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CHAPTER ACTIVITIES

IEEE Day 2017 Celebrated by IEEE ComSoc Karachi Chapter

By Anum Talpur, Mehran University of Engineering and Technology (MUET), Pakistan

The Department of Telecommunication Engineering, Mehran University of Engineering & Technology (MUET), Pakistan, in collaboration with IEEE Karachi, IEEE ComSoc Karachi, IEEE MUET and the Higher Education Commission (HEC), celebrated IEEE Day on 9 October 2017. The IEEE MUET student branches provided student volunteer support for the successful completion of the event.

The event started with a cake cutting ceremony. Later on, a

welcome speech was given by Prof. Dr. Bhawani Shankar Chowdhry, the Dean of the Faculty of Electrical, Electronics and Computer Engineering (FEECE), who is also the chairman IEEE Karachi chapter. He talked about the role played by IEEE in leveraging engineering technology. The IEEE Day celebrated first time in the history when engineers and IEEE members gathered to share their technical ideas in 1884. IEEE Day's theme was "Leveraging Technology for a Better Tomorrow."

The celebration was also enriched by two guest lectures. The first speaker was Ms. Kiran Rajput. She is working as a contracts & procurement engineer at ENI Pakistan Limited. She presented her point of view with respect to the job market after graduation. Later on, she spoke about the perspective of younger graduates, how they see and should see the market to find a job. She also discussed the importance of management skills in engineering jobs. In the second talk, Mr. Fahaz Kazi, president of the Pak-US Alumni network and a youth activist, presented a speech about leadership skills and their importance with respect to the theme of IEEE Day. He spoke about the values of leaders, and quoted a number of famous leaders and discussed their success. He also spoke about the significance of leadership skills in the life of new era people. He spoke about the role of Abdul Sattar Edhi as a leader who inspired humanitarian actions. The event gathered attendees from the academia of the FEECE faculty, MUET. The event also featured a photo contest with cash prizes.

After technical lectures, in the closing ceremony, Dr. Faisal k. Shaikh, Chairman of the Department of Telecommunication Engineering at MUET and Chair of IEEE ComSoc Karachi, expressed his thanks and admiration for the informative talks delivered by the guest speakers. He also expressed his appreciation for the collaboration between HEC and IEEE ComSoc Karachi to support the celebration. He and Dr. Bhawani Shankar Chowdhry also presented shields to the respected speakers at the event and cash prizes to the photo contest winners.



Group photo of speakers and participants.



From left to right: Prof. Dr. Bhawani S. Chowdhry welcoming the participants; Ms. Kiran Rajput presenting a talk about the job market; Mr. Fahad Kazi talking about leadership skills; Dr. Faisal K. Shaikh concluding the event.

ComSoc Sister Society: The Forum for European ICT & Media Professionals (FITCE) Explores the Challenges Posed by Digital Transformation

By Edward Smith, UK representative on the FITCE Board

FITCE (the Forum for European ICT & Media Professionals) is a federation of national associations in each of its 10 member countries and is a Sister Society of the IEEE Communication Society (ComSoc), with which it signed cooperation and publication side agreements in 2015. It allows its members to keep in touch with leading ICT developments and aspires to build strong cultural and business ties between European ICT (Information and Communications Technology) professionals. This is achieved by encouraging members to benefit from the experience acquired by other members in all ICT fields, and in particular provide support to young professionals as they develop their careers.

FITCE organizes an annual congress for improving information and knowledge exchange, communication, networking and relationships among members. This year's conference was held in Madrid and is described below, together with an overview of the activities of the national organizations. For more details please link to the FITCE web site at www.fitce.eu.

THE FITCE CONFERENCE

The 56th annual FITCE congress, with the theme "The Digital Transformation: A challenge for ICT Engineers," was held in Madrid on 14-16 September 2017. This rich two and a half day technical program presented the latest thinking in ICT developments across Europe, as well as interesting views on the challenges faced by ICT engineers. About 230 delegates attended the conference, which featured 50 speakers and was supported by the IEEE.

José María Lassalle, the Secretary of State for Information Society and Digital Agenda, Andy Valdar, President of FITCE, and Eugenio Fontán, Dean-President COIT and President of AEIT (the Spanish national association) gave keynote speeches.

The technical sessions began with a stimulating presentation on the present and future challenges of the European Space program, particularly relevant since the Cassini probe was due to crash into Saturn the following day. This was followed by sessions covering the Internet of Things and the value of engineers in the digitalization of companies and society, 5G and its impact, and the development of Industry 4.0. A set of papers was presented considering new networks of communication for digital transformation, covering broad-



FITCE President Prof. Andy Valdar discusses the conference with delegates.

cast convergence, testbeds for Gigabit PON, the design of antennas for 5G backhaul, and design modelling for FTTH deployments.

A round table discussion examined the profession of the ICT engineer in Europe, covering a range of perspectives and issues. After this, a series of papers covering technologies and systems for the digital transformation of society were presented, including: business cases for new propositions; engineering training; testing as a service; the distribution of CPE functionality into the cloud; and the business drivers of the digital transformation. The day concluded by looking at SMART Technologies, including multi-operator synergistic utility planning and its real-life implications and an examination of the requirements for Smart Cities and Smart Regions.

The second day opened with a description of network virtualization and its impact on data center design, followed by a review of the business potential for 5G. The value of professional organisations was described in some detail, including an examination of the role of IEEE as a professional organization. There then followed a round table debate covering the importance of cybersecurity, which included debates on the impact of security breaches and the training and retention of cyber security professionals. There then were three talks covering the training and career structure for ICT engineers in Spain. These considered the professional role of engineers in commercial companies in the 21st century, the present and future role of engineers' professional associations, and training and qualifications of the ICT engineer in Spain.

The major conclusions of the conference were that satellite communications remain an important medium and will supplement 5G. The low latency features of 5G are needed to support advanced applications such as driverless cars. Network operators need support from regulators and mobile operators to accelerate the rollout. Security remains an important aspect of the industry, both as an independent service and as a key design consideration for infrastructures and products.

The Internet of Things is with us now and can build on the experience gained from other robotics and factory automation systems. Sensor networks that form the basis of many IoT implementations are becoming better understood.

The demands of broadcasters will have a significant impact on network providers. ICT applications will have a major role in automating testing, supporting design decisions, and scheduling implementation activity. Virtualization of infrastructures, both IT and communications, remains important. New business models are needed within the industry, as new OTT models appear to replicate and mutate.

While the outlook for ICT engineers in Spain is good, there is a great deal of debate on the best way to train them and develop

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Jonathan Spruytte, University of Ghent, talks about utility planning as George Agapiou and Felix Herrera look on

IEEE 5G Summit Shanghai, China

By Xudong Wang, Chong Han and Xinwan Li (IEEE ComSoc Shanghai Chapter Chair), Shanghai Jiao Tong University, China

Recently, the IEEE Communications Society has developed a strategic framework based on the principles that embrace industry's interests and priorities while integrating the objectives of IEEE and ComSoc. In order to engage industry members with high value and innovative technologies, the IEEE Communications Society plans to hold a series of high impact one-day Summits in emerging technology areas under the 5G realm.

The IEEE Shanghai 5G Summit was held at Shanghai Jiao Tong University, on Friday, July 28, 2017. The honorary venue was located in Qian Xuesen Library and Museum, which was named after the scientist and father of China's space program. The Shanghai 5G Summit is co-sponsored by the IEEE Communications Society, the IEEE Shanghai Section, and the University of Michigan-Shanghai Jiao Tong University Joint Institute, Shanghai Jiao Tong University. This conference attracted more than 150 participants from top-rate universities such as Tsinghua University, Shanghai Jiao Tong University, China University of Science and Technology, and first-class enterprises, such as Huawei, ZTE, China Mobile, Qualcomm, National Instruments, among others.

Professor Xudong Wang, the general chair of the IEEE 5G Summit Shanghai, orchestrated the introduction of the conference, followed by four plenary speeches, given by Prof. Yi-Bing Lin from Taiwan National Chiaio-Tung University, who presented "5G and IoT Make Better Smart Cities." In addition, Prof. Norman C. Beaulieu from Beijing University of Posts and Telecommunications presented "The Forgotten Bottleneck Limiting Performance in Wireless Systems with Interference;" Prof.

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Group photo of the IEEE 5G Summit organizers and speakers. From left to right: Chong Han, Jianming Lu, Robert Qiu, Xudong Wang, Yi-Bing Lin, Zhisheng Niu, Lei Xu, Xinwan Li, Xiaoxiao Zheng, Zuqing Zhu.



The IEEE 5G Summit Conference was presided over by Professor Xudong Wang, General Chair of this conference, from UM-SJTU Joint Institute, Shanghai Jiao Tong University.

Keynote Talk at ECTI-Con 2017, Thailand: China's Quantum Cryptography from Terrestrial to the Sky

By Keattisak Sripimanwat, Thailand Chapter Chair

The IEEE ComSoc Thailand chapter with a local IEEE sister society, the ECTI association (www.ecti.or.th), jointly organized a keynote speech at the annual conference, ECTI-Con 2017, at Phuket island. Dr. Wei Chen, an associate professor from the Dept. of Optics and Optical Engineering, School of Physical Sciences, University of Science and Technology of China (USTC), gave a wonderful talk to an audience of nearly 100 on 28 June 2017.

The topic was "Applying quantum key distribution technology in real-life networks" covering quantum key distribution (QKD) and quantum information. In these areas after more than 30 years of research worldwide, great progress has been made both in theory and experimentation. In the past 10 years, a number of new challenges and opportunities have emerged, along with the development of QKD, especially in the field of real-life applications.

One big step that pushed forward QKD is the development of practical QKD systems and the deployment in field test networks. Evidently, several metropolitan and wide-area networks have then been built in China, which greatly promote the research and application process of quantum communication technology there.

Based on those efforts, stories of several types of practical QKD terminal and network routing equipment in the field test, more than 50-node network with the total fiber channel length



Dr. Wei Chen (left) with Prof. Prabhas Chongstitvatana (right), former ECTI president.

over 400 km, including a wide area QKD network between two cities of nearly 200 km apart, were shown impressively in this keynote talk.

Also, additional progress with other main QKD groups in China were introduced. Those are, for instance, effective human resource and team development, future plans for China and the world QKD standard, QKD commercialization, interesting topics on ultra high speed devices and ultra long distance networks with quantum relay, the background of quantum satellites (Micius), and many others.

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ECTI-CON 2017/Continued from page 3

Finally, the event was organized successfully with delightful responses from audiences in this third joint event of USTC and IEEE & ECTI Thailand (the first workshop was at ISPACS 2011 organized in the northern city of Chiangmai, given by the lab's head, Prof. Zheng Fu Han). A sound recording with selected presentation(s) of this fantastic talk was already composed and free for downloading at Q-Thai.org.

Consequently, ongoing collaborative activities are being discussed among IEEE ComSoc and ECTI Thailand and Dr. Chen QKD's group toward the establishment of a student exchange program, technical visit, joint R&D topics, etc. As a result, the growth in the number of members among Thai students, scientists, and engineers in this new challenge field is anticipated.

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them as their career advances. Professional organizations remain highly relevant and beneficial to the community in general and to engineers in particular.

AROUND EUROPE

The Austrian Association holds monthly meetings, covering cultural and technical topics such as "shopping in 2020" and Block Chain and a conference on automatic driving, and other automotive issues is planned for October. Polish membership is increasing and the Polish Association provides paid technical

consultancy to a number of organizations. It also arranges and contributes to conferences, actively documents the history of telecommunications in Poland, and sponsors academic prizes.

The Belgium Association has carried out consultations to examine how it will meet member needs in the future. Eighty people attended FITCE Belgium's conference, examining the status and future of Fiber to the Home in Belgium. Their future plans include sessions on: smart listening-indoor acoustic sensor networks, the (r)evolution of the payment industry and the Gigabit Society (5G, millimetre wave radio). They have added participation from young people through workshops and provided support for IEEE through a workshop in Leuven.

Italy has held meetings to discuss photonics and driverless and connected cars. They are hosting an international congress on energy savings in 5G and are planning a seminar on Artificial Intelligence in Milan. The Spanish association provides about 50 lectures per year and maintains strong links with the industry. In Greece, events have been planned to consider 5G, satellite and fibre technology.

5G SUMMIT/Continued from page 3

Summit Roy from the University of Washington talked about "An Overview of Spectrum Co-Existence Research at FUNLAB;" and Prof. Zhisheng Niu from Tsinghua University gave a plenary speech on "Hyper5G: from Networking Hype to Hyper Networking."

In addition to the speakers from academia, seven industry leaders generously presented keynote talks. In particular, Dr. Zhiqin Wang, Vice President of the China Academy of Information and Communication Technology, presented the IMT-2020 5G Advance Group's status on 5G communication research and field tests. Dr. Chih-Lin I, Chief Scientist at the China Mobile Research Institute, introduced China Mobile's deployment of 5G communication systems and envisioned the development trend of 5G technologies. There were also two panel discussions on the topics of "Where is 5G going" and "NOMA in 5G," which stimulated interesting and fruitful discussions in the venue. With continuous exploration and in-depth exchange of insightful ideas, the panelists depicted the development blueprints of 5G communications and brought up many exciting research ideas. Finally, this exciting event ended after the concluding remarks, presented by IEEE ComSoc Shanghai Chapter Chair, Prof. Xinwan Li.

This one day summit provided a rich platform for the leaders, innovators, and researchers from industry and the academic community to collaborate and exchange ideas in this emerging technology that may help drive standards and rapid deployment. For the first time, this summit was held together with IEEE 5G Tutorials on July 27, 2017, organized by Dr. Yang Yang from Shanghai Research Center for Wireless Communications.

**GLOBAL
COMMUNICATIONS
NEWSLETTER**

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