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REGIONAL ACTIVITIES

## Making San Diego Better Off: From Antenna Workshop to Science Fair

By Liangping Ma, InterDigital, Inc., San Diego, CA, USA (ComSoc Chapter Chair)

Like any other IEEE ComSoc chapter, we, the San Diego ComSoc chapter, are part of a much larger community, professionals in electrical engineering and computer science who may or may not be IEEE members, as well as young students who will become the next generation of electrical engineers and computer scientists. We strongly believe that the better off the larger community, the better off the IEEE. While serving IEEE members, we reach out to offer training opportunities to non-member professionals and to inspire the growth of young students (high school students and below).

In 2017, as a key part of our tradition, we continued to bring world-class researchers and professionals to our members. On June 12, in collaboration with the Vehicular Technology Society (VTS) chapter, chaired by Dr. Byung K. Yi, CTO of InterDigital, we invited Prof. Shiwen Mao of Auburn University, an IEEE VTS Distinguished Lecturer, to present his recent research on contact-free vital sign measurement for the healthcare Internet of Things. Besides theory and implementation, Prof. Mao gave a live demonstration of a smartphone app, which made the event very engaging to the audience.

As part of our year 2017 outreach effort, we worked closely with Jason Geurts of ANSYS Inc., a major computer-aided engineering software development company, and organized a hands-on interactive workshop on antenna design on April 26. Arien Sligar, lead application engineer of ANSYS, showed the ease, speed and accuracy of combining a high frequency structural simulator (HFSS) and the shooting and bouncing rays methodology



Prof. Shiwen Mao, an IEEE VTS Distinguished Lecturer, shown presenting to IEEE members.

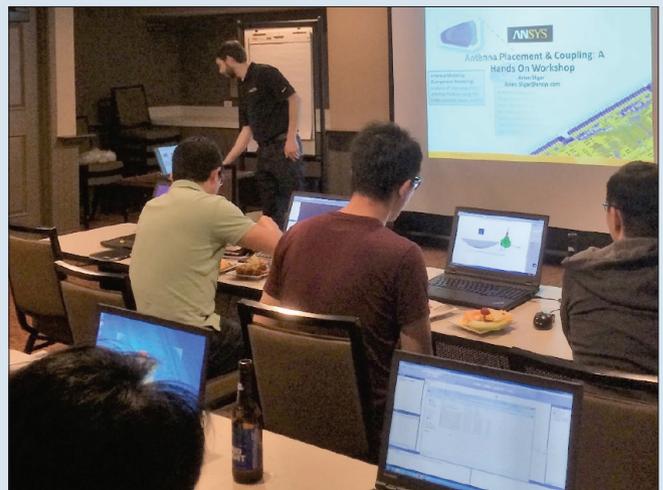
(SBR+) in the new ANSYS Electronics Desktop platform to study electrically large scenes. The workshop was enjoyable and rewarding to many in the audience.

We further reached out to young students, mainly high school students and middle school students in the greater San Diego area. We leveraged the annual Greater San Diego Science and Engineering Fair, which had 578 participating projects in 2017. The IEEE San Diego Section formed an award committee, led by Lawrence Hamerman, Member-at-Large of the IEEE San Diego Section. I was also on the committee, as the ComSoc chapter chair. The committee reviewed all projects, interviewed many participants, and selected six projects for an award of \$200 per awardee. The award committee also provided valuable suggestions on how to improve the quality and impact of the projects.

The accomplishments were the result of the hard work of the IEEE San Diego ComSoc chapter and the section, with the generous support of corporate sponsors. Together, we are making the greater San Diego community better off.



Lawrence Hamerman (fourth from the right), Member-at-Large of IEEE San Diego Section, shown with the Science Fair awardees.



Arien Sligar, lead application engineer of ANSYS, shown teaching at the antenna hands-on workshop.

## IEEE Green ICT Envisions a Smart and Sustainable Future

By Charles Despins, ÉTS Université du Québec, Montreal, Canada, Jaafar Elmighani, University of Leeds, UK, and Thierry Klein, Nokia, NJ, USA, IEEE Green ICT Initiative Co-Chairs

Currently transforming all spheres of human activity, at a level greater than the industrial revolution, the Information and Communication Technology sector (ICT) is emerging in the 21st century as the dominant driver of sustainability, with the potential to reconcile economic growth, environmental protection and societal benefits. It is a key tool in the fight against climate change as it can enable a 20 percent reduction in global greenhouse gas emissions by 2030. However, achieving such outcomes will require a holistic approach to the proper design, broad application, widespread adoption and social acceptance of ICT products and solutions. As such, this “green” potential of ICT requires a complete rethinking of how not only we design but also how we use ICT in a sustainable fashion. It is a huge challenge that can only be satisfactorily addressed by bringing together the research community, ICT equipment and solution providers, practitioners in various ICT vertical markets, the standards community, and public policy and regulatory influencers and decision makers.

As IEEE is the world’s largest technical professional organization dedicated to advancing technology for the benefit of humanity, the Green ICT initiative is committed to providing leadership on these issues. In this context, the mission of the IEEE Green ICT Initiative, launched in January 2015 by the IEEE Future Directions Committee and the IEEE Communications Society, has been defined as “build a holistic approach to sustainability by incorporating green metrics in various IEEE technical domains”. Viewed through the triple bottom line of sustainability (economic, environmental and social), the Green ICT Initiative offers a compelling opportunity for IEEE to demonstrate the full impact of the technology innovation it supports.

Huge efforts have been deployed over the past two and a half years by a dedicated group of initiative volunteers from academia and industry. Nine new IEEE Green ICT standards are currently in development within three working groups and are the result of inter-Society and multidisciplinary collaboration. New publication opportunities have been created and raising awareness of the Green ICT opportunity has been an initiative focus through events of various IEEE Societies. The Initiative is now extending this collaborative approach by reaching out to non-traditional IEEE communities within industry, governments and society at large.

### THE GREENING THROUGH ICT SUMMIT: SMART MUST BE SUSTAINABLE

A strategic planning workshop was held last May in Paris between 25 invited stakeholders and Initiative members in order to prepare our October 3rd Greening through ICT Summit. Diver-



The May 24th preparatory workshop for the October Summit.

sity was a key component of this core group, with representatives from academia, industry and the public policy arena from the Americas, Asia, Europe and Africa.

One of its recommendations was that the Green ICT initiative must emphasize even more the crucial role of ICT in building a sustainable future in both an environment-friendly and sustainable way. This ambitious goal can only be achieved through a cross-disciplinary and systematic approach requiring broad participation of stakeholders from different backgrounds.

The inaugural Greening through ICT Summit will be held in Paris, France, on October 3, 2017. The unique event, held under the theme “Sustainability in a Connected World”, will draw a diverse audience of ICT researchers, practitioners, technology providers, standards experts, and policy- and decision-makers, to collectively identify the technical, commercial and public policy challenges that must be addressed to achieve sustainability through ICT. Through unparalleled open discussions, networking and education opportunities, GtICT delegates will explore solutions for overcoming challenges to achieving sustainability in today’s increasingly connected world.

Smart technologies hold untold potential for enhancing the lives of millions around the world. However, as emphasized by initiative co-chairs Charles Despins, Jaafar Elmighani and Thierry Klein, these innovations must drive disruptive change with minimal environmental consequence, and with an eye toward maximum sustainability. Moreover, recent major developments in the Paris Climate Change agreement have moved prominent world leaders to reiterate their commitments, and this further heightens the importance of IEEE’s role and actions in the sustainable development sphere.

As ICT must be part of the search for climate change solutions and the adoption of related public policies, the Summit will stimulate a dialogue between those who design technology, those who use it and those who regulate it. These specialists will share their experiences and challenges that impact energy efficiency, greenhouse gas emissions, technology life cycle management, public policy and social issues. This conversation is key to humanity’s well-being in the 21st century and beyond.

Designed to stimulate interaction in an impartial environment, the event will consider an array of topics and viewpoints, including:

- ICT as a driver of sustainability through digital economy strategies.
- Convergence of power grids with the Internet.
- Impacts of regulatory and adoption policies on climate change initiatives.
- Improved management of technology life cycles.
- Vertical market reactions to the ICT-driven paradigm shift.

(Continued on Newsletter page 4)



Graphic compilation of May 24th discussions (to be also used at October Summit).

## IEEE ComSoc Kolkata Chapter: Winner of the 2016 Chapter Achievement Award

By Prof. Iti Saha Misra, ComSoc Kolkata Chapter Chair

To begin, ComSoc's Chairperson of the Kolkata Section, Prof. Iti Saha Misra, would like to convey her sincere thanks to the leaders of IEEE ComSoc Global Activities for considering the Kolkata Chapter as one of the winners for CAA-2016. The year 2016 was a very eventful year for the IEEE ComSoc Kolkata Chapter.

The Chapter organized two DLTs. On 20 June Prof. Luiz Da Silva of Trinity College Dublin delivered a lecture on "Sharing Infrastructure and Spectrum: A Vision for the Future of Mobile Networks" with 65 attendees from academia and industry; and on 29 September, Prof. Anura P. Jayasumana of Colorado State University, USA, delivered a lecture on "Internet of Things: A Pervasive Technology for Innovation", with 70 attendees. In addition to organizing these DLTs, the Chapter actively participated and provided technical sponsorship for International Conferences, RAIT-2016 at ISM Dhanbad and ICACNI-2016 at NIT Rourkela. The Chapter also organized six IEEE lecture meetings, three out-reach programs, a one-day Industry seminar, and a four-day workshop with the participation of the new ComSoc Student Branch Chapter at MSIT, Kolkata. The Chapter also convened six executive committee meetings, and participated in two IEEE 5G Summits held in Delhi and Patna.

Chapter activities started at the beginning of the year by hosting an IEEE Technical Lecture meeting on 8 January 2016 delivered by Dr. Samik Sengupta, Dept. of Computer Science and Engineering at the University of Nevada, Reno (UNR) with 60 participants, followed by almost monthly programs through the year. In all programs 10 to 20 IEEE members participated. To partially cover expenses the chapter has taken a small amount of registration fees for one DLT and collaborated with other institutes. In 2016 the one-day industry participated program was financed by Moulana Abul Kalam Azad University of Technology, Salt Lake Kolkata, attended by 120 undergraduate students and research scholars.

Organizing the DLT program on 29 September at Meghnath Saha Institute of Technology (MSIT) had special significance as the newly formed ComSoc Students Branch Chapter (30 students) was the co-organizer of the DLT. Moreover, it was the first DLT program in the MSIT where the young faculty members and students learned about the IEEE Distinguished Tour quality lecture. The DLT lecture topic was on the very relevant upcoming technology of "Internet of Things: A Pervasive Technology for Innovation", delivered by Prof. Anura Jayasumana.

The concept of the IEEE 5G Summit in Kolkata held on 17-18 March 2017 has been formalized through the ComSoc representation of IEEE 5G Summit at IIT Patna.

The IEEE Patna 5G Summit was the fourth in the series and the first one in India, and has held at IIT Patna on 29 March 2016 that provided a rich platform for industry leaders, innovators, and



Sri Ravi Sankar Prasad, Prof. Ramjee Prasad, Prof. Iti Saha Misra at the Lighting of the Lamp for 5G Summit.



MSIT Students Branch Chapter members and ComSoc organizers with DLT speaker, Prof. Anura Jaya Sumana at the centre (sitting).



DLT speaker Prof. Luiz Da Silva delivering his lecture at the K.P. Basu Memorial, Jadavpur University lecture.

researchers from the industry and academic community to speak about 5G technology. The then Hon. Minister of IT (India), Sri Ravi Sankar Prasad graced the Inaugural program along with distinguished Professor Ramjee Prasad, Fellow IEEE and Founder President CTIF Global Capsule. Chairperson of the IEEE ComSoc Chapter, Prof. Iti Saha Misra, highlighted ComSoc activities for 5G initiatives around the world. She is one of the members of 5G Summit steering Committee.

RAIT (Recent Advancement in Information Technology) has become the signature conference of ComSoc, technically sponsored by the IEEE ComSoc Kolkata Chapter for the fourth time, (RAIT-2016) organized by The Department of Computer Science & Engineering of Indian School of Mines, Dhanbad 3-5 March 2016, which was a very technically rich and well organized conference, with the conference proceedings published in IEEE Explore.

ICACNI-2016, the 4th International Conference on Advanced Computing, Networking and Informatics, was hosted at NIT Rourkela, Odisha, India on 22-24 September 2016, technically co-sponsored by IEEE ComSoc Kolkata Chapter. There was a special event featuring a ComSoc student paper contest. The first and second prize winners based on quality of work and presentation were awarded Rs. 2500 and Rs. 1500, respectively, along with a certificate by ComSoc Kolkata Chapter.

The ComSoc Kolkata Chapter organized three outreach programs in 2016. In each program the ComSoc Chairperson delivered a motivational speech for the faculty, researchers and students to join IEEE followed, by a technical lecture. One such collaborative seminar program was held on 23 April 2016 jointly with IETE at Tripura State Centre along with 50 students studying engineering.

## Security of Things Conference & Workshop at CommunicAsia 2017, Singapore

By Leo Hwa Chiang and Ewell Tan, IEEE APO Office, Singapore

The CommunicAsia 2017 Summit once again dominated the arena, being the most highlighted information and communications technology (ICT) event on 23-25 May 2017, at the Singapore Marina Bay Sands Convention Centre. This summit gathered ICT stakeholders, regulators, authorities, telecommunication firms, enterprises, technology firms, analysts and industry experts. A total of 40,000 trade professionals attended the exhibitions and the conference tracks.

Hwa (Leo) Chiang, the Director of IEEE Asia Business Development, orchestrated and curated a “Security of Things” Conference & Workshop on behalf of the IEEE Communications Society. This three-day conference attracted more than 50 participants and was one of the most successful and popular tracks among all the seven conference sessions. We invited a total of 18 speakers and seven workshop presenters. They hailed from the Singapore Cyber Security Agency, Nomura Research Institute, Edith Cowan University (ECU), Singapore University of Technology and Design (SUTD), KPMG, etc.



Security of Things Conference & Workshop.



Exhibit booth and trade show at CommunicAsia 2017.

In addition, also accepting an invitation was His Excellency, Mr. Mohamed Abulkheir, Egypt Ambassador to Singapore, who represents the United Nations Group of Government Experts (UNGGE) in Cyber Security to share the United Nations’ policy with regards to cyber threats.

In collaboration with IEEE Marketing, Sales and Design (MSD) and the IEEE authorized dealer, InfoHost, Ewell Tang, the Project Manager of IEEE Asia-Pacific Limited, provided support and assistance in managing the IEEE Communications Society exhibit booth, to promote IEEE Xplore Digital Library, IEEE and IEEE Communications Society membership.

It was a productive and successful event in which all colleagues from IEEE Asia-Pacific, IEEE MSD and InfoHost worked together to make happen.

### IEEE GREEN ICT/Continued from page 2

The Summit will be conducted under a stimulating “World Café” approach in order to foster a productive, open dialogue in a relaxed and casual atmosphere. The event will culminate with a declaration of a “Green ICT Vision for the Future” driven by the day’s discussions.

The IEEE Green ICT Initiative has just held its first IEEE Young Professional Green ICT Idea Competition. Aimed at harnessing the input of younger membership with IEEE, notably those who will live with the consequences of climate change, the competition encouraged young professionals to submit creative Green ICT ideas and solutions. Competition winners will have the opportunity to present their ideas at the Summit.

The IEEE GtICT’s theme of smart, sustainable technologies will also be highlighted during Le Salon de la Ville et des Territoires Intelligents, Durables et Connectés, a smart city and smart grid exhibition taking place immediately after the GtICT Summit, October 4-5, 2017 at the Paris Porte de Versailles.

We are looking forward to seeing many readers at the October 3 Summit in the 9th arrondissement of Paris (Opera district). Registration is now open through the Initiative Web portal at <http://greenict.ieee.org>.

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