GCN GLOBAL COMMUNICATIONS TO NEWSLETTER



April 2024 ISSN 2374-1082

COMSOC CONFERENCE

IEEE Consumer Communications & Networking Conference 2024 (IEEE CCNC 2024) 6-9 January 2024, Las Vegas, USA

by Marco Di Felice, General Chair, and Silvia Mirri, Technical Program Chair, University of Bologna, Italy

The IEEE CCNC 2024 conference has been organized in the vibrant Las Vegas, from January 6 - 9th, 2024. Continuing tradition, the prestigious Flaming Hotel once again served as the conference venue. However, this year's event was strategically scheduled before the Consumer Electronics Show (CES), providing attendees with the unique opportunity to delve into the trends of consumer electronics at our conference before exploring the technological innovations of the year at the CES.

Organizing a conference as extensive as CCNC, which included numerous concurrent events and involved over 30 dedicated individuals on the organizing committee, demanded careful planning and coordination: to this aim, we implemented a meticulous process that engaged all members of the organizing committee, fostering a sense of community among everyone involved. After the Covid pandemic, we could feel palpable eagerness within the research community to return to in-person events and reconnect with colleagues.

We believed that CCNC and Vegas provided the ideal setting for fostering these social interactions. To enhance networking opportunities, we paid attention to enjoyable social events to complement the technical program. In addition to the traditional social dinner, where we announced the best paper awards, we organized a lively welcome cocktail event. Attendees enjoyed food and beverages while engaging in a poster session, and a similar dynamic was replicated during the demo session.

However, the true measure of the conference's success was the level of interaction and engagement observed among participants during the sessions. These meaningful exchanges served as an ultimate reward for the organizing committee and provided promising indicators for the future of the conference.

The CCNC 2024 conference presented attendees with a diverse and comprehensive program, ensuring that participants could find something of interest at every moment of the event. Our program featured two keynote addresses, one-panel discussion, four workshops, nine tutorials, three poster sessions, one demo session, and 35 technical and work-in-progress sessions, totaling more than 280 presentations all condensed into just three-and-a-half days.

While keeping the focus on networking and consumer communications, the CCNC 2024 conference explored how innovation in this domain can be enriched by integrating complementary fields. To accomplish this, we meticulously planned ten technical main tracks, delving into the future of Al-driven, secure, integrated networking systems, and applications.



The General Chair Marco Di Felice with the Keynote Speaker Charles Schroeder.



The Keynote Speaker Danijela Cabric.



The Keynote Speaker Danijela Cabric.

Notably, we introduced a new track focused on the digital twin of cyber-physical systems. The overwhelming response from the community confirmed the efficacy of this approach, with more than 300 technical papers submitted and carefully reviewed by our Technical Program Committee (TPC). Based on the outcomes of the tracks, we highlight that challenges related to cybersecurity are perceived as highly significant by the research community in this domain.

However, the most formidable challenge appears to be integrating security into system design, while also addressing other requirements. Notably, the paper awarded as the best of this edition ("A Lightweight Aggregate Authentication Protocol for Internet of Drones," from Image Bhattarai, Cong Pu, and Kim-Kwang Raymond Choo) tackled the combined challenges of communication security and efficiency for resource-constrained drones.

From paper submissions, it was evident that Al-driven approaches can support all aspects of networking and consumer communications, spanning from protocol design to applications and services. In this context, the remarkable industrial keynote by Dr. Charles Schroeder from National Instruments unveiled the possibilities and challenges of generative Al in designing new measurement systems and next-generation communication technologies.

Additionally, the need for holistic approaches in designing communication systems for future 6G networks was underscored in the keynote by Prof. Danijela Cabric from UCLA, who provided insights into the fundamental rethinking of radio architectures, signal processing, and networking protocols required by such systems.

In exploring the societal impacts of these technologies, the panel organized by Prof. Mehmet Ulema from Manhattan College and Dr. Doug Zuckerman prompted the audience to reflect on communication systems for public safety and shed light on IEEE initiatives addressing this critical area. The program was further enriched by workshops and tutorials going into the vertical of emerging topics, such as quantum and virtualized edge computing for future network systems, digital twins, and the web of things, just to name a few.

We are confident that the diverse array of offerings presented over the three days of the CCNC conference will undoubtedly inspire researchers and catalyze new studies.



The Technical Program Chair Silvia Mirri with some conference attendees The Panel Chair Doug Zuckerman.

WORKSHOP

IEEE Jamaica Section Workshop, January 2024

by Christopher Udeagha, IEEE Section/ComSoc Chair

The University of Technology, Jamaica was the site of an exciting, well-planned, well-attended two-day workshop on January 17–18th, 2024, organized by IEEE Jamaica Section, with the theme, "Towards Expanding Access to Quality Engineering Science Excellence Opportunities in Jamaica."

Over 300 participants of all ages and with varied educational and professional backgrounds-K-12, college undergrad and graduate students, university professors, industry professionals, and government officials were treated to lectures, presentations, panel discussions, tabletop displays, and general socializing with IEEE leaders that included: Sophie Muirhead IEEE Executive Director, Fred Schindler VP Technical Activities, Eric Grigorian and Bala Prasanna region directors, IEEE Jamaica section chair and senior lecturer at University of Technology Engr. Christopher Udeagha (P.E), Marie Hunter, Terence Martinez, Nancy Ostin, and Ashley Moore. The speakers also included University of Technology President,



From right to left: Christopher Udeagha, Section Chair, the Honorable Fayval Williams, Minister of Education and Youth, and Kevin Brown, President University of Technology, Jamaica.

Dr Kevin Brown, and The Honorable Fayval Williams, Minister of Education and Youth and a representative for the Minister of Science, Jamaica.

Under the industrial forum panel entitled, "Engineering Science in Jamaica Today," the speakers were Shonari Bullock, experienced Telecommunications Engineering Leader, formerly with Digicel Jamaica LTD, Mazahurlt Davis, Director, Network Services-Flow Jamaica, Andre Palmer, Director of Strategic Client Engagement, Symptai Consulting, Jamaica, and Olajide Olowoyeye Senior Consultant at Microsoft Azure for Operators. Moderated by IEEE Jamaica Section Chair, Engr.Christopher Udeagha (P.E). Each speaker was given five to ten minutes to make a presentation. The objectives and services provided by each company were discussed, and accomplishments that encompass STEM/STEAM/SIWES and student internship outreach and public visibility campaigns were discussed. Among all questions to migrate from IPV4 to IPV6 were addressed.

Most importantly the idea was conveyed that MOVE is an all-volunteer-driven program helping each community during times of need and helping in ordinary times through education outreach efforts thereby making a huge impact; the humanitarian message appealed to participants.

IEEE MOVE banner and several MOVE-related swag items were a big attraction too, for the hundreds who stopped by at the table.

Minister of Education and Youth, Hon. Fayval Williams shares a photo opportunity with members of the Institute of Electrical and Electronics Engineers (IEEE) team, during Wednesday's (January 17) opening session of the IEEE workshop, held at the University of Technology, Jamaica (UTech), in St. Andrew. Minister of Education and Youth, Hon. Fayval Williams, says efforts will be made to strengthen industry linkages to retain engineering graduates in Jamaica. "I know that a gap exists currently. We need to have stronger links and stronger linkages in the industry in Jamaica. I don't think we are exploiting that enough; having those conversations with companies, having them know the skill set of the graduates who are coming out," Mrs. Williams said.

The industrial forum on, "Engineering Science in Jamaica Today," includes discovering the thriving world of engineering Science in Jamaica. The industrial experts explained why it is beneficial to keep homegrown talent here at home. This session offered an inspiring look at professionals who chose to pursue their careers in Jamaica. And what opportunities lie ahead in the Caribbean for the next generation of electrical engineers, Computer Scientists, and technologists.

The island country of Jamaica, located in the Caribbean Sea, is often described as a "country of sun and water" due to its tropical climate, abundant sunshine, and beautiful coastal areas. Locals and tourists are drawn to Jamaica's breathtaking landscapes, which range from pristine beaches to lush mountains.

In addition to its captivating beauty, Jamaica, like many other countries, is susceptible to various natural calamities due to its geographical location and topography. It faces challenges related to hurricanes, earthquakes, flooding and landslides, volcanic activity, tsunamis, and other natural disasters.

To address these natural calamities, Jamaica has established disaster management and response mechanisms. The Office of Disaster Preparedness and Emergency Management (ODPEM) plays a crucial role in coordinating disaster response efforts, providing early warnings, and implementing preparedness measures. Additionally, public awareness campaigns aim to educate the population on how to respond to various disasters and reduce their vulnerability.



From left to right: Balvin Thorpe, Technical Activities Chair, Fred Schindler, IEEE VP-elect Technical Activities chair, Christopher Udeagha, Section Chair, Sharlene Brown, IEEE Region 3 Committee Member, Sophia Muirhead, IEEE Executive Director & Chief Operating Officer, Sean Thorpe, Hon. Fayval Williams, Minister of Education, Kevin Brown, President Utech., Bala Prasanna, IEEE Region 1 Director, Eric Grigorian, IEEE Region 3 Director, Devon Gayle, Computer Society Chapter Chair, Ostin Nancy, IEEE HKN Director, Halden Morris, LMAG Chair, Marie Hunter, IEEE MCE Director, Ashley Moran, IEEE EPICS Program Manager, Donovan Wilson, Union of Jamaican Alumni Associations U.S.A., Inc (UJAA) President.



Industrial Forum on "Engineering Science in Jamaica Today." From left to right: Christopher Udeagha, Section ComSoc Chair, Moderator, Andre Palmer, Director of Strategic Client Engagement, Symptai Consulting, Shonari Bullock, Past Manager, Digicel Jamaica limited, Mazahurlt Davis, Director of Technology Operations, Flow Jamaica Limited, and Olajide Olowoyeye, Senior Consultant at Microsoft Azure Cloud.

In this setting, an invitation to establish IEEE MOVE-Jamaica under the IEEE MOVE international program was enthusiastically received.

Professor Halden Morris, a well-known and deeply respected IEEE Life Senior Member, no stranger to IEEE MOVE leadership, has volunteered to build a team of 10 to 12 local IEEE members who would make the core of IEEE MOVE- Jamaica.

In the not-too-distant future, we IEEE Members and volunteers with the mission of, "Advancing Technology for Humanity," can also look forward to being a part of Jamaica's motto, "Out of Many, One People."

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International Day of Light 2023, Thailand

by Keattisak Sripimanwat, IEEE ComSoc Thailand Chapter Chair

A post-pandemic symposium on, "Light in Healthcare," was organized on the International Day of Light (IDL 2023), May 16. This event covers for wide range of minimum technical background audiences of the growing, aging society in Thailand. Starting from the high school student level through university, to the public, this IDL2023 was proposed to stimulate young people into STEM, and for long-term public self-learning to understand both sides of the benefits and risks of lightwave.

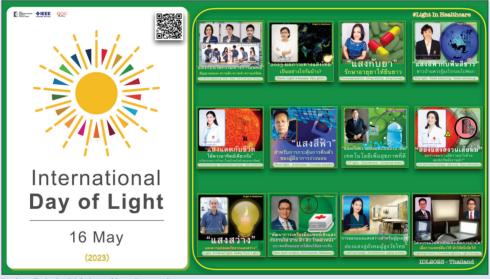
Online twelve topics by fifteen speakers from all around the country were given in the areas of biomedical engineering, light pollution, light and medicine, blue light for alertness, teeth bleaching and whitening, photodynamic therapy, light disinfection for drinking water, skin laser surgery, lighting design for aging society, circadian lighting and light therapy, and safety from light.

In parallel on the same date at a local IEEE ComSoc annual seminar, another extended topic from the previous year

based on, "Light in Cable," was organized online. Optical fiber foundation for submarine network is focused on this industrial talk. Two communication engineers from the local telecommunications industry shared its overall technology and services targeting non-technical background people in the title of, "Light in Submarine Cable."

Thai IEEE ČomSoc chapter would like to thank those seventeen speakers, and their organizations; Biomedical Engineering and Faculty of Dentistry, Srinakharinwirot University; Faculty of Architecture of Chulalongkorn and Kasetsart Universities; Faculty of Engineering and Medicine, Chulalongkorn University; Faculty of Pharmacy, Siam University; Faculty of Engineering, Khon Kaen University, Electricity Generating Authority of Thailand (EGAT), Streesmutprakan School; Faculty of Medicine Siriraj Hospital, Mahidol University; King Chulalongkorn Memorial Hospital; and the National Telecom Public Company Limited (NT). Their kindness to co-enlighten people is highly appreciated.

Full information of all contributors with their recorded videos on both the symposium and seminar are serving at https://shorturl.at/aDPR5 and https://shorturl.at/gkAL9, respectively.



Twelve talks in the "Light in Healthcare" symposium



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www.comsoc.org/gcn ISSN 2374-1082