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CHAPTER ACTIVITIES

Activities of the IEEE ComSoc Chapter – Bahia Section, Brazil

By Fabrício Braga Soares de Carvalho, Chair of the Bahia Joint Chapter, Brazil

The IEEE Joint Chapter C16/COM19 in the Bahia Section, Brazil, was created in 1994. The Bahia Section aggregates members and acitivities in Brazilian's Northeast region (including nine states). The ComSoc chapter from the Bahia Section is composed of undergraduate and graduate students, faculty and professionals interested on communications in Brazil's Northeast.

Currently ComSoc in the Bahia Section is composed of 42 members, in the following categories: one affiliate member; one associate member; six student members; four graduate student members; 20 members; nine senior members and one life senior

We present here a brief summary of the main activites developed by ComSoc members and students in 2016 and 2017.

Different lectures and seminars were organized with recognized telecommunications specialists in the Bahia Section. Life senior member Orlando Baiocchi, from the University of Washington Tacoma, in Tacoma-WA, United States, senior member Marcelo Sampaio de Alencar, from the Federal University of Campina Grande and the Advanced Institute of Communication Studies, both in Campina Grande-PB, Brazil, and senior member Fabrício Braga Soares de Carvalho, from the Federal University of Paraíba, in João Pessoa-PB, are some of the researchers who presented lectures at different institutions and universities in Brazil's Northeast. These presentations were organized at Federal University of Vale do São Francisco (UNIVASF), in Juazeiro-BA; Federal Úniversity of João Pessoa (UFPB), in João Pessoa-PB; Federal University of Campina Grande (UFCG), in Campina Grande-PB, and Federal Institute of Paraíba (IFPB) in João Pessoa-PB and



Participation of Student Chapter from the Federal Institute of Paraíba (IFPB) in Campina Grande-PB at the ENCOM 2016.



Technical presentation held at the Federal University of Vale do São Francisco in Juazeiro-BA.



Distinguished Lecturer presentation held at the Federal University of Rio Grande do Norte (UFRN) in Natal-RN.

Campina Grande-PB.

On August 21, 2017, a Distinguished Lecturer presentation was held in Natal-RN. ComSoc Distinguished Lecturer Prof. Dr. Rui Luis A. Aguiar, from the University of Aveiro, in Portugal, was invited by three different ComSoc Sections in Brazil to present the lecture entitled "A General Overview of Research on 5G." One of these Sections was the Bahia Section.

The presentation of Prof. Rui Luis A. Aguiar attracted several IEEE members and non-IEEE members to the event. The total number of attendees was 137, including undergraduate and graduate students, faculty members, and professionals. The presentation was organized at the Federal University of Rio Grande do Norte (UFRN). During the event, the IEEE Student Branch from UFRN supported the presentation by receiving the audience, distributing folders about IEEE, and recruiting new IEEE members.

The ComSoc Chapter from the Bahia Section technically supported the First IEEE Summer School on Smart Cities, IEEE S3C 2017, which was held in the city of Natal-RN from August 6-11, 2017. This was the first of its series and was intended to provide a valuable forum for knowledge exchange between industry, the scientific community, and municipalities in all fields of smart cities. A total of 23 graduate students, 46 undergraduate students, and 47 professionals (faculty and city representatives) registered and participated in the conference. The IEEE Student Branch from UFRN in the ComSoc Chapter from the Bahia Section supported the organization of this remarkable conference. The conference website with supplementary information is located at http://s3c. imd.ufrn.br/.

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Fifth Annual IEEE North Jersey Advanced Communications Symposium, Fall 2017

By Amit Patel, IEEE North Jersey Section ComSoc Chapter Chair

The 2017 IEEE North Jersey Advanced Communications Symposium (NJACS) was held at the Babbio Center, Stevens Institute of Technology, in Hoboken, NJ, on Saturday, September 23, 2017. The symposium consisted of four keynote presentations and a parallel poster session contest with nearly a dozen student posters from universities in the region. The symposium was well attended with 105 participants from the NY/NJ metro-area.

The symposium started at 9:30 am when the registration desk opened, participants got together for refreshments, and the posters were set up. The program started at 10:00 am with opening remarks from the Symposium Chair, Stevens Professor and Department Chair, Dr. Yu-Dong Yao. He introduced Dr. Jean Zu, the new Dean of the Schaefer School of Engineering and Science, who welcomed participants and expressed Stevens' commitment to hosting events such as ACS. Additional welcoming remarks were given by Dr. Adriaan van Wijngaarden, from Nokia Bell Labs, and final acknowledgments and thanks to the many technical and financial supporters were given by Mr. Amit Patel, IEEE North Jersey Section ComSoc Chapter Chair. Co-sponsors of the event included the IEEE North Jersey Section, ComSoc Chapter, which received additional financial support from the IEEE Communications Society, and its Vehicular Technology and Computer Chapters.

Dr. Yao then gave program remarks and introduced this year's theme: "A Day of Deep Learning." The morning program began with Prof. Rensheng Wang (Stevens) giving the first lecture on "Deep Learning: Autoencoder." This was followed by Prof. Hai Phan (NJIT), who presented a lecture on "Differential Privacy Preservation in Deep Learning." During the lunch break, there was time for discussions with the participants, speakers and the poster presenters. Poster judges also reviewed the materials and student presentations.

The afternoon program started with a lecture on "Convolutional Neural Networks for Figure Extraction in Historical Bell Labs Records" by Dr. Chun-Nam Yu (Nokia Bell Labs). This presentation was followed by a lecture on "Adversarial Perturbations in Deep Neural Networks: Attack and Defense" by Mr. Huaxia Wang (Stevens/Bell Labs). Abstract summaries and speaker biographies for all presentations can be found at the event web site: https://meetings.vtools.ieee.org/m/46425.

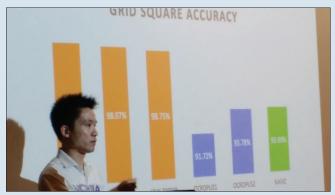
In the closing remarks following the technical program, symposium chair Dr. Yao introduced the Poster Committee Chair, Hannah Zhao (FDU), who announced the winners of the poster competition. The symposium's Poster Committee had invited students and postdocs during the months prior to the symposium to prepare a poster presentation on recent research work and cutting edge developing technologies for this year's



NJACS keynote speaker Huaxia Wang.



NJACS symposium participants in the auditorium.



NJACS keynote speaker Dr. Chun-Nam Yu.

theme. Undergraduates, Master students, Ph.D. students and postdocs were all encouraged to participate. The symposium's Poster Committee accepted a number of high-quality posters from several local universities. The poster topics ranged from applications of machine learning for image analysis and communications resource allocation to addressing medical image based disease diagnosis. The poster session provided student researchers direct interactions with faculty, industry researchers and regional IEEE officers and volunteers. It served as an excellent platform and opportunity to network for future collaborative research and career advancement. The posters were on display all day and special exhibition times were scheduled for all attendees. The poster committee, chaired by Hannah Zhao and further consisting of judges Adrian van Wijngaarden, Newman Wilson (Jersey Coast ComSoc Chapter Chair), and Stephen and Paul Wilkowski, evaluated the posters. The chair emphasized that all posters had been of an extremely high quality and demonstrated the wide range of subject matter and domains to which machine and deep learning was being applied. After a rigorous review process, the following three posters were selected to receive best poster awards:

First Place: Hanyu Jiang and Narayan Ganesan, "A GPU-based Parallel Framework for Accelerating Genomic Sequence Analysis."

Second Place: Yuan Jiang, "Bayesian Learning for Adaptive Signal Detection."

Third Place: Thomas Bender and Mark Del Rosario, "Satellite Image Classification: The Human Occupation of Earth."

The first, second, and third place winners received prizes of \$300, \$200, and \$100, respectively (one prize per winning poster). All poster presenters received participation certificates.

In his closing remarks, Dr. Yao thanked Stevens Institute of Technology for hosting the symposium and for the use of the Babbio Center, which provided an excellent venue for the symposium. Additional thanks went to all co-organizers and volunteers for their hard work that made the symposium a success including, Michael Newell, Registration Chair; Hong Man, Local Arrangements; and Bennet Meyer, CEU coordinator. Please contact the organizing committee or volunteers for any additional follow up questions or feedback on the event.

IEEE International 5G Summit, March 2017, Kolkata, India

By Iti Saha Misra, Kolkata Chapter Chair, India

The IEEE International 5G Summit and 28th GISFI Standardization Series Meeting (GSSM) was held March 17–18, 2017 at the SENSES Hotel, Sector V, Salt Lake, Kolkata-700091, India, focused on the theme of Digital India. The program was organized by the IEEE ComSoc Kolkata Chapter jointly with the IEEE CAS Kolkata Chapter. ComSoc Kolkata Chapter Chair Prof. Iti Saha Misra of Jadavpur University assumed entire responsibility as the General Chair for hosting the Summit. Prof. Suvra Sekhar Das from IIT Kharagpur was the Program Co-Chair, Mr. Pallab Ganguly of CESC Pvt. Ltd did an excellent job as an Industry



Mr. Prakash Suthar, the Principal Architect based in US, CISCO, delivering keynote speech.



Mr. Tallen Kumar, Principal Secretary Consumer Affairs, Govt of West Bengal addressing at the Inaugural Session , In the Dais ComSoc Chairperspn –Iti Saha Misra, Prof. Ramjee Prasad and Dr. Ashutosh Dutta.

Interface, and Prof. Salil Kumar Sanyal, CAS Chair of the Kolkata Section, was the Finance Chair.

It was our pleasure to work with Dr. Ashutosh Dutta, IEEE 5G Initiative Co-Chair, Lead Member of Technical Staff, AT&T, USA, and Prof. Ramjee Prasad, Founder Chair–GISFI, Founder President–CTIF Global Capsule (CGC), and Professor of FT4BI, Aarhus University, Denmark, without whom the program would not have been so successful. The IEEE 5G summit in Kolkata was the fourth summit in India. It was attended by many high-ranking industry personnel and sponsored by CISCO, Ericsson, Webel, the Government of West Bengal, Qualcomm, Polaris Network, RS Software, ISOAH, and BSH, among others.

In the first Keynote session, Mr. Prakash Suthar, the Principal Architect at Cisco based in the United States, delivered a presentation on "5G Transforming Service Providers' Business." Mr. Indrajit Sanyal, Senior Director, Ericsson Global Services, delivered a presentation on "5G-Out of the Labs and into the Neighborhood." Mr. Vinosh Babu James, Qualcomm India, delivered a presentation on "System Aspects of Digital India-Requirements, Architecture and Standardization Status."

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CONFERENCE REPORT

Birth of a New Conference: IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE)

By Ali Abedi, IEEE COMSOC North American Region Board Member and Maine Chapter Chair, USA

The history of this conference dates back to the late 1990s with the inauguration of an informal series of NASA workshops called "Fly by Wireless" to address the important topics of wireless communication and sensing in the context of space applications. Later Fly by Wireless Workshops sponsored by CANEUS resulted in meetings with an expanded focus. Finally, beginning in 2010, the IEEE Maine and Montreal sections collaboration brought all these activities under one umbrella with the 2010 Fly by Wireless Workshop in Maine and the 2011 Workshop in Montreal.

Noting the successful series of similar workshops in Europe called WiSense4Space organized by the European Space Agency (ESA) and similar events hosted by the Canadian Space Agency (CSA), space agency, academic, and industry representatives joined forces in 2011 to organize IEEE WiSEE 2013 (with a new name) in Baltimore, MD to bring NASA, CSA, and ESA together with IEEE to create a larger, international conference that brings together all interested parties in the use of wireless in space and related extreme environments. This conference included a tour of the NASA GSFC center.

The interdisciplinary nature of this conference calls for several IEEE technical society sponsorships to assure the selection of high-quality papers. These societies include, IEEE APS, ComSoc, UFFC, CRFID, and international bodies such as URSI and ISA.

Creating this conference would not have been possible without generous financial sponsorships from IEEE USA, IEEE Canada, the IEEE UFFC, and industry donors. WiSEE 2014 was hosted by ESA in the ESA/ESTEC facility in Noordwijk, Netherlands, followed by WiSEE 2015, which was co-hosted by NASA KSC and (Continued on Newsletter page 4)



Group photo of attendees of WiSEE 2015, including Buzz Aldrin (man on the moon) who attended the conference. Buzz is the one in the middle with MARS shirt on.

BAHIA SECTION/Continued from page 1

The ComSoc chapter from the Bahia Section is supporting the organization of the ENCOM 2017 conference, which is promoted by the Institute of Advanced Studies in Communications (Iecom). This is a meeting for the discussion of different topics on telecommunications, signal processing, cryptography, and networks, annually scheduled at a different city in Brazil, since 2011. The 2017 edition is scheduled for October, 2017 in the city of São Luis, State of Maranhão. ComSoc is supporting the participation of undergraduate and graduate student members in this event. The website of the conference is http://www.iecom.org.br/encom2017/.

The Student Chapter from the Federal Institute of Paraíba (IFPB) in Campina Grande-PB was created in 2016. The advisor is Prof. Marcelo Portela Sousa, an IEEE Senior Member. The Student Chapter is very active with participation in different regional and national communications conferences and the organization of technical lectures weekly. The following workshops were offered to the community of IFPB: Introduction to Phyton; Introduction to Arduino Applications; Radio Link Design; among others.

5G SUMMIT/Continued from page 3

The other notable presentation were made by Mr. Vinoy Gupta, CTO of Polaris Networks, who spoke about "Innovations in Cellular Core Network for IoT and Machine Type Communications"; Mr. Tarun Gupta, Business Development Manager, RF, National Instrument, India, who spoke about "Platform Based

There was a very interesting panel discussion session on "Security Challenges with 5G Technology–A Cross Industry View" moderated by Mr. Sandeep Sengupta, ISOAH Data Securities Pvt. Ltd. Among the panelists were Dr. Ashutosh Dutta, Mr. Sumit Poddar from CESC Kolkata, Dr. Sourav Dutta from IBM Kolkata, Mr. Rana Pratap Sircar, Director, GSI SDU IT & C, Head of Information at Ericsson Global Services, Gurgaon, and Nirupam Sen, Business Head (East), BSI Group India

Approach for Prototyping 5G Research"; and Mr. Sumit Misra,

General Manager and Head of Technology Innovation, RS Soft-

Wireless Advisor, Government of India; "Applications 5.0-Rid-

ing the 5G Wave" by Mr. Ravikiran Annaswamy, CEO, Innohabit Technologies Pvt Ltd Education, and Co-Chair of the IEEE

5G Initiative; and "MIMO in 5G" by M Chandrasekaran, Senior

Research Engineer, Centre of Excellence in Wireless Technolo-

Several other Invited talks included: "Spectrum Requirements for IoT Applications" by Dr. Ashok Chandra, Former

ware, who spoke about "Digital Payments."

gy (CEWiT).

Pvt. Ltd.

The present Ph.D. researchers were also the part of presentation, and drew the attention of the participants in which the leading Ph.D. scholars presented their thoughts on various aspects of 5G research, including intelligent transport systems, cognitive radio aspects for 5G, and network densification in 5G. The first day of the IEEE 5G Summit ended at 9.00 pm with a cultural program followed by a gala dinner. A total 170 participants attended, of which 100 were registered attendees, mostly engineering students and young faculty.



STEFANO BREGNI

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the University of Central Florida in Orlando, FL, including a NASA KSC tour.

In 2016, WiSEE was located in Europe again, co-hosted by RWTH Aachen University and German DLR, including a tour of the TIRA space observation system at Frauenhofer Inst. and the Effelsberg Radio Telescope.

This year WiSEE 2017 is held on October 10–12, 2017 in Montreal, Canada, co-hosted by Concordia University and CSA. The event included a tour of CSA as well as participation in the 375th anniversary celebrations in Montreal.

WiSEE 2018 will be co-hosted by the University of Alabama and NASA MSFC, and will take place in Huntsville, AL December 11–13. WiSEE 2019 will be held in Ottawa, Canada from October 8–10, and will be co-hosted by Ottawa University and CSA.

If your chapter is interested in hosting WiSEE in 2020, please send your proposal to the WiSEE Steering Committee Chair, Dr. Ali Abedi at abedi@ieee.org.

For more information visit: http://sites.ieee.org/wisee