals with a common interest in advancing all communications technologies. To that end, the Society sponsors publications, conferences, educational programs, local activities, and technical committees that:

- Foster original work in all aspects of communications science, engineering, and technology.
- Encourage the development of applications that use signals to transfer voice, data, image, and/or video information between locations.
- Promote the theory and use of systems involving all types of terminals, computers, and information processors; all pertinent systems and operations that facilitate transfer; all transmission media; switched and unswitched networks; and network layouts, protocols, architectures, and implementations.
- Strongly advance developments toward meeting new market demands in systems, products, and technologies such as personal communications services, multimedia communications systems, enterprise networks, and optical communications systems.

Stefano: You organized and chaired the 35th North America Region Chapter Chairs Congress (NA-RCCC) in Kansas City, MO, USA this year on May 19-20. Would you like to outline what was the main objective of this NA-RCCC, what was its focus, and what have been its outcomes?

Wahab: The objective of NA RCCC 2018 was to be a forum that provides the chapter chairs with focused training and workshops that will help the chairs maintain chapter vitality, increase chapter activities, and serve their members and communities. The Congress encourages sharing, feedback, and networking among chapter chairs, ComSoc officers, and staff.

The focus this year was to address the main issues concerning the membership and the retention of our Society. The theme of the Congress is "Let's Work Together as One Team to Increase ComSoc Activities that Leads to Membership Increase and Retention." The Congress had a lot of dynamics, interaction, and sharing among the chapter chairs, ComSoc Officers, staff, and trainers. Many topics were presented and discussed at the NA RCCC 2018, and the Chapter Chairs participated in training and workshops on how to use vTool as well as training on MD.

The outcomes: Many hot topics, challenges and suggestions were raised by NA Region Representatives and Chapter Chairs at the NA RCCC 2018. Based on that, five key recommendations were suggested for ComSoc BoG consideration by the IEEE ComSoc North America Board at the F2F meeting on May 20. These five recommendations were then presented at the ComSoc BoG F2F Meeting on May 22 in Kansas City for implementation:

1. Marketing: BoG to request that the Marketing Committee create a "30sec – 3min – 30min" pitch (what it is, why, what value and how to take advantage), adjusted to member types (i.e., members, students, professionals, academics, government, etc.).

2. Region and Chapter Matters: Empower volunteers at the four ComSoc Regions and the ComSoc chapter levels to function more

(Continued on Newsletter page 4)

CONFERENCE REPORT

ICIN 2018: Innovation in Clouds, Internet and Networks

By Rogier Noldus, Ericsson Telecommunicatie, Nederland, and Noël Crespi, Institut-Mines Télécom, Télécom SudParis Evry, France

ICIN 2018, the 21st edition of the long-standing ICIN conference series, took place on 20–22 February, in Paris, France. It was technically co-sponsored by IEEE ComSoc and IFIP, and held in cooperation with ACM Sigmobile, with Orange, Nokia and Gandi being patrons (gold, silver, bronze, respectively). The conference was attended by 125 delegates from around the globe, representing academia, research institutes, standardization organizations, network operators and equipment vendors. As with all previous editions of ICIN, from the first edition in 1989 onward, ICIN 2018 provided presentations on the latest research and development projects in the field of mobile communications, along with sharing market experiences, discussing trends and setting out directions for industry.

The main theme of ICIN 2018 was "5G Network Architecture and Solutions," a topic that a large cross-section of the operators, equipment vendors and academia and research institutes in the area of telecommunications, are currently working on. The overall organization of the conference was in the capable hands of the general co-chairs, Prosper Chemouil, Orange Labs, France, and Bruce Maggs, Duke University and Akamai, USA. The TPC was formed by Laurent Ciavaglia, Nokia Bell Labs, France, and Rahim Tafazolli, University of Surrey, UK. The conference steering committee was chaired by Noël Crespi, Institut Mines Telecom, France. Out of 85 submissions, the TPC selected 24 full papers and 13 short papers.

Christian Jacquenet, Orange Labs, France, gave a keynote presentation on Dynamic Service Negotiation in 5G Networks. The concept of Network Slicing in 5G networks requires careful network management, to ensure availability of network resources when requested, at the negotiated QoS. The presentation taught, among other things, the role of SDN in this framework. Pierre Lynch, Ixia Solutions Group, Keysight Technologies, USA, gave a keynote presentation on Validating 5G. The presentation took the audience through the 5G network architecture and presented novel approaches for isolating individual VNF's for testing, so eventually an entire 5G network can be tested. The keynote presentations were organized by Bruno Chatras, Orange Labs, France, and Alex Galis, UCL, UK.

An invited session, entitled "5G: Are We on the Right Track," led by Amina Boubendir, Orange Labs, France, complemented the keynotes. The invited session comprised presentations that view the 5G network from a standardization perspective.

The main part of the conference was divided into six full-track technical sessions, comprising 24 papers:

1. 5G Network Architecture and Modelling (chair: Dimitri Papadimitriou, Nokia–Bell Labs, Belgium), presenting novel techniques for optimal 5G network design.

(Continued on Newsletter page 4)

Enjoying a sunny coffee break at ICIN 2018. The author Noel Crespi is in front of the first row, on the left.

CHAPTER REPORT

Workshop on Women in Cybersecurity Research (WCR'18), Kerala, India

Report by Lillykutty Jacob, Chair, ComSoc Kerala Chapter, India

IIITM-K, in association with the ACM Trivandrum Professional Chapter and the IEEE Communication Society Kerala Chapter, organized a Workshop on Women in Cybersecurity Research (WCR'18) on 25–26 May 2018 at IIITM-K. The workshop served as a venue for women teachers, research scholars, post graduate students and corporate professionals across India to exchange their ideas and best practices in cybersecurity.

The two-day workshop showcased insightful sessions by eminent speakers from renowned institutions inside and outside India including Dr. Indrakshi Ray, Professor, Computer Science Department, Colorado State University, USA; Dr. Krishnasree Achuthan, Director, TBI, Amrita Viswavidyapeetam; Ms. Shweta Chawla, SC Cyber Solutions, Pune; Dr. Aninditha Banerjee, QuNu Labs, Bangalore; Dr. Ponnurangam Kumaraguru, IIIT-Delhi; Dr. Sudip Misra, IIT-Kharagpur; Mr. Adarsh S V, Sr. Security Analyst, UST Global, Trivandrum; Ms. Jancy Jose, Managing Director, Strava Technologies; and Mr. Manoj Kumar R, Tata Elxsi, Trivandrum. The speakers shared their experiences in the field of security and sparked the passion in the audience to make a move toward new ventures aimed at women empowerment. The participants were also enlightened by the short talks and discussions by research scholars on various research works published in top venues which highlighted recent developments in diverse areas including secure localization in wireless sensor networks, image forensics, LOADng IoT, video surveillance and distributed access control mechanisms.

The two day workshop concluded with a panel discussion on the topic "Why women's expertise remains unutilized in the cyber security domain?" moderated by Dr. Ciza Thomas, Professor, College of Engineering Trivandrum. The essence of the panel discussion motivated women candidates to tread the arduous paths to attain success in the area of cyber security. The workshop was marked by the immense participation of women delegates across the country and received a wide response from the participants. It proved to be an effective platform that offered awareness and insights into the latest technologies and advancements in cybersecurity research.

CHAPTER REPORT

One-Day Seminar of Ashutosh Dutta on Security in SDF/NFV and 5G Networks: Opportunities and Challenges

Netaji Subhash Engineering College, Kolkata, India

By Rishov Aditya and Saheli Sarkhel, Kolkata Chapter, India

The IEEE EDS NSEC Student Branch Chapter in association with the Department of Electronics and Communication Engineering organized a one day seminar on "Security in SDF/NFV and 5G Networks: Opportunities and Challenges" on 4 August, 2018. Prof. Ashutosh Dutta, Senior Wireless Communication Systems Research Scientist at Johns Hopkins University Applied Physics Labs (JHU/APL), presented his valuable lecture on the aforementioned topic. Prof. Dutta holds the respected positions of Director of Industry Outreach and IEEE 5G Initiative Co-chair apart from being an eminent Distinguished Lecturer of IEEE ComSoc.

The lecture session commenced with a brief introduction to IEEE membership and its benefits for students and professionals. It was followed by the evolution of network technology from 1G to 4G, exposing the loopholes in these that could lead to security breaches. The second part of the talk primarily focused on the new opportunities and challenges in dealing with 5G technology. The talk was quite informative and explained the concept of 5G technology, focusing on its applications in potential areas of real-time communications. Prof. Dutta also guided us to make a local 5G setup in our lab.

Almost 45 participants including students and faculty members showed up for the event along with the 13 members of this chapter.

CHAPTER REPORT

Thailand MWIT Science School Talk: How to Understand Quantum Communications and Computing

By Thanyanan Phuphachong, MWIT, and Keattisak Sripimanwat, ComSoc Chapter Chair, Thailand

An event for human resource and membership development was organized on 14 February, 2018 by the IEEE ComSoc Thailand Chapter with ECTI association (quantumIT) at Mahidol Wittayanusorn (MWIT), the national high school for gifted students, Nakhon Pathom, Thailand.

This school talk and discussion aimed at introducing a story of quantum information technology (QIP) through its history with current worldwide news, and also their present situations including related IT applications (quantum computing and cryptography). All was presented for students self-learning and helping on widespread distribution to their own generation.

In recent decades the established field of quantum information technology has been mentioning widely with high potential and impact (the age of basic quantum mechanics is about a century). However, in Thailand, where quantum mechanics arrived more than 40 years ago, there are serious cases of confusion. Ultimately, most science lessons and books from government agencies as well as from private publishers mentioned fundamental particles absurdly from what the original is (as a countable or in fixed unit of matter, i.e. not as two photons or three electrons but shown arbitrarily in Thai language as "photons two units or electron three bodies" instead).

Up to the 2017 survey, this strange learning appeared from physics classes continued throughout all society via science news and other media. Consequently, serious misunderstanding starting from school influenced all translated science news in the local language, effected to fabricated R&D with related publications at the university level, produced a number of fraudulant products with "quantum" in their name, and already reached policy decision makers sharing much fake news related to quantum mechanics (more details at Q-Thai.Org).

Following the above depressing situation that developed over the past four decades, one possible solution is to notify the beginner, high school student, who has just been surrounded with those incorrect local media reports, especially from their Thai physics books (starting in grade 11) and others. The goal is to show them how local learning differs from other areas of the world.

Basically, a student's first encounter with quantum mechanics should then be reconsidered and reshaped simpler as "it is easy to bend a young twig, but difficult to bend an old one." Organizers focused on these young people as the main target group this year.

Thirty (of grade 11-12) MWIT students with teachers attended this event. Fruitful student questions also re-motivated the

(Continued on Newsletter page 4)

Participants of the Thailand MWIT Science School event.

INTERVIEW/*Continued from page 1*

autonomously to enable membership growth by: (1) enabling member continuous feedback to keep on top of shifting trends and stay relevant; (2) ensuring OU analytics privileges apply automatically upon assignment of role; (3) creating a collaborative NA RCCC space to share files and lessons learned/best known practices; (4) ensuring new chairs receive welcome message, readiness preparatory information, and expectations list upon new assignment, plus sending previous chair a message from the President thanking them for serving and asking or support in training the new chair.

3. Membership Fees & Types: In conjunction with the ComSoc Strategic Committee and the ComSoc MGA Council, create a Tiger Team of staff and volunteers to develop the appropriate membership fee models and pricing for ComSoc membership.

4. Humanitarian and Community Outreach: Investigate how ComSoc can become involved in humanitarian and community development activity.

5. Volunteer Recognition: ComSoc to recognize most active/successful volunteers at the Region and Chapter level.

Stefano: The Distinguished Lecturer Program (DLP) and the Distinguished Speaker Program (DSP) are particularly appreciated by our Members. During my previous term as VP for Member Relations, we increased significantly the budget allocated to these programs, in order to allow more and better DLTs in all Regions. In 2019, the budget will be further increased to meet the enthusiast response of our Chapters. What is your perception of these Programs? How are they organized in the NA Region?

Wahab: Both the DLTP and DSP programs are the most prevalent and widespread programs in North America that our NA ComSoc Chapters and members would like to have. The DLTP and DSP are very important forums for knowledge dissemination and idea sharing. These programs are a drive for our Society membership growth and retention. They also attract attendees from industry and academia, and these attendees can be potential members.

In 2018 we organized 14 Distinguished Lecturer Tours (DLT) requested and hosted by 33 NA ComSoc Chapters in 40 different locations across North America. We also organized seven Distinguished Speaker Programs requested and hosted by nine NA ComSoc Chapters in nine different locations across North America.

Stefano: Among the many activities that you are running, what will be the highlight next year?

Wahab: Membership growth and retention, and support and coordinate with our chapters and student chapters.

GCN GLOBAL COMMUNICATIONS NEWSLETTER

STEFANO BREGNI
Editor-in-Chief
Politecnico di Milano, Italy
Email: bregni@elet.polimi.it, s.bregni@ieee.org

FABRIZIO GRANELLI
Associate Editor
University of Trento, Italy
Email: fabrizio.granelli@unitn.it

IEEE COMMUNICATIONS SOCIETY – MEMBER AND GLOBAL ACTIVITIES
NEI KATO, VICE-PRESIDENT FOR MEMBER AND GLOBAL ACTIVITIES
SONG GUO, DIRECTOR OF MEMBER SERVICES
LISANDRO ZAMBENEDETTI GRANVILLE, DIRECTOR OF LA REGION
WAHAB ALMUHTADI, DIRECTOR OF NA REGION
ADLEN KSENTINI, DIRECTOR OF EAME REGION
SAEWOONG BAHK, DIRECTOR OF AP REGION
OCTAVIA DOBRE, DIRECTOR OF SISTER AND RELATED SOCIETIES

REGIONAL CORRESPONDENTS WHO CONTRIBUTED TO THIS ISSUE
EWELL TAN, SINGAPORE (EWELL.TAN@IEEE.ORG)

IEEE ComSoc IEEE Communications Society

www.comsoc.org/gcn
ISSN 2374-1082

ICIN 2018/*Continued from page 2*

2. Cloud and Content Services (chair: Anders Lundqvist, Oracle, Sweden), in which the role of cloud in 5G networks was discussed and explained.

3. Routing and Resource Allocation (chair: Rogier Noldus, Ericsson, Netherlands), focusing on novel techniques and research for efficient resource allocation and how SDN can be applied for path selection.

4. Security, Authentication and Privacy (chair: Ning Wang, University of Surrey, UK), providing an overview of the challenges, of security in 4G and 5G networks.

5. Reliability and Energy Efficiency (chair: Stefano Secci, Sorbonne Université, France), discussing a variety of topics in the area of network robustness and fault-resilience.

6. Performance and Service Assurance (chair: Armen Aghasaryan, Nokia Bell Labs, France), covering network modelling and traffic scheduling.

The conference also included two short-track sessions, comprising 13 presentations:

1. Network Design (chair: Jérémie Leguay, Huawei, France).

2. QoS Management (chair: Bruce Maggs, Duke University and Akamai, USA).

During the conference, 11 demos were held, showing practical use cases of various aspects of 5G and future mobile communication networks. The demos provided good insight into the fact that the communication networks that we are developing and building are being used in all parts of society. The demos were organized by Emmanuel Bertin, Orange Labs, France, and Nadjib Ait-Saadi, ESIEE, France.

The conference closed with a panel session (chairs: Rogier Noldus, Ericsson, Netherlands and Antonio Manzalini, TIM, Italy), where delegates from academia, research institutes and industry shared their views on the success factors of 5G networks today and in the near future. The panel session also provided a podium for the audiesnce to engage in the discussion.

ICIN 2018 was co-located with two additional events on February 19: DRCN 2018, the 14th International Conference on the Design of Reliable Communications Networks, and NI 2018, the 1st International Workshop on Network Intelligence. Furthermore, ICIN 2018 comprised two tutorial sessions: a tutorial on Multipath TCP by Olivier Bonaventure, UCL, Belgium, and a tutorial on Federation, Programmability and Security in Future NFV/SDN Infrastructures by Roberto Minerva EIT Digital, Italy, *et al*.

ICIN proved once again to be a dynamic and diverse community of dedicated professionals in the field of telecommunications, who wish to share their knowledge and experience in their work. The atmosphere within ICIN is truly unique.

Arrangements for ICIN 2019 are in full swing (https://www.icin-conference.org/). ICIN 2019 will be held on 19–21 February 2019, in Paris, France again. ICIN 2019 will be chaired by Alex Galis, UCL, UK, and Fabrice Guillemin, Orange, France. The TPC is formed by Rogier Noldus, Ericsson, Netherlands, and Stefano Secci, CNAM, France. Noël Crespi, Institut Mines Telecom, France, will be the steering committee chair.

SCIENCE SCHOOL/*Continued from page 3*

IEEE ComSoc Thailand Chapter and its partner to re-organize the presentation to demystify the "quantum story" for non-technical people outside school.

All contents of this talk with additional references were composed into two videos that are free to the public: "How to understand quantum" (https://youtu.be/axUdz_PThB0) and "Atta in Thai quantum mechanics - misleading!" (https://youtu.be/1NUl38hDvEQ).

An introduction to the benefit of IEEE membership was also given to MWIT teachers for collaboration with the IEEE local section. Finally, the growth of a new generation of scientists and engineers from this gifted school is expected to help expand the correct understanding of QIP nationwide.