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CHAPTER REPORT

Visit of the ComSoc President Khaled Ben Letaief to the ComSoc Beijing Chapter

By Xiaofeng Tao, IEEE ComSoc Beijing Chapter Chair, China

The IEEE Communications Society Beijing Chapter has been in operation since December 1987. The chapter is now made up of the Chapter Chair Professor Xiaofeng Tao from Beijing University of Posts and Telecommunications (BUPT), the Vice Chair Prof. Yiqing Zhou from the Chinese Academy of Sciences, the Secretary Dr. Yu Chen from BUPT, professionals and students from different universities, research institutes and companies in Beijing. Currently, the chapter is actively engaged in various actions including Distinguished Lecturer tours and IEEE ComSoc sponsored conferences.

Prof. Khaled Ben Letaief speaking at the Building of Science and Technology, BUPT.

Group photo in the meeting room: (from left to right) Qimei Cui, Wei Zhang, Khaled Ben Letaief, Jianyong Qiao, Xiaofeng Tao and Yao Wang.

On 18 January 2019, the chapter was pleased to invite the IEEE ComSoc president, Professor Khaled Ben Letaief from Hong Kong University of Science and Technology (HKUST), to visit BUPT. Prof. Letaief gave an exciting talk on the "future wireless innovations and evolution" starting at 10:00 am in room 610 in the Building of Science and Technology. The talk attracted approximately 50 university scholars and students.

In this talk, Prof. Letaief first introduced the opportunities of next-generation wireless networks, and then described the key challenges and requirements such as ultra-low latency and massive connectivity for smart cities, green communications and environmental monitoring application scenarios. Considering the demand for green communications, he explained the power allocation problem in different scenarios. For massive connectivity in ultra-dense networks, he also introduced the current progress in massive MIMO technologies, including MIMO beamforming with transmit diversity. The talk was well received with a lively discussion between Prof. Letaif and the attendees.

The afternoon program started with a meeting hosted by Prof. Jianyong Qiao, the President of BUPT. Prof. Wei Zhang from the University of New South Wales, ComSoc Asia-Pacific Board (APB) Vice Director, and a number of professors from BUPT also attended the meeting. A technical tour of the State Key Laboratory of Networking and Switching Technology was later conducted. This tour was guided by Prof. Xiaofeng Tao to present their newly developed trial system named the MORE 5G (dynaMic coperation & Openness & viRtual Environment). This system demonstrated the ultra-dense network concept and the capability of data aggregation in heterogeneous networks for future 5G systems. The data rate achieved was up to 12.75 Gbps. The entire tour was enjoyable.

In conclusion, we were thrilled by how Prof. Letaief's visit was received. Moreover, we warmly welcome all distinguished lecturers from the information and communications technology (ICT) fields to visit the Beijing Chapter as well as BUPT.

REGIONAL REPORT

Professional and Community Development Activities in New Zealand: A Reflection

By Nurul I Sarkar, IEEE Joint NZ North, South and Central ComSoc Chair

This article highlights and reflects on professional activities, including community development programs, an IEEE Distinguished Lecturer (DL) tour to New Zealand, and wireless workshops conducted during 2017-2018.

Unlocking Young Minds through Community Workshop

This workshop was held on 11 February 2017; a follow up event from the last successful workshop held in December 2015 (reported in the July 2016 issue of the *Global Communications Newsletter*). We selected the IQRA Academy as the site for this workshop due to its distinct Auckland-based community school run by a group of dedicated volunteers. IQRA aims at providing students (ages 5 to 15) with a good foundation of Islamic knowledge and faith/ethics in supplementing moral/religious education to the traditional schools in New Zealand (NZ). The idea was to unlock young minds through community workshops in NZ who will be future members of IEEE, especially when they enter into the tertiary institutions.

This workshop began with a short power point presentation highlighting IEEE's contributions in the development and standardization of emerging technologies for humanity. After introducing IEEE and its potential community benefits, we presented a short video to highlight the significant contributions made by IEEE in the field of Science/Technology. The students enjoyed the video presentation and were excited to learn more about IEEE. A number of interactive quizzes were given to the students to test their knowledge and understanding of various aspects of IEEE. The students did well with the quizzes, indicating that they had learned IEEE activities effectively.

Finally, we had an open discussion forum during which IQRA Academy Principal Dr. Ataur Rahman spoke about various signs of Science/Technology found in Al-Quran. ComSoc Chapter Chair A/Professor Nurul Sarkar received positive feedback from participants, indicating the event was successful.

IEEE-IQRA community workshop participants.

Advanced Wireless Network Workshop

A day-long AUT-IEEE Advanced Wireless Network Workshop was held at the Auckland University of Technology (AUT) on 21 November 2017. This workshop had 13 excellent presenters, including Professor Fumuyuki Adachi (Tohoku University, Japan); Professor Yifan Chen, (University of Waikato); and Professor Winston Seah (Victoria University of Wellington). Approximately 60 engineers, researchers, academia, and students from around the country attended the event, which provided an excellent opportunity for networking and collaboration. We thank Dr. Xuejun Li (AUT) for organizing this great event.

IEEE Distinguished Lecturer Tour to NZ

We hosted two IEEE ComSoc Distinguished Lecturers (DL) over the last two years. Professor Song Guo (Hong Kong Polytechnic University) visited NZ as a ComSoc DL and gave four public lectures in Auckland, Wellington, Palmerston North and Christchurch on 25, 26, 27, and 28 July 2017, respectively. Professor Guo's talk on "Device-to-Device Communication in Cellular Networks" generated a lot of interest among the participants for further discussion and collaboration. The tutorial style presentation helped the audience to understand the technical subjects very well. There was an opportunity for further question/answer after the presentation.

Dr. R Venkatesha Prasad (TUDelft, The Netherlands) was our DL last year (2018). He offered four public lectures in Christchurch, Wellington, Palmerston North, and Auckland on 29, 30, and 31 October, and 1 November, respectively. Additional details about the DL lectures in Auckland are presented next. The AUT School of Engineering, Computer and Mathematical Sciences hosted the Network and Security Research Group (NSRG) workshop in conjunction with the IEEE DL program on 1 November 2018. Dr. RangaRao Venkatesha Prasad of the Faculty of Engineering, Mathematics and Computer Science at Delft University of Technology in The Netherlands delivered a fantastic keynote talk titled "Internet of Things, Approximate Services and Virtual Sensing" which was well received by the audience. Dr Prasad also offered a special session with research students, which was very productive.

Our Ph.D. students from NSRG also presented their research on that day to an audience from across AUT and further afield before a networking afternoon tea. Organizing chair A/Professor Nurul Sarkar received good feedback from the participants, indicating that the event was successful. Despite the busy time of year, approximately 40 people within and outside of AUT attended the session. This workshop was co-sponsored by AUT and IEEE.

2018 IEEE NZ Wireless Workshop

We hosted a day-long IEEE NZ Wireless Workshop at AUT on 7 September 2018. This was a premier annual event that brought together about 100 people, including industry professionals, engineers, researchers, academics, students, policy makers, and those working in start-ups to discuss technologies and issues of interest to the wireless community in NZ. The workshop featured 25 presenters from NZ universities and local industrial partners. It was one of the largest ComSoc events in the country.

2018 IEEE NZ wireless workshop participants.

CHAPTER REPORT

IEEE ComSoc Kerala Chapter, India, Activities in 2018

By Lillykutty Jacob, Kerala Chapter Chair

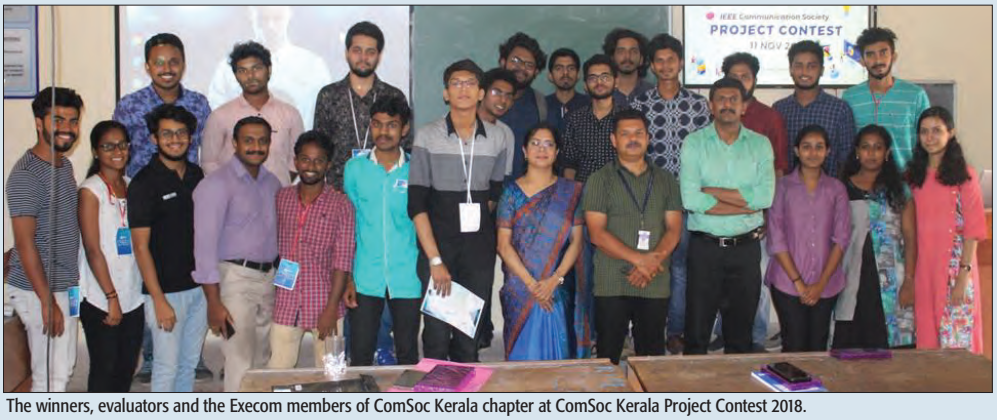
Last year was a vibrant year for the ComSoc Kerala Chapter with a plethora of activities: three new ComSoc SB chapters; ComSoc Webinar series; ComSoc Project Contest at the state level; several high impact workshops; monthly technical talks by eminent speakers from academia and industry; ComSoc Distinguished Lecturer Talk; Webex meeting of the administration; and much more. A few high impact events initiated in 2018 toward ComSoc membership development are briefly reported below.

Webinar Series: The ComSoc Kerala Chapter initiated the webinar series in 2018, which has had a great impact on the general public of Kerala state. Each webinar attracted hundreds of IEEE members and non members.

UG Project Contest (State Level): For the first time in its history, the ComSoc Kerala Chapte organized a Project Presentation State Level Competition for the Under Graduate (UG) students of Kerala. The contest rules and instructions were as follows: (i) submissions should be in or related to topics in communication engineering and its applications; (ii) the submitted project proposals should have tangible outcomes; (iii) the maximum number of members per team should be four; (iv) the shortlisted teams should present a final report in IEEE paper format and a demo/presentation at the IEEE LINK event KITES 2018; (v) three of the best teams will be awarded cash prizes: first place, INR. 10000; second place, INR. 5000; third place, INR. 3000; (vi) all other shortlisted teams will be awarded INR. 2000 each. The important dates were: (i) deadline for project proposal submission: 10 October; (ii) announcement of shortlisted projects: 1 November; (iii) final selection: 11 November. There were a total of 22 proposals, out of which five were short listed for presentation and demonstration, and the winners were selected from among them.

Graduate Congress — GraTE'7' (National Level): An annual national level workshop with the title "Graduate Congress: Graduate Thesis Evaluation in 7 minutes (GraTE'7)" was conceptualized jointly by the IEEE ComSoc Bangalore and Kerala chapters to recognize and award the top/best thesis works at the post graduate and Ph.D. levels in the field of information and communication technology (ICT). The award comprises a INR. 20,000 cash prize for each Ph.D. thesis and INR. 15 000 for each master thesis along with a certificate of merit for both the candidates and their supervisors.

The first edition of the event was limited to applicants who graduated from institutions/universities in the Kerala and Karnataka states only. However, the plan for the next edition



The winners, evaluators and the Execom members of ComSoc Kerala chapter at ComSoc Kerala Project Contest 2018.

CHAPTER REPORT

IEEE Delhi Section and ComSoc Delhi Chapter partnered in Event on Ethics in Artificial Intelligence in Feb 2019

By Prashant Chugh, IEEE ComSoc Delhi Chapter Chair, India

The IEEE Delhi Section and its ComSoc Chapter, in partnership with a group of think tanks and not-for-profit organizations in India, organized a two-day event entitled "International Colloquium on Ethics and Governance of Autonomous AI Systems for a Better World," at the India International Center, Lodhi Road, New Delhi, on 18-19 February 2019.

The objective of the colloquium was to identify policy and governance mechanisms that may be put in place that encourage and not inhibit technological development of AI for the betterment of society and the environment. Deliberations were held in the colloquium on the need for transparency, accountability, protection of human values, the well-being of the environment and other related topics as AI based applications become more prevalent in society.

Eminent speakers from academia, such as the National Institute of Advanced Studies, the Indian Institute of Technology (IIT) Hyderabad, IIT Roorkee, Maulana Azad Medical College,

Dr. Gulshan Rai along with other panelists in the concluding panel discussion and Q&A session.

the Indian Institute of Science, the Indian Institute of Information Technology Bengaluru, the Dayalbagh Educational Institute, Agra, etc., among others, and industry, such as the Center for Development of Telematics, the Center for Development of Advance Computing, Math-Works, Indian Telephone Industries, SAP, Microsoft, Aricent/Altran and Facebook among others, presented their perspectives on these issues.

Besides the Technology Overview, case studies in the field of Medical Image Processing, Telecom, Agriculture, Healthcare, Strategic Applications, Education, Ethics & Governance and Finance & Accounting were presented by a galaxy of distinguished speakers. There was a very good representation from

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Activities in New Zealand/*Continued from page 2*

Presenters from the University of Canterbury, Victoria University of Wellington (VUW), the University of Auckland, Massey University, the University of Waikato, Huawei, Qamcom, InternetNZ and RF Test Solutions presented research talks on 5th Generation (5G) networks, Internet-of-Things (IoT), Visible Light Communication (VLC), and other emerging topics of next-generation wireless systems. We had an excellent opportunity for informal discussion and networking.

We offered best student presentation awards on that day. The winner was Ms. Chelsea Miler, a Ph.D. student from VUW. A pre-workshop hands-on tutorial on 'software defined radios' was organized by our industrial partner National Instruments on 6 September. Dr. Saeed Ur Rehman and Assoc. Professor Boon-Chong Seet organized the event under the umbrella of AUT's wireless innovations in engineering (WISE) research group.

Conclusion

Being a small IEEE joint NZ ComSoc Chapter, we have managed to retain members over the years, which is excellent. In addition to the Distinguished Lecturer (DL) program, invited talks, and workshops, we established a new initiative of unlocking young minds through IEEE community school workshops and played an active role in community development in NZ. Our ongoing community development program was highlighted at the Chapter Chair Congress held in Singapore in December 2017. The DL programs, and wireless workshops were very effective as far as networking, academy-industry link, and sharing ideas are concerned. Last year was a very productive year for us in terms of professional development of the members of the wider community. We are working hard to organize more professional development activities (workshops, DLs, and invited talks) this year. Thanks to IEEE ComSoc, the NZ North, South and Central Sections, and AUT for their financial support throughout.

Delhi Chapter/*Continued from page 3*

Government as well. Honorable Union Minister Suresh Prabhu (in-charge of Commerce & Industries, Aviation) delivered the inaugural address while Dr. Gulshan Rai, National Cyber Security Coordinator, Government of India was present in the concluding panel discussions and Q&A session.

From the IEEE Delhi Section, the event was supported/represented by Mr. Ajay Goel (Member, IEEE Delhi Section Executive Committee) and Mr. Prashant Chugh (IEEE ComSoc Delhi Chapter) under the guidance of Prof. Subrata Mukhopadhyay (Chair of the IEEE Delhi Section Standing Committee on Technical & Professional Activities).

Among the presenters from IEEE were Mr. Subhankar Pal, who delivered a presentation on "Human Centered Design for Responsible AI," and Mr. Prashant Chugh, whose presentation was titled "Prioritizing Human Well-being with Autonomous and Intelligent Systems–IEEE Vision." This presentation gave a summary of efforts by IEEE as a part of its standardization initiative and its very elaborate document "Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems," along with the ongoing efforts under IEEE P7000 Series of Standards.

Kerala Chapter/*Continued from page 3*

would be to cover the entire nation. It was initiated in November 2018 by opening an online portal for the applicants to submit the synopsis and other necessary documents. Twenty-one short listed theses after initial screening and evaluation were called for presentation in the final round. In the Graduate Congress organized on 30 March 2019 at Amrita School of Engineering Bangalore, each candidate was given seven minutes to present their work in front of evaluators/experts. Experts were chosen from industry and academia, and they are also the executive members and officers of both sections (Kerala and Bangalore).

The Graduate Congress began with a welcome note by Ms. Sreebha followed by a brief introduction to GraTE'7' by Dr. Navin Kumar (past Chair of the IEEE ComSoc Bangalore Chapter) and started with presentations. Twenty-one theses were presented. of which six were in the category of postgraduate and 15 were in the category of Ph.D. The Graduate Congress had seven evaluators:

- Dr. Dilip Krishnaswamy, Chair of the IEEE ComSoc Bangalore Chapter and Vice President at Reliance Jio.
- Dr. Lillykutty Jacob, Chair of the ComSoc Kerala Chapter and a Professor at NIT Calicut.
- Dr. Aloknath De, Chair Elect of the IEEE ComSoc Bangalore Chapter and Corporate Vice President and CTO at Samsung Electronics India.
- Dr. Ganesan Thiagarajan, Vice-Chair of the IEEE ComSoc, Bangalore Chapter.
- Dr. Gopakumar A, Past Chair of the IEEE Malabar Subsection and a Professor at MES Kuttippurum.
- Dr. Lakshmi Narasimhan Theagarajan, Asst. Professor at the Indian Institute of Technology, Palakkad.
- Mr. Subhas Mondal, Chief Architect, Wipro Ltd.

GraTE'7 featured many prominent theses, and post lunch of GraTE'7 had discussions by the evaluators. The Graduate Congress was concluded by awarding one best thesis under the category of PG and five best theses under the category of Ph.D. Prof. Lillykutty gave thanks to all the award winners and participants as well as Cisco Systems India (Private) Ltd who sponsored the cash awards. The awards were distributed by all ExCom members available from both the Bangalore and Kerala sections.

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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)

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