GCN GLOBAL COMMUNICATIONS NEWSLETTER

Building Activities for ComSoc Young Professionals

Interview with Shashank Gaur, Chair of the YP Standing Committee

By Stefano Bregni, Global Communications Newsletter Editor in Chief, Vice-President for Conferences, and Shashank Gaur, Chair of the YP Standing Committee

This is the seventh article in the series started in December 2020 and published monthly in the IEEE ComSoc *Global Communications Newsletter*, which covers all areas of IEEE ComSoc Member and Global Activities (MGA). In this series of articles, I introduce the Vice-President MGA and the members of the Member and Global Activities Council. In each article, one by one, they present their sector activities and plans. In this issue, I interview Shashank Gaur, Chair of the Young Professionals (YP) Standing Committee.

Shashank Gaur is a Systems Engineer for Platform Architecture at TTTech Auto, providing safe software and hardware platforms for automated driving. Shashank contributes to topics such as time sensitive networking and scheduling for in-vehicle ethernet communication. Shashank also actively engages in TSN standards activities. Shashank is also Chair of ComSoc's Young Professionals group, where he leads a team of volunteers across various projects such as events at flagship conferences, a blog, webinars, etc. Shashank is also Chair of the Tools Subcommittee of the IEEE Conferences Committee. Shashank has been volunteering for IEEE for 15+ years across various OUs such as RAS, MGA, Region 8, TAB and ComSoc.

Stefano: Hello Shashank! Let us begin by explaining what is the role of the Young Professionals Committee in the IEEE Communications Society.

Shashank: The IEEE Communication Society has more than 29,000 members. These members include people from different geographic locations and different technical areas. ComSoc serves its member by creating various volunteer groups to work on a specific demographic (location, technology, and career goals). Some of our members graduated from their first university degree (usually a four year bachelor program) within the last 15 years, just like me. These members are categorized as Young Professionals by IEEE and are served through a volunteer group known as ComSoc Young Professionals (yp.comsoc.org).

Stefano: How many Young Professionals are currently enrolled among ComSoc Members?

Shashank: IEEE ComSoc has more than 6,700 Young

Stefano Bregni

Shashank Gaur

Professionals spread around the globe. We also have a significant number outside North America, which represents more than 60 percent of Young Professionals. In terms of their professional role, more than 45 percent of our members are in their early career stage, either working in academia or industry. The rest of our members are graduate students.

The IEEE ComSoc Young Professionals team includes members from various demographics such as students, academia, industry, etc. We have more than 15 members contributing to different projects on their own time. We consider ComSoc YP as a front door for anyone interested in volunteering for ComSoc. Through our team, a member can experience what volunteering is all about without making any considerable time commitments. We allow everyone to contribute in whatever shape or form they wish to.

Stefano: Why do you think the YP Committee is important among ComSoc priorities?

Shashank: IEEE ComSoc is a leading organization with experts from different technical areas. However, we also need contributions from the younger generation to keep ComSoc relevant in the future. Young Professionals are a key resource and contributor for our organization. You can pick any of our major events and examine the volunteer teams. You will find that a lot of work is done by the younger generation on the ground. Young Professionals are motivated to work on projects and learn from experts, and they also bring new perspective to ComSoc activities.

Stefano: What are the main activities that have been run by the YP Committee under your leadership? And please introduce the YP Committee members working with you on organizing such activities?
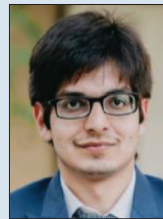
Shashank: In 2021, ComSoc Young Professionals are engaged in the following significant activities that are led by various volunteers.

Events: Our core activity is engaging Young Professionals at ComSoc's leading conferences such as ICC, GLOBECOM, INFOCOM, etc. Each year we organize a comprehensive set of students, post-doctoral researchers, early career faculties, industry researchers, and practitioners. In the past, We planned these activities in partnership with local IEEE student groups in the cities where the conference was hosted. Since COVID, we have kept these activities virtual but still kept them free and accessible for anyone interested. Some of our successful sessions have been fireside chats in which ComSoc leaders come together to have an open discussion with the audience through interactive Q&A. This year we hosted similar activities again at ICC 2021 (https://icc2021.ieee-icc.

XV Siberian Conference on Control and Communications (SIBCON 2021), Kazan, Russia

By Oleg Stukach, Tomsk ComSoc Chapter Vice-Chair, Russia

The XV Siberian Conference on Control and Communications (SIBCON), the flagship conference of the joint Tomsk IEEE Chapter, was held in Kazan, Russia in May. This series started in 1995 to focus on the convergence of communications and control technologies. In particular, the discussions highlight the practical problems related to this field. Previous meetings took place in Tomsk, Krasnoyarsk, Astana, and Moscow.
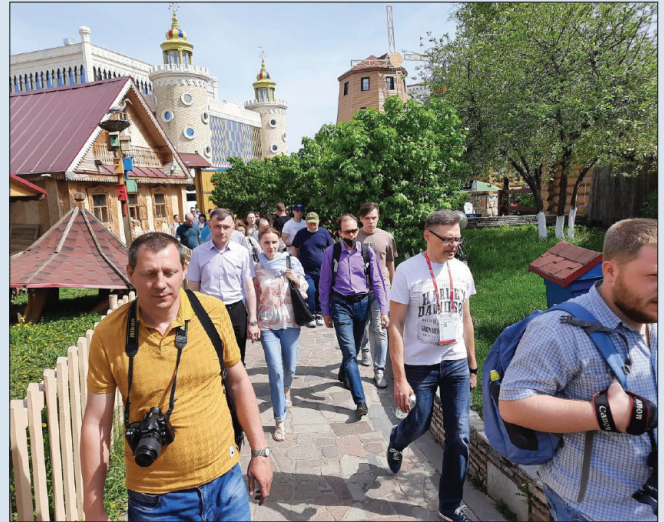
The conference comprised 100 presentations divided into three tracks. On the first day, sessions dealt with various aspects of communications, such as QoS, signal processing, wireless technologies, antennas and propagation, and additional topics including network control and satellite communications. The papers presented on the second day covered control and robotics. The papers presented on the final day were related to technical excursions in the frameworks of the conference and social program.

Plenary sessions were organized to give insight into new developments in the theory and practice of advanced control and communications. The keynote speaker, Yuri Choni, a professor in the Radio Telecommunication Systems Department of the Kazan National Research Technical University. spoke about the engineering approach to antenna synthesis and its role in research in the field of communication via a geostationary satellite. He proposed an extremely fast algorithm for antenna synthesis based on some robust engineering assumptions.

Professor Max Talanov from Kazan Federal University presented a brain-computer interface (BCI) overview in the context of integration with robotic and biological systems starting from classical perception up to the current breakthrough technologies of BCI, which could change the scientific outlook of the field. He referenced many interesting projects dedicated to BCI.

SIBCON session on communications.

SIBCON sightseeing tour: participants in the Tatar Village.

The attention of many participants was paid to an emerging topic, "Robotics and Information Systems for Disaster Management", which was addressed by Evgeni Magid, the General Chair of SIBCON, Professor at the Institute for Information Technologies and Intelligent Systems (Kazan Federal University) in the report and at the allied invited session. Another point of interest were the sessions on distributed temperature sensors, the borehole telemetry transfer system, with application to MWD-LWD geophysical systems, a topic independently initiated and widely studied by the Tomsk Chapter members.

The invited lectures were very different and presented a wide range of achievements and perspectives in communications, control, and its applications. In the session on control, various problems related to analysis, identification, and control of complex dynamic systems, with an emphasis on both theory and applications, were considered. The conference allowed the organizers to bring together and cross-fertilize ideas from these fields which have many similarities. Significant attention was paid to the analysis and design of neural networks, robotics, unmanned aerial vehicles, and AI. A number of the papers addressed the problems of analysis of complex behavior in cyber-physical systems. Participants presented the most recent research and shared ideas. We are proud that SIBCON is able to attract very outstanding people, and the connections in the academic com-

Beautiful Kazan from a window of the Institute for Information Technologies and Intelligent Systems.

QuantumIT Fact Check and CEO's Talk, "Quantum-Safe Security 2020"

By Keattisak Sripimanwat, IEEE ComSoc Thailand Chapter Chair

In parallel with the annual meeting of the IEEE Thailand Section on November 2020, one of the most interesting topics as a keynote speech was given, covering the aspects of quantum technology, particularly quantum cryptography. Dr. Grégoire Ribordy, the founder of ID Quantique (iDQ), presented a 40-minute online talk. In the session of quantum information technology for communications security, he recalled his 19 years of quantum technology startup and updated how far iDQ has grown. He presented a number of tips for those who have no technical background, such as the basic of quantum key distribution (QKD), the second quantum revolution, quantum random number generator (QRNG) in 5G phone, quantum tech security in a Korean 5G network, investment on quantum technology around the world, and many others.

In order to expand his keynote presentation, the Thai Quantum Information (Q-Thai) forum organized another session to convey more up-to-date information via a contemporary Q&A page. Many important controversial topics on QKD were questioned and answered there, for example, QKD seems like a solution to a problem that we do not really have, uncleared standardization and market, ambiguous technical development where "quantum channel" "trusted node" and "quantum hacking" established in the physics area but not available in the real world of communications engineering. The archive of this talk at www.quantum-thai.org/quantum-safe-security-2020, is good for all technology lovers, entrepreneurs, policy makers, and even for science communicators.

Event poster and a cover of video "Quantum - Safe Security 2020" by Dr. Grégoire Ribordy.

Because of the excessive hype in quantum information technology in recent years, apart from that main event, the Q-Thai forum also served with additional resources in order to provide the public with adequate background. They are worldwide year news, related policy and investment, important and popular keywords, statistics and analysis on publications/patents/products, and technical development. All is included in an annual video series started in 2016 and being served at www.quantum-thai.org/year-news. Moreover, older necessary menus on QuantumIT digest, quotes, columns and articles, books, and pictorial milestones, have also been accumulated since 2014. All of them are backing up as a knowledge portal becoming a new project, "Quantum ICT FactCheck at Thailand" recently.

IEEE ComSoc Thailand has also initiated a campaign to raise public awareness on both sides of QuantumIT by networking people in parallel. They could utilize those evidence based resources to cross check on "trusted science vs pseudoscience" and "fact vs. fake news or hype" by themselves. Hopefully, these up-to-date sources of reference, QICT FactCheck, should be one of the sustainable solutions toward the new normal society.

SIBCON 2021/*Continued from page 2*

munity are very strong. It should be noted that the Conference offered a balance of ideas of science and practice, a wide range of areas for applications of information technology in communications. Of course, the Organizing Committee should be credited for a rare combination of a strict timetable for plenary sessions, an unobtrusive rhythm of speeches and discussions in sessions, and an almost home atmosphere.

The conference was held at the Kazan Federal University located in the historic section of Kazan, the third Russian city. The city has witnessed many exciting events in history and still plays a very important role in its scientific and cultural life. The participants had the opportunity to enjoy the historic sites and the beauty of this city, including the masterpieces of the Kazan Kremlin, palaces, and charming districts.

Recent months have had a negative effect because all research work is based on the co-authors' communication, but research in one location has lowered productivity. Time is especially valuable for scientists. Now scientists are in

some euphoria because we can participate in a large number of conferences at once. However, there is no substitute for human communication based on a real exchange of energy and emotions. Now communication and relationships have changed. Formats of professional events have become more efficient and ergonomic. The academic conferences will be modernized like everything in the world. Offline events already have developed a certain culture and traditions, and have become part of scientific community life. Therefore, we need to continually invent ways of comfortable discussions. In this SIBCON Conference we succeeded.

Thanks to the face-to-face format and only to a small extent remotely, we could keep the unique atmosphere of the in-person conference and the luxury of connection between professionals. Of course, in the future, people will try to combine formats, because the social aspect is extremely important. We have been parted with the hope of future meetings, counting on understanding and partnership in solving common problems.

org/program/young-professionals), and we look forward to interacting with GCN readers in our other events.

Webinars: In 2021, we started to organize regular virtual events to accommodate a diverse audience. We understand that not everyone can be available during the same conference due to time commitments. Hence, we are bringing our excellent speakers to these virtual events every month on different topics. Imran S Ansari and Marco Giordani are leading efforts to identify these fantastic speakers and topics. This year we have already hosted talks on hot topics such as Non-Terrasterial Networks by Michele Zorzi of the University of Padova, and Communication in the 6G Era by Preben Mogensen of Nokia Bell Labs. Many more talks will be scheduled. Please follow us on social media or subscribe to our newsletter on our website to stay updated on upcoming sessions.

Blog: The ComSoc YP Blog (yp.comsoc.org/blog) is organized by Shashi Raj Pandey (a Ph.D. student at Kyung Hee University). Our intention behind drafting each content in the blog is to document valuable materials relevant to young professionals. While it is equally challenging to conquer all avenues of our objectives, we try to balance sharing key research directions, progress made, future challenges in communication networks, and the underlying "thought process" to develop a solution. We have worked to simplify the content submission process by enlisting sufficient information in advance. We would like to host an open platform where YPs openly share their "untold" academic/personal challenges during an early career as personal narratives and failures/successes stories. We are also working to reach out to diverse contributors. We plan to have content related to applying for grants/funding at conferences, mini-tutorials on recent progress made in the field, and mentorship. If you are interested in highlighting your work through our blog, please reach out to us at yp.comsoc.org/blog/submission.

Awards: ComSoc Young Professionals has maintained a successful awards program since 2016. Our 2021 awards program received around 50 nominations from various Young Professionals from both academia and industry. We hope to provide more opportunities to highlight the rising stars of our community, who are working hard in multiple areas. Nominations for the 2021 award are open now; check our website for more info: yp.comsoc.org/award

Social Media: Our social media activities are led by John Benedict Boggala and Manuel Lopez Morales (Ph.D. student, University Carlos III of Madrid). We have created a LinkedIn showcase page inside Comsoc's main page. We now have accounts in four social networks: LinkedIn, Twitter, Facebook, and Instagram. Social media is intended as an outlet for all Comsoc YP things by collaborating with other activities and engaging our members across the board. The aim is to keep our followers aware of ongoing activities in Comsoc YP. With this, members can directly participate if they find some content that can be of interest to be published on the social networks. For future plans, we aim at keeping things engaging and maybe think of new means to interact with our followers.

Stefano: Any more opportunities still open for 2021?

Shashank: Here are some of the opportunities available for the rest of 2021:

• We are looking for various volunteers to manage our communities on topics and events across the year. These exist over platforms such as slack but also across our events (virtual for now).

• We are looking for volunteers to interview communication experts. For this there is no need to have in-depth technical experience, but a basic understanding of Communication technologies is appreciated.

• We are looking for volunteers to help us organize events at various conferences (virtual and in-person).

• We are looking for volunteers to represent various geographic areas in our team such as North America.

You can find out more by visiting: https://yp.comsoc.org/volunteer/

Stefano: What are the specific needs of YPs that you have identified through these two years of service as YP Committee Chair?

Shashank: One of the major resources YPs need is opportunities to learn and highlight their skills. As an organization we need to provide more volunteer opportunities that fit the time schedule of a YP. Remember that most YPs change jobs and geographic areas a lot. We cannot expect them to stay committed to the same projects for a long time. We need to become flexible to adapt to their schedules and interests. Another key challenge is to provide a "front door" for interested YPs, where they can walk in and have a meaningful conversation with our leaders.

Stefano: Is it possible to join your efforts and contribute to the YP activities?

Shashank: We are always looking for new volunteers for our projects. Readers who are interested in joining our team, please visit yp.comsoc.org/volunteer or just send us an email at yp@comsoc.org