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MEMBER AND GLOBAL ACTIVITIES

IEEE ComSoc Latin-America Regional Chapter Chair Congress 2024

by Yessica Sáez, Universidad Tecnológica de Panama, Director of IEEE ComSoc Latin America Region

The Latin-America Regional Chapter Chairs Congress (LA RCCC) 2024, hosted by IEEE Communications Society (ComSoc) Latin America, took place from November 5–6 at the Hotel Four Points by Sheraton in Medellín, Colombia, in conjunction with the IEEE LATINCOM 2024 Conference.

The event brought together 41 participants, including professionals, students, and leaders from IEEE ComSoc chapters across the region, creating a dynamic collaboration and knowledge exchange platform.

Technical Sessions and Presentations

The RCCC 2024 featured an impressive lineup of technical sessions and workshops. Highlights included:

- Industry Session: María Cristina Ríos and Sebastián González Palacios led a session on "Secure Access Service Edge (SASE)," focusing on cybersecurity challenges in the digital era.
- Invited Speaker: Stefano Bregni, a distinguished leader in IEEE ComSoc and Editor-in-Chief of the Global Communications Newsletter (GCN), presented a session titled "*GCN: Showcasing Our Chapters*." This session focuses on the Global Communication Newsletter to celebrate the achievements of ComSoc chapters and their contributions to advancing telecommunications globally.
- Breakout Sessions: Chapter and Student Branch Chairs worked in groups to share best practices and enhance collaboration.
- Educational and Humanitarian Initiatives: Presentations on educational activities and projects like "Humanitarian Technology and Internet for All" by Andrés Navarro emphasized the role of technology in societal impact.

Day one concluded with a session on ComSoc leadership and planning, during which Yessica Sáez, Director of ComSoc Latam, provided a roadmap for future initiatives. This was followed by discussions on funding opportunities and regional development strategies.

Networking and Social Events

The congress kicked off on the evening of November 4 with a vibrant networking session, providing attendees with an informal platform to connect and discuss mutual interests. On November 5, the participants gathered for an informal dinner, fostering deeper interactions among professionals and student leaders. These events added a personal touch to the technical program, creating opportunities for collaboration and camaraderie.

Results and Outcomes

The RCCC 2024 demonstrated tangible outcomes, with participants showing increased enthusiasm for contributing to IEEE ComSoc initiatives. Key results included:

- Increased Participation in Awards: More chapters and individuals committed to applying for IEEE ComSoc awards,

From left to right: Stefano Bregni (IEEE Division III Director, IEEE ComSoc Director Conference Operations, GCN Editor-in-Chief), José David Cely (IEEE ComSoc LA Membership Development Committee), Andrés Navarro (IEEE ComSoc LA Past Director and Awards Committee), Yessica Sáez (IEEE ComSoc LA Region Director), Maria Cristina Ríos (IEEE ComSoc LA Region Secretary), Aris Castillo (IEEE ComSoc LA Student Activities Committee), Miguel Gutierrez-Gaitán (IEEE ComSoc LA Communications Committee), Sebastián González (Invited Speaker, Millicon Tigo).

Regional Chapter Chair Congress
Latin America Region
5–6 November 2024
Medellín, Colombia
IEEE
Advancing Technology for Humanity
IEEE ComSoc
IEEE Communications Society

Group photo of LA Region Chapter Chairs and RCCC speakers after the closing session

LA Director Yessica Sáez presenting IEEE ComSoc MGA Council activities to the LA Chapter Chairs.

reflecting a heightened motivation to showcase their work and achievements.

- Enhanced Article Submissions: A surge in interest was noted in submitting technical articles to the IEEE Global Communications Newsletter, which aims to highlight the innovative projects emerging from Latin America.
- Proposals for Hosting Conferences: The congress inspired new proposals for hosting major IEEE conferences in Latin America, furthering the organization's visibility and influence in global telecommunications.

STUDENT PARTICIPATION AND RECOGNITION

For the first time, RCCC 2024 invited Student Branch Chapter Chairs from various countries, fostering intergenerational collaboration. Representatives from Bolivia, Colombia, Ecuador, Peru, and Panama student chapters shared their achievements and plans.

Special recognition went to Jhon Cristian Quispe Suca from Bolivia and Luis Carlos Merón Jaen from Panama for winning the IEEE ComSoc Latam Student ICT Innovation Competition.

FINAL REMARKS

The event demonstrated strong regional representation, with participants from 14 countries and student leaders from different institutions. The RCCC 2024 exemplified IEEE ComSoc's commitment to advancing telecommunications in Latin America.

Through engaging technical content, collaborative activities, and a focus on leadership development, the event strengthened the network of IEEE ComSoc chapters, laid the foundation for innovative initiatives, and ignited enthusiasm for expanding IEEE's influence in the region.

The networking and social events further solidified connections, making RCCC 2024 an unforgettable experience for attendees.

DISTINGUISHED LECTURER

Distinguished Lecture Tour to Portugal

Exploring Wireless Innovations Through Lisbon, Aveiro, and Covilhã

by Carlo Fischione, IEEE ComSoc Distinguished Lecturer, Sweden

From the vibrant streets of Lisbon to the scenic landscapes of Aveiro and the mountainous charm of Covilhã, my Distinguished Lecture Tour (DLT) in Portugal was an inspiring exploration of wireless innovations. Throughout November 13, 14, and 15, 2024, I delivered three lectures on cutting-edge wireless communications and machine learning topics. These events brought together an audience of approximately 10-50 participants per venue, including students, researchers, and faculty members eager to engage in forward-looking discussions.

THE TOPICS

Each lecture delved into a unique aspect of wireless and computational advancements:

Lisbon, NOVA FCT — Predicting the Quality of Service for Connected Vehicles by Machine Learning

Summary: Focused on utilizing machine learning to predict quality-of-service (quality of service) in cellular networks, particularly for connected vehicles. I introduced a federated learning framework that clusters geographical areas for localized prediction models, showcasing its superiority over traditional methods.

Takeaway: Attendees appreciated the relevance of machine learning to real-world challenges, especially in urban mobility. Researchers in the joint fields of wireless communication and robotics posed exciting questions about extending the research to flying drones.

Aveiro, Universidade de Aveiro — Analog and Digital Wireless Communications for Computations

Summary: Discussed Over-the-Air Computation (OAC) and the innovative ChannelComp approach, which leverages digital modulation for broader computational functions. Simulations demonstrated significant energy savings and enhanced spectral efficiency.

Takeaway: The audience was intrigued by the potential of digital OAC for future wireless networks, sparking a lively Q&A session, especially regarding industrial applicability.

Covilhã, Universidade Beira Interior — Channel Coding for Digital Wireless Computations

Summary: A novel scheme, Repetition for Multiple Access Computing (ReMAC), was presented to reduce computation errors in noisy and fading channels. The lecture explored optimization techniques and showcased performance improvements through simulations.

ML and Wireless: Challenges

- In wireless networks and devices, it is difficult to make ML training and inference in real time.
- The networks and devices are distributed, and heterogeneous, even using different communication protocols.
- Inference on a device/access network needs data from other devices and network locations as a collaborative effort.
- A major concern is energy efficiency, bandwidth limitations, privacy, and security.

Carlo Fischione speaking.

Takeaway: Researchers found channel coding and computation integration particularly innovative, initiating discussions on potential applications, especially within wireless sensor networks.

WHY IT RESONATED

The extremely welcoming setting at each venue facilitated deep engagement and personalized interactions. Local participants were captivated by the practical implications of these advanced topics, bridging theoretical innovation with real-world applications. They appreciated the pedagogical clarity of the presentations, which made complex concepts accessible and inspiring, unlike presentations that give collections of visions.

BEYOND THE LECTURES

Portugal's cultural richness provided a perfect backdrop for the tour. Between sessions, I immersed myself in the country's history and traditions, especially due to my deep interest in history and architecture:

Lisbon: A stroll through the iconic Belém district and visiting the Jerónimos Monastery offered a glimpse into Portugal's maritime legacy. My hosts introduced me to the exquisite Vinho Verde, a low alcoholic white wine known by Seneca the Younger and Pliny the Elder almost 2000 years ago.

Aveiro: Known as the "Venice of Portugal," the city's colorful gondolas and tranquil canals provided a serene interlude. Here, I learned of the hundreds of recipes for cooking cod fish (bacalhau).

Covilhã: Nestled in the Serra da Estrela mountains, the region's natural beauty and gastronomy left an indelible impression (not to mention the delicious local cheese Queijo da Serra da Estrela).

These experiences enriched the tour and sparked informal discussions with participants about the interplay between technology and culture.

LESSONS LEARNED

Engagement Matters: Tailoring content to the audience's background ensures better understanding and stimulates meaningful dialogue.

Cultural Context: Exploring local traditions deepens connections and broadens perspectives, making the DLT more impactful.

Emerging Trends: Portugal's academic community is highly receptive to novel research, highlighting the potential for future collaborations.

CONCLUSION

My Distinguished Lecture Tour in Portugal was a remarkable journey of knowledge exchange and cultural discovery. The enthusiasm of local participants and the vibrant academic environment reaffirmed the importance of international engagement in advancing global research. I am grateful to my primary contact, Prof. Fernando Velez, and all the hosts, Prof. Luis Bernardo, Prof. Rodolfo Oliveira, and Prof. Daniel Nunes Corujo, for their exceptional hospitality.

I look forward to building on these connections.

DISTINGUISHED LECTURER

Distinguished Lecture Tour to Spain

A Voyage of Rediscovering Memories, Sharing Wisdom and Exchanging Insights

by Nizar Zorba, IEEE Distinguished Lecturer, Qatar

I successfully completed an IEEE ComSoc Distinguished Lecture Tour (DLT) to Spain in November 2024. The trip was delightful, fuelled by the excitement of sharing my knowledge with senior and junior researchers at four institutions. The discussions with the audience provided highly insightful ideas, and the experience of exchanging information was genuinely unforgettable.

A special talk was at my first stop at CTTC, a research center where I worked and have not visited in the last 16 years. A mix of emotions in the same building, where I met old friends and colleagues and made new ones, resulted in fruitful discussions and plans for future collaborations.

In this DLT, I delivered four talks, scheduled as follows:

- Talk 1 at CTTC, Casteldefels, Barcelona, hosted by Prof. Ana Perez Neira, on 20November 2024.
- Talk two at Universitat Oberta de Catalunya (UoC), Barcelona, hosted by Dr. Ferran Adelantado, on the morning of 21 November 2024.
- Talk three at Universitat Pompeu Fabra (UPF), Barcelona, hosted by Dr. Giovanni Geraci, on the evening of 21 November 2024.
- Talk 4 at Universidad Carlos III (UC3M), Madrid, hosted by Prof. Ana Garcia Armada, on 22November 2024.

All of my talks titled "*Are UAVs Needed for Wider Implementation of Terahertz Communications?*" focused on Terahertz Communications due to the spectrum availability as such high frequencies. High-frequency Terahertz (THz) links meet the capacity requirements of next-generation communication networks. I motivated the need for THz and then tackled its challenges by considering the different technologies that can help and comparing the various proposals from the literature/industry to deal with such a scenario. A discussion of recent 2024 field trials on the different technologies was presented, ending with the proposal of UAVs needed for THz implementation in commercial systems. Recent standardization activities by IEEE ComSoc have been offered, and the audience (mainly Ph.D. students) encouraged them to make their work to IEEE standards.

At the end of each talk, IEEE ComSoc activities were promoted to the audience, along with how the Technical Committees (TCs) can be a path to standardization activities.

Seeing so many specialized attendees at each talk was remarkable, with special attention to the one at CTTC, which had more than 60 attendees, including staff members and research students. After each conversation, I engaged in insightful discussions with the audience on UAVs, 6G, THz, and all the technical aspects of my presentation and the different mechanisms to engage in the IEEE standardization process for such technologies. I encouraged all attendees to register and become active in the various IEEE ComSoc TCs and pursue standardization through them. I even got some new ideas from the discussions, with a special highlight to the talk al CTTC, where I stayed for 1 hour after the presentation attending questions.

Conclusions

- Researchers are motivated to explore 6G communication, particularly focusing on THz technologies in UAV-based scenarios, which promise unprecedented data rates and possibility for implementation.
- Standardization efforts by IEEE motivate researchers to contribute to the development of interoperable and efficient communication systems.
- Researchers are encouraged to embrace these transformative technologies, fostering collaboration and innovation.

Talk at UC3M.

I should mention that this trip to Spain is very special as it reminded me of my Ph.D. studies 20 years ago. I missed the walks in Barcelona. I met many of my old contacts and got in contact with many new ones. To see both Barcelona and Madrid on the same trip was marvelous. I even stopped in Zaragoza (a city halfway between Barcelona and Madrid), where I met former friends. I saw the fantastic work done at the two football stadiums (Camp Nou and Santiago Bernabeu). From the outside, they seem mind-blowing, even though I did not get the chance to access them.

I was invited to lunch on the visit days, and the technical and non-technical discussions at the lunch table were very interesting and insightful.

Reflecting on my DLT, it was far more than an academic endeavor; it was a powerful demonstration of the value of in-person connections and the vast potential of collaboration. I wholeheartedly recommend the DL program to researchers eager to expand their horizons. If you aspire to become an IEEE ComSoc DL, I urge you to apply — this experience will profoundly enhance your research career. Together, with the collective efforts of all DLs, we can unlock the full potential of our shared knowledge and drive our field toward groundbreaking advancements. The program is a great success for ComSoc, and I wish more peers would benefit from it.

Several photos of my talks are available on my LinkedIn, where I shared the DLT experience with my colleagues and friends worldwide and highlighted the DLT benefits.

CONFERENCE REPORT

The 32nd International Conference on Software, Telecommunications, and Computer Networks (SoftCOM 2024)

by Dinko Begusic, Josko Radic, Matko Saric, Josip Lorincz, Katarina Rados, Marta Balic, Sinisa Krajnovic, Croati; Pascal Lorenz, France; Joel J. P. C. Rodrigues, Brazil/Portugal

The 32nd International Conference on Software, Telecommunications and Computer Networks — SoftCOM 2024 was held in Elaphusa Hotel, Bol (island of Brac), Croatia, September 26 to 28, 2024. The Conference has been technically co-sponsored by the IEEE Communications Society (ComSoc) with the support of the Technical Committee on Communications Software (CommSoft) and the IEEE Croatian Section. The Conference was organized by the University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture (FESB), and Croatian Communications and Information Society (CCIS) under the auspices of the Croatian Academy of Engineering. 32nd SoftCOM conference gathered researchers from academies and industries worldwide to join their efforts in advancing science, technology, and education in ICT. The attractive ambiance of the island of Brac and the Adriatic Sea coast has been a perfect location for such a meeting.

The technical program featured sixteen conference sessions, including six special sessions dedicated to Next Generation Wired and Wireless Networks, Ad Hoc&Sensor Networks and Internet of Things, Security and Digital Forensics, Green Networking and Computing, Robotics, and ICT-assisted Well-being and Advanced Educational Technologies. Besides that, a Symposium on Environmental Electromagnetic Compatibility and a dedicated half-day tutorial by professor Dragan Poljak, University of Split, have been held. The 15th Symposium on Green Networking and Computing (SGNC 2024) was organized by Josip Lorincz, Ph.D., FESB (UNIST, Croatia), with the support of the IEEE ComSoc TCGCC. As one of the oldest symposiums dedicated to the field of "green networking and computing," the SGNC served as a platform for academia and industry researchers and visionaries from all over the world to share ideas, results, and experiences that are presented in the special session on green networking and computing organized in the frame of the symposium. The interdisciplinary Symposium on Information Security and Intellectual Property has been organized with the University of Split, the Faculty of Law, and the University of Zagreb Faculty of Electrical Engineering and Computing. The authors of selected papers have been invited to extend their papers and submit them for publication in the Journal of Communications Software and Systems (JCOMSS).

During the opening ceremony, Profs addressed the audience: Dinko Begusic, SoftCOM 2024 General Co-Chair; Prof. Silvestar Šesnić, Vice Dean of the Faculty of Electrical Engineering, Mechanical Engineering, and Naval Architecture (FESB); Prof. Zvonimir Sipus, Chair of IEEE Croatia section Chapter of Microwave Theory and Techniques; Dean Marusic, Split Site manager, Ericsson Nikola Tesla company, Split.

As a part of the plenary session, the keynote talk titled: "Sovereign Smartphone: Revisiting Smartphone Security Architecture" was given by Professor Srdjan Capkun, PhD, Department of Computer Science, ETH Zurich, Switzerland. The speaker shared his perspective on the privacy of modern smartphones. He presented his experiences developing an innovative smartphone architecture that enables the secure transfer of control back to users while maintaining compatibility with the existing smartphone ecosystems.

The accompanying SoftCOM 2024 Business Forum featured professional workshops, project presentations, and panel discussions with the participation of experts and institution representatives. 30th Workshop on ICT featured a set of presentations of professional papers and posters in ICT. Professor Sven Gotovac, FESB Split, organized the Workshop on Contemporary technologies for natural and man-made disaster management. The workshop included the presentation of the (Interreg VI-A) IPA CBC Croatia — Bosnia and Herzegovina — Montenegro HR-BA-ME00392 Project: Contemporary technologies for natural and manmade disaster management — SmartProtect.

Damir Brčić, Head of Digital Dalmatia, County of Splitsko and Dalmatia, moderated the panel discussion "The Importance of Digital Skills in Developing the Local Tech Community." The discussion focused on the collaboration between academic institutions and the local community in developing digital skills.

A special part of the program was aimed at master-level students. The Ericsson Nikola Tesla Summer Camp 2024 Workshop featured the presentation of six students' projects completed during the summer camp. Denis Duka, Department manager in the Digital society domain, and Marta Balic, Ericsson Nikola Tesla, Croatia, moderated the workshop.

In conjunction with the SoftCOM 2024 conference, the final event of the EU Marie Skodowska Curie Innovative Training Network Greenedge project was organized by Michele Rossi, Ph.D., Andrea Zanella, Ph.D. (UNIPD, Italy) and Paolo Dini Ph.D., Marco Miozzo Ph.D. (CTTC, Spain). In the frame of the Greenedge project final event, a program containing different activities, such as the Greenedge project keynote speech, PhD student poster session, Ph.D. student challenge contest, and award ceremony, took place. The project keynote speech titled "Towards Truly Sustainable Wireless Communication Systems" was given by Professor Marcos Katz, Ph.D., University of Oulu, Finland.

More information about the SoftCOM 2024 conference may be found at the address https://2024.softcom.fesb.unist.hr/

The social programme included a gala dinner on a terrace in the town of Bol, on the southern side of the island of Brac. The conference trip included lunch with a view of the town of Supetar, on the northern side of the island of Brac.

WORKSHOP

IEEE DAY 2024 Pakistan

Organising Research and Innovating with IoT and AI

by Umair Ahmed Korai, IEEE ComSoc Karachi Chapter Chair, Pakistan

Group picture of IEEE DAY 2024 Pakistan.

The IEEE ComSoc Karachi Chapter, in collaboration with the IEEE ComSoc MUET Student Chapter, organized a technical hands-on workshop and seminar on October 1, 2024, at Hyderabad Gymkhana, Hyderabad, Pakistan. This event was organized as a part of the IEEE DAY 2024 celebration. This event was titled: "Organising Research and Innovating with IoT and AI," and two separate talks were delivered under this title. The first talk was the hands-on workshop titled "Hands-on Workshop on Mendeley," the next part of the event was a technical seminar titled "AI-Driven Intrusion Detection Systems for IoT Network." Last, the cake-cutting ceremony for celebrating the IEEE DAY 2024 was held, followed by the certificate distribution and dinner.

The total number of participants in the session was 60, of which 58 were IEEE members and 02 were non-IEEE members. The event started with reciting the Holy Quran, followed by the National Anthem of Pakistan. Afterward, Dr. Umair Ahmed Korai, Chair of IEEE ComSoc Karachi Chapter, delivered the welcome speech, briefly introducing IEEE Day. Afterward, a video message by Prof. Ana Garcia Armada, Vice President of IEEE Communication Society, was played. In the video message, Prof. Ana discussed the importance of AI and IoT and appreciated the IEEE ComSoc Karachi Chapter for organizing such an informative session and IEEE Day 2024 celebration. The event was graced by esteemed guests, including the Chief Guest, Prof. Dr. Bhawani Shanker Chowdary, Advisor MUET Pakistan, and the Guest of Honor, Prof. Dr. Faisal Karim Shaikh, Professor MUET Pakistan.

Dr. Nadeem Ahmed led the first session with a Hands-on workshop on Mendeley. Participants actively engaged in learning how to efficiently manage and organize their research using the platform. The interactive session provided valuable practical skills, and all students participated enthusiastically.

Dr. Fayaz Hassan followed with a compelling talk on AI-Driven Intrusion Detection Systems for IoT Networks, delivering insights into this cutting-edge field. Participants gained significant knowledge and appreciation for the intersection of AI and IoT security.

Our esteemed Chief Guest, Prof. Dr. Bhawani Shanker Chowdhry, shared his invaluable experiences in various fields, offering students inspiration and guidance on opportunities for their involvement in research and innovation. He also shared his journey in bringing IEEE to MUET and involving MUET teachers in the process, which provided a historical perspective on the impact of IEEE in the academic community. The celebration continued with a cake-cutting ceremony, where all participants, guests, and speakers celebrated IEEE Day together. The specially themed IEEE Day cake featured logos that added a festive spirit to the occasion. A shield and certificates distribution ceremony was held, and the shields were distributed among the speakers and guests. In contrast, the Certificates of Appreciation were distributed to the volunteers who helped organize the event.

The event concluded with a group photo featuring all participants, speakers, and guests, capturing the spirit of unity and collaboration. Following this, participants enjoyed a networking session during dinner, which provided a relaxed environment for further discussions and relationship building. Everyone thoroughly enjoyed the evening, making the event a memorable celebration of IEEE Day 2024.

Conclusion

The IEEE Day Celebration 2024 was a resounding success, providing participants with insightful sessions, valuable networking opportunities, and a festive atmosphere to celebrate the spirit of IEEE. The event upheld the theme of innovation and research, particularly in the domains of IoT and AI, inspiring future initiatives in these transformative fields.

GCN GLOBAL COMMUNICATIONS NEWSLETTER

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