GCN GLOBAL COMMUNICATIONS NEWSLETTER

September 2020
ISSN 2374-1082

CONFERENCE REPORT

Talks on Amateur Radio in the Indian Ocean

By Miroslav Skoric, IEEE Austria Section

7th IEEE Radio and Antenna Days of the Indian Ocean (IEEE RADIO 2019), Reunion Island

The 7th edition of IEEE Radio and Antenna Days of the Indian Ocean (IEEE RADIO 2019) was held in Reunion Island from 23 to 26 September 2019. The aim of the conference was to discuss "recent developments, theories and practical applications that cover the whole scope of radio frequency engineering, including radio waves, antennas, propagation and electromagnetic compatibility". Besides IEEE, the event was co-organized by the Radio Society (Mauritius), and the Université de La Réunion. IEEE RADIO 2019 featured Best Student Papers, a Young Scientist Award and an Industrial Engineering Paper Award. Professor Vikass Monebhurrun and his associates Frédéric Alicalapa and Alexandre Douyere took care that the conference performs in a pleasant and fruitful atmosphere. Prof. Tapan Sarkar, a doyen of the conference, attracted the audience by questioning presenters' results and posing provocative comments intended to initiate reconsidering scientific contributions discussed in several papers.

IEEE RADIO 2019 hosted one half-day tutorial session, titled "Designing Amateur Radio Communication Networks at Home, School, and Work", and performed by Miroslav Skoric from the IEEE Austria Section. Besides the tutorial, the conference program included a special session for radio amateurs, which provided an opportunity for local 'hams' from Reunion Island, as well as for an amateur radio enthusiast from Mauritius, to present their own activities in that field. Having in mind that the amateur radio community is widely known as a promoter of engineering and technology among 'ordinary' people, the conference decision to include such a session was a great achievement. Thanks to the understanding of the French telecommunications regulatory agency ANFR (Agence Nationale des Fréquences), a special radio license was issued on time, which enabled the presenter to provide practical tests 'in the field'. Local enthusiasts Patrick FR5FC and Jacky FR4NP were of great help in providing radio equipment and other logistics for the special session. FR5FC and Jean Marc 3B8DU actively contributed to the special session by informing the audience about amateur radio in Reunion Island and Mauritius.

IEEE RADIO 2019 also had a single industry-related presentation, which was completely performed in the French language.

13th IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTS 2019), Goa, India

The 13th IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTS 2019) was held December 16-19, 2019, at Birla Institute of Technology and Science, Pilani K K Birla Goa Campus, Goa, India. The event mostly attracted domestic students and researchers living in India, and also several of Indian origin who reside abroad, but only a few foreign participants came from other countries. Besides parallel sessions, the conference included a half-day mixed industry-governmental panel on the presence and future of wireless technologies in India. Many attendees spoke with panelists in Hindi dialects. Because of that, IEEE ANTS 2019 gave an impression of a 'national event with foreign participation' rather than of a truly international meeting. On the other side, it remained unclear why more scientists from other parts of the globe did not participate.

(From left, clockwise) VU2ZMK, VU2MYH, VU2ROE, VU2YQ, YT7MPB at IEEE ANTS 2019.

S. Ram Mohan and Miroslav Skoric at IEEE ANTS 2019.

Nevertheless, the tutorial on amateur radio communications and computer networking, performed by S. Ram Mohan VU2MYH from the National Institute of Amateur Radio (NIAR), Hyderabad, and Miroslav Skoric YT7MPB from the IEEE Austria Section, provided insight (in English) on emerging and state-of-the-art ways to communicate internationally by using amateur radio frequencies. Local radio operator volunteers, Amey VU2YQ, Mahindra VU2ZMK, and Roni VU2ROE, did their best to provide a reception demo for the newest geostationary satellite Eshail'2 QO-100. The tutorial also provided a chance to exchange knowledge and experience in 'ham' radio, at least between Asian and European communicators, and the whole session contributed to better mutual understanding and overcoming cultural differences.

CONFERENCE REPORT

TeleWeek and Telecom 2020, Examples of Co-Working in the ComSoc Ecuador Society

By Román Lara, IEEE ComSoc Ecuador Chair

COVID-19 has induced social distancing, quarantine, and isolation, but in the same way has enabled the consolidation of telework, e-commerce, telemedicine, and of course e-learning.

In this sense, Teleweek and Telecom 2020 have been developed, in order to allow researchers to share the results of their work with academia, and at the same time keep our IEEE ComSoc members updated with knowledge related to trending topics in Communications.

IEEE ComSoc Ecuador decided, as the primary aim, to join efforts with the IEEE ComSoc Student Chapters, and this proposal has been quite effective from February. After several meetings, it was decided to join efforts to have a dedicated week in order to celebrate World Telecommunication and Information Society Day. We were planning to invite a Distinguished Lecturer (DL), in the DL Tour; to do that, we maintained contact with IEEE ComSoc Chile, as Professor Ekram Hossain was available for traveling to these countries and on those dates. Due to Covid-19, the DL tour was suspended, and we decided to stop the organization of this activity, waiting to see how the pandemic developed.

TeleWeek, Our First Webinar

In the IEEE Ecuador Section there appeared the first proposal of webinars, which was developed by the Computer Society. We decided to follow this initiative, and proposed TeleWeek. This event was co-organized with the support of the Engineering in Medicine and Biology Society (EMBS), and we presented five researchers associatedwith: Universidad de las Fuerzas Armadas – ESPE (Ecuador); King Juan Carlos University (España); University of Windsor (Canada); Tianjin University of Technology; and Universitat Politècnica de Catalunya (España). These talks were developed from 13 to 17 April.

The picture of Teleweek promotional material shows the professionals who were part of TeleWeek, with themes related to communications and bioengineering fields. Our first talk was with Dr. Gonzalo Olmedo, who spoke about "Emergency Warning System for Digital Terrestrial Television ''. The second talk was about "Practical Approaches to Identify Users in the Radio Spectrum'' by Dr. Danilo Corral. Another interesting topic was related to the medical field and machine learning techniques entitled "BigMed+ Machine Learning and Data Science in Cardiology'' by Dr. José Luis Rojo. On our fourth presentation day, Dr. Xun Luo spoke about "Digital City Simulation and its Application for Communications". Finally, TeleWeek was concluded with the theme "Blockchain in Health Emergencies'' by Eng. Ignasi Oliva. Attendance of Teleweek reached a peak of 110 people, with a mean of 100 people per day. The largest percentage of attendees was from Ecuador, followed by Colombia and Perú.

Telecom 2020, Celebrating the World Telecommunication and Information Society Day

We decided to maintain our previous planning in order to celebrate World Telecommunication and Information Society Day, but now with virtual attendance. Telecom 2020 was organized in coordination with ComSoc Student Chapters of the Universidad Técnica Particular de Loja- UTPL; Universidad Politécnica Salesiana - UPS; Universidad Técnica del Norte - UTN; Escuela Superior Politécnica del Litoral - ESPOL; Universidad de las Fuerzas Armadas – ESPE; and the participation of IEEE Young Professionals R9. A total of five Universities, 10 volunteers, and 17 researchers participated in this event related to 5G, optical networks, and IoT, among others.

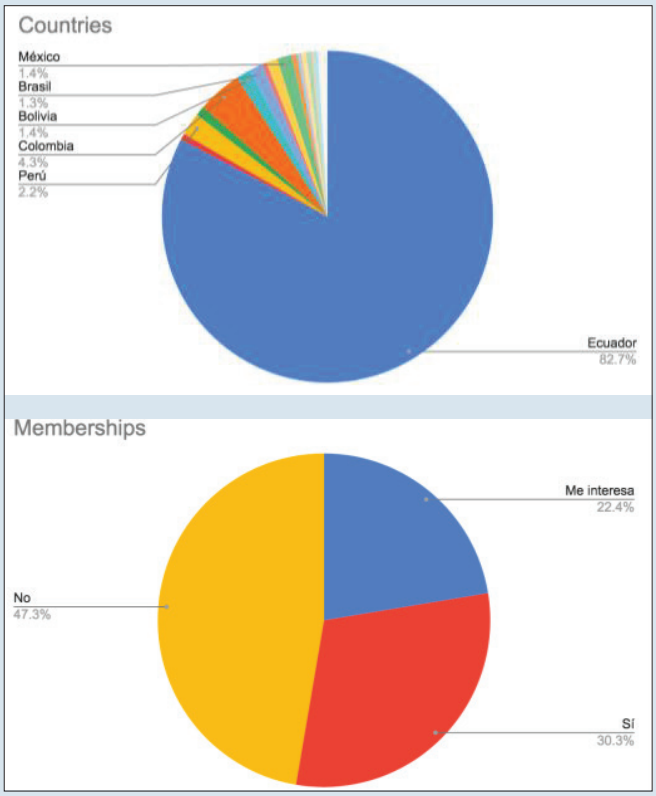
ComSoc Ecuador team.

Telecom was divided into five days from 18 to 22 May, and scheduled in order to make it possible for all ComSoc Ecuador Student Chapters to participate.

The first day was organized by IEEE ComSoc Ecuador, and we presented "Workshop on the Benefits of Being Part of IEEE ComSoc" by Nury Ramirez (ComSoc Director); Andrés Navarro (DLT and DSP Coordinator); Gidy Flores (Student Activities); and Ricardo Veiga (ComSoc's Board of Governors).

We had the honor of presenting Dr. Ekram Hossaim with the talk "Radio Resource: Allocation in the beyond 5G Era: Promises of Deep Learning and Deep Reinforcement Learning". Dr. Hossain's lecture was phenomenal, the

Teleweek official promotional material.



Telecom's statistics: attendees' main countries and membership.

audience was very enthusiastic to interact, and many questions were answered.

On the second day, we had the participation of three researchers from UPS and ESPE universities. We started with Dr. Mónica Huerta with the topic "Impact of Telecommunications on Biotechnology". Telemedicine and its relationship with the pandemic positioned it as a topic of interest with high impact. Then Eng. Renato Cumbal spoke about "Reinforcement Learning Applications" in which algorithms to solve computational intelligence problems were discussed. Finally, it ended with Eng. Darwin Alulema with the topic "IoT, Service, and Event-based Architectures", in which the architecture of IoT and cloud computing platforms were analyzed. On this day, the ESPE's ComSoc student chapter was in charge of the event organization.

On the third day, UPS's ComSoc student chapter was in charge of the event organization. On this day we started with Dr. Germán Arévalo with the talk "Optical Networks Evolution in Ultra-connectivity New Era". Then, Dr. Vinicio Carrera presented an interesting topic related to "Radar Detection" by using machine learning. Finally, Eng. Diego Freire presented the topic "New Trends in SDWAN", a discussion about whether software can overcome hardware. These researchers were from UPS and ESPE universities.

On the fourth day, we had the participation of researchers and volunteers fromUTPL University who were in charge of the day. We started with Eng. Manuel Quiñonez with the topic "Wireless Technologies by Using SDR and Open Source". Then Dr. Katty Rohoden spoke about "Covid-19: Implications for Telecommunication Operators", explaining how the pandemic has put pressure on telecommunications systems. Finally, Dr. Francisco Sandoval spoke on the topic "Telecommunications: Opportunities in Pandemic Time".

On our final conference day, we had the participation of researchers from UTN and ESPOL, and UTN volunteers were in charge of the session. We started with Eng. José Marcillo, who spoke on the topic "CNT-EP Connecting Ecuador in Pandemic Times". Then Eng. Ernesto Serrano spoke on the topic "5G and Something More", a trending topic about how to implement this technology in developing countries. Finally, Eng. Alexander Trejo spoke on the topic "Business Opportunities Generation", which presented a vision for entrepreneurs.

Some Statistics of Telecom

Attendance at Telecom exceeded our expectations. There were 630 registered attendees, from 15 countries, with Ecuador contributing 82.7 percent of the attendees. In the institution graph, there was a record 100 different institutions, with the largest number of attendees belongs to the academy. As for the statistics of the attendees with membership, approximately 30 percent were IEEE members, 47 percent were not IEEE members, and 22 percent were interested in joining IEEE ComSoc.

These statistics motivate us to continue our work and we take advantage of this article to thank the volunteers who collaborated with the organization of this event, the speakers who dedicated their time to share their knowledge, and all the attendees!

Telecom official promotional material.

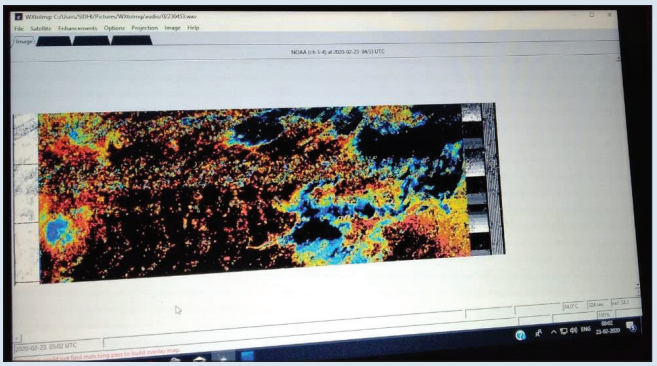
CHAPTER REPORT

Workshop on Tracking and Decoding of LEO Weather Satellite, Kerala, India, February 2020

By A. Gopakumar, IEEE ComSoc Kerala Chapter Chair, India

A workshop on "Tracking and Decoding of LEO Weather Satellite" was organized by the IEEE ComSoc Kerala Chapter in association with ComSoc SBC UKFCET and CESA (Communication Engineering Students Association, UKFCET) on 22 February 2020 at UKF College of Engineering and Technology, Parippally, Kollam, India. It was a hands-on session and was the first event of the IEEE ComSoc Kerala Chapter in 2020. The session was organized by two licensed ham Operators: Mr. Vipin V A (assistant professor in the EEE Dept., Govt Engineering College Idukki; license no 37109 – call sign: VU3VVA); and Mr. Shankar Jayaraj (assistant professor in the ECE Dept., UKF College of Engineering and Technology, Kollam; license no 42238 – call sign: VU3FIY).

The day started with tracking of the NOAA satellite live image capture from 9.20 am to 9.40 am IST (22 February). The students could see the live image capture of the satellite and were very enthusiastic about it. An introduction to wireless communication and installation was given, covering various types of signal transmission formats and classification of satellites. The participants were introduced to equipment used in satellite tracking like SDR dongle and QFH antenna along with software such as SDR#, Wxtoimg, LRPT Decoder and Orbitron for decoding the downlink data from the satellite. By using mobile applications such as ISS Detector and Heavens Above, participants gained knowledge on how to track a satellite. Pre-downloaded satellite data by licenced instructors were given for decoding. The students decoded the satellite data to obtain cloud precipitation, temperature, clear aerial view image and IR view image.



Decoded Satellite image, IR view.

The workshop was a great success with positive reviews from 83 participants including IEEE members and ComSoc members. The participants were very much satisfied with the quality of the sessions and shared it as a different and great hands-on experience in satellite communication.

Participants of the Workshop on'Tracking and Decoding of LEO Weather Satellite', Kollam, Kerala, India, 22nd February 2020.

GCN GLOBAL COMMUNICATIONS NEWSLETTER

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
Ricardo Veiga, Director of Member Services
Nury Gabriela Ramirez Cely, Director of LA Region
Fawzi Behmann, Director of NA Region
Christos Verikoukis, Director of EMEA Region
Sumei Sun, Director of AP Region
Maite Brandt Pearce, Chair of the WICE Standing Committee
Shashank Gaur, Chair of the YP Standing Committee

Regional Correspondents Who Contributed to this Issue
Ewell Tan, Singapore (ewell.tan@ieee.org)
Andrea Carrion Herrera, Ecuador (a.k.carrionherrera@ieee.org)

IEEE ComSoc IEEE Communications Society

www.comsoc.org/gcn
ISSN 2374-1082