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COMSOC CONFERENCE

IEEE LATINCOM 2023 Yet Another Success of Innovation and Global Networking by the Panama Chapter

by Yessica Sáez, Universidad Tecnológica de Panamá,
IEEE LATINCOM 2023 Finance Chair

From November 15 to 17, 2023, the city of Panama became the epicenter of innovation in communication technologies with the 15th edition of the IEEE Latin-American Conference on Communications (LATINCOM) 2023. Organized by the Communications Society (ComSoc) of the Institute of Electrical and Electronics Engineers (IEEE) Panama Section, in collaboration with the Technological University of Panama (UTP) and the National Institute of Advanced Scientific Research in Information and Communication Technologies (INDICATIC AIP), the event exceeded all expectations.

The conference, which attracted participants from around the world, stood out for its robust program that brought together industry experts and academics in a vibrant exchange of ideas, research, and innovation. With 110 scientific papers proposed, 51 were selected and presented in 13 technical sessions, showcasing the diversity and quality of contributions. In addition, five keynote speeches by world-renowned leaders addressed crucial topics such as edge computing, artificial intelligence in communications, and cybersecurity.

The keynote presentations at IEEE LATINCOM 2023 were nothing short of groundbreaking, offering profound insights into the future of communication technologies. Renowned experts from around the globe took center stage, addressing critical themes that are shaping the landscape of the industry. Falko Dressler, a distinguished professor in Telecommunication Networks at the Technical University of Berlin, kicked off the series with a visionary talk on "6G Virtualized Edge Computing," delving into the integration of high-performance computing into the transition towards 6G. Venkatesh Ramaswamy, MITRE's Chief Technologist for NextG, provided a compelling exploration of the road to 6G, emphasizing the pivotal role of Automation and Artificial Intelligence. Michele Nogueira, an Associate Professor at the Federal University of Minas Gerais, Brazil, illuminated the critical intersection of Data Science and Cybersecurity, offering a comprehensive overview with a focus on networking aspects. Emilio Calvanese Strinati, the Program Director for Nanotechnologies and Wireless Networks for 6G at the French Atomic Energy Commission, brought a fresh perspective by envisioning post-Shannon era communications, emphasizing semantic, goal-oriented, and reconfigurable intelligent environments. Finally, Muriel Médard, a professor at MIT, introduced the concept of Guessing Random Additive Noise Decoding (GRAND), an innovative universal decoding algorithm with implications for signal processing and network communications. Each keynote not only showcased the speakers' expertise but also fueled anticipation for the transformative advancements on the horizon in the field of communications.

Hector Poveda, General Co-Chair of the organizing committee, along with Eduardo Ortega Barría, National Secretary of Science, Technology, and Innovation of Panama, welcomed participants during the opening ceremony. This event managed to attract 102 participants, with an impressive 70% of international attendees. The quality of the 209 communication professionals involved in presenting scientific papers demonstrated the global appeal and relevance of LATINCOM 2023.



IEEE Latincom 2023 Organizing Committee, Steering Committee and Keynote Speakers



Muriel Médard, IEEE Latincom 2023 Keynote Speaker



IEEE Latincom 2023 Keynote Speaker Emilio Calvanese Strinati and other participants enjoying shaved ice during the Welcome Reception

The event organizers spared no effort in providing unforgettable experiences outside the academic program. The welcome reception, held at the end of the first day, provided a relaxed setting for participants to exchange ideas while enjoying shaved ice and violin music. The gala dinner, held in the luxurious Sytsth Hall of the Riu Plaza Hotel, was the social highlight with saxophone performances,

folkloric presentations, and the awarding of certificates to outstanding scientific works, all supported by PROMTUR PANAMA.

The presence of prominent members of IEEE ComSoc, including Stefano Bregni, Director of Conference Operations, highlighted the event's international significance. Media coverage from over 20 outlets, including TVN, SERTV, El Capital Financiero, and La Exitosa, underscored the relevance and impact of LATINCOM in the scientific and technological field.

The success of IEEE LATINCOM 2023 has consolidated Panama as a potential host for future conferences of this magnitude. The



IEEE Latincom 2023 participants with folkloric performers during the Gala Dinner

quality of the organization, international participation, and positive media coverage have put Panama on the map as a destination for high-level scientific events.

IEEE LATINCOM 2023 was not only a showcase of the latest trends in communications but also a social and cultural experience in an exceptional setting. Those who had the privilege of attending will undoubtedly carry with them not only advanced knowledge but also unforgettable memories of Panama and its hospitality. For those who missed this event, there is hope for equally exciting future editions. Until the next LATINCOM!



Fernando Merchán, IEEE Latincom 2023 Technical Program Co-Chair, being interview by TVN, a local TV News Channel

WORKSHOP

IEEE ComSoc University of Bahrain Student Branch

Introduction to Arduino Programming Workshop

by Ehsan Ali Alhawaj, Chair, IEEE ComSoc UOB Student Branch, Bahrain

The IEEE University of Bahrain (UOB) Student Branch organized a remarkable activity called "Introduction to Arduino Programming," which quickly gained recognition as one of the best events of the year. This hands-on workshop aimed to introduce participants to the world of Arduino programming, enabling them to explore the potential of this powerful microcontroller. The event garnered significant praise and attention due to the positive outcomes it generated for the attendees.

The "Introduction to Arduino Programming" workshop empowered participants by providing them with the necessary skills and knowledge to harness the capabilities of Arduino boards. The organizers meticulously designed the curriculum to cater to individuals with varying levels of programming experience, making it accessible to both beginners and more advanced participants. Also, workshop commenced with an overview of the Arduino platform, highlighting its versatility and wide range of applications. Participants were introduced to the Arduino Integrated Development Environment (IDE) and taken through the essential components of an Arduino board, including input/output pins, sensors, and actuators. The true essence of the workshop lay in its hands-on approach. Participants were encouraged to engage in practical exercises, which allowed them to write and upload their first Arduino programs. Led by experienced mentors, attendees learned how to control LEDs, read sensor data, and even control motors using Arduino. These hands-on activities provided a deep understanding of the concepts and instilled confidence in the participants' programming abilities. The workshop fostered a collaborative environment where participants could learn from both the mentors and one another. Group projects and interactive sessions allowed attendees to exchange ideas, troubleshoot together, and build a supportive community. This networking aspect of the event created lasting connections among enthusiasts, fostering an environment of continued growth and knowledge-sharing.

The practicality of Arduino programming was emphasized throughout the workshop. Participants were exposed to a wide array



Introduction to Arduino Programming Workshop by IEEE ComSoc UOB Student Branch.

of real-world applications, such as home automation, robotics, and Internet of Things (IoT) projects. This exposure ignited their creativity and imagination, inspiring them to explore innovative solutions to everyday problems. This activity yielded numerous positive outcomes for the participants. Firstly, it sparked an interest in programming and electronics among individuals who had never delved into these fields before. Many attendees discovered a newfound passion for technology, which motivated them to pursue further studies or careers in related disciplines. Secondly, the workshop provided a strong foundation in Arduino programming, equipping participants with the skills to undertake more complex projects independently. As a result, several attendees went on to develop their own Arduino-based prototypes and showcase them at various events and competitions. Lastly, the success of the workshop inspired the IEEE ComSoc UOB Student Branch to organize similar activities in the future, further enriching the learning opportunities available to students. The positive feedback received from participants encouraged the organizers to continue offering workshops on different aspects of technology, fostering a culture of continuous learning and innovation.

IEEE ComSoc UOB Student Branch would like to take the opportunity to extend their sincere and deep appreciations to Wafeeq Ajoor, Chair, IEEE ComSoc Bahrain Chapter, who encouraged and facilitated, through formal written request to UOB EE Department, this very rewarding and memorable hands-on electrical and/or electronic engineering activity.

IEEE International Black Sea Conference on Communications and Networking (IEEE BlackSeaCom), Istanbul, Turkey, 2023

by Sema Oktug, Turkey, and Mehmet Ulema, USA

The IEEE Black Sea Communications and Networking (IEEE BlackSeaCom) series of conferences are held in the countries surrounding the Black Sea. The 11th edition of the IEEE BlackSeaCom series was held in beautiful Istanbul, Turkiye on 4-7 July 2023 (<https://blackseacom2023.ieee-blackseacom.org/>). The General Co-Chairs were Sema Oktug of Istanbul Technical University, Turkiye; Taner Arsan of Kadir Has University, Turkiye; and Burak Kantarci of the University of Ottawa, Canada. It was hosted by Kadir Has University, a well-known private university in Turkiye with a great campus by the Golden Horn.

The theme of the conference was “Immersive Bridging of Continents in the Era of Hyperconnectivity.” It was an appropriate theme for a conference in Istanbul, which is situated in both Europe and Asia.

Unfortunately, while the organization of the conference was going on, a devastating earthquake on February 6, 2023, in southern Turkiye, caused the loss of more than 50,000 lives, as well as thousands of injuries and the displacement of the entire region of more than 10 large cities and many thousands of small towns and villages. More than 40 million people were impacted in this region in Turkiye and its neighbors. Despite this unfortunate event, the work on the organization of the conferences continued without significant impact on the program.

Work on the conference organization started seven months in advance. 10 meetings were held regularly with the participation of the members of the Organizing Committee. Past conference experiences and IEEE practices were conveyed by Alex Gelman and Mehmet Ulema of the Steering Committee, Tina Gaerlan, and Bruce Worthman of the IEEE Communications Society. Publicizing the conference, collecting papers, evaluation of them by the TPC members, deciding on the accepted papers and formation of the program, invitation of the keynote speakers, collecting the tutorial/workshop proposals, deciding on the panels, finding sponsors, deciding on the venue and many other steps of the conference organization were done by the distinguished chairs, co-chairs of the organizing committee. We are grateful to all OC members and TPC members who did their job meticulously.

The social program started with a Welcome Reception on the first day. It was held at Rezan Has Museum, which is on the campus of Kadir Has University. The structure of the museum was built on the city walls from the Byzantium era and the exhibition containing Urartian artifacts impressed the participants.

On the second day, the social program started in the afternoon with a visit to Istanbul Technical University (ITU) ARI Teknopark, established to leverage technology production in Turkiye. ITU ARI Teknopark Incubation Center (ITU Seed), in 2023 has been awarded as the “Best Incubation Center in the World” on a prestigious list announced by Sweden-based UBI Global. The visit began with a welcoming talk by the Teknopark director Prof. Attila Dikbas. Then the activities and the programs of ITU ARI Teknopark were introduced. Two ITU SEED companies gave information about their projects. The participants had a chance to visit the ITU SEED work space and chat with the young entrepreneurs supported. ITU ARI Teknopark’s visit ended with a cocktail accompanied by a violin-cello-flute trio performance.

Sur Fish Restaurant – Halic, one of the best restaurants in Istanbul, was chosen for the Banquet. The event was accompanied by flute-violin-accordion trio music. During the banquet, a song contest was held as a tradition of the IEEE BlackSeaCom conference series.

The participants had a great time watching the entertaining performances. The performance of the accompanying trio was also superb. Using applause intensity as a metric, the jury had no difficulty in choosing the winner. The winner’s prize, as every year, was to attend the next IEEE BlackSeaCom without paying the registration fee.



IEEE BlackSeaCom 2023 Registration Desk on the Opening Day



At Istanbul Technical University ARI Teknopark Incubation Center (ITU SEED)



The cocktail at ITU ARI Teknopark. Alex Gelman at right.

The social events were finalized with the Organizing Committee dinner at Galata Port-Istanbul.

We should mention that Local Co-Chairs Gokhan Secinti of Istanbul Technical University, Yalcin Sadi of Kadir Has University, and Sponsor Chair Tolga Ovatman of Istanbul Technical University spent a lot of time for the local issues and for raising support. Our Web Chair Elif Ak of Istanbul Technical University contributed greatly to keeping the website, which was the main guide of the participants, always up to date. We should not forget the graduate students from ITU and Kadir Has University working at the registration desk.

The conference was supported by Kadir Has University, and Istanbul Technical University – School of Computer and Informatics. We would like to thank our patrons IEEE Public Safety Technology Initiative and Istanbul Technical University ARI Teknokent for the generous support of the conference.

Updated Quantum Cryptography Project from Japan in the 5th Thai Quantum Information Forum's Seminar

by Keattisak Sripimanwat (D.Eng), IEEE ComSoc Thailand Chapter Chair

In IEEE Thailand section's annual meeting on November 30, 2022, the fifth Thai quantum information forum's seminar (Q-Thai SEM #5) was jointly organized. An online keynote speech entitled "Proof of concept of QKD (quantum key distribution) – use cases in Tokyo QKD network" was given by Dr.Mikio Fujiwara, director of quantum ICT laboratory, the National Institute of Information and Communications Technology (NICT), Japan. Number of onsite meeting members is twenty, and fifty online audiences for this invited topic.

This thirty minutes – talk for technology management & policy makers, researchers, as well as student, focused on QKD from the most update through various applications around the world, to recent roadmap in Japan. The highlight was inside the future four step of NICT's QKD plan (2023 – 2035). Fascinating QKD network around Tokyo will be started in the year 2023 and then reaching to the global level at 2035.

About a month before the event, eight selected questions and answers as a warm-up session was promoted. Briefly, Dr.Fujiwara mentioned that "we were the first in the world to research and develop these points and were able to apply them to various POCs (proof of concept). Therefore, we believe that it is important to incorporate a design with excellent role-sharing and connectivity with existing communication and cryptographic infrastructures."

Regarding the international collaboration with new comers in ASEAN countries, he illustrated that "satellite QKD is essential for the formation of a global network, and it is necessary to enhance the peripheral technologies that enable satellite communications."

However, in the mean time, there was worldwide doubt on QKD with a number of negative feedback – quotes such as "seems like a solution to a problem that we don't really have" and "boutique security product." Moreover, main national information security units such as, NCSC (National Cyber Security Centre – UK 2018), NSA (National Security Agency – US 2020), ANSS (Agence nationale de la sécurité des systèmes d'information – France 2022), and BSI (Federal Office for Information Security – Germany 2022), did not recommend QKD for the cyber security solution. Dr.Fujiwara responded to those confusion with; "cannot be discussed because it is a difference of opinion, a business model is being formed" and "it is up to them and we are not involved, we consider it unfortunate that there are more than a few people who criticize QKD without understanding the technology."

Those exclusive Q & A are shared on Q-Thai.Org forum web with a full talk – video at <https://youtu.be/sQKqQnXdMS0>.

Q-THAI SEMINAR #5 (2022)
 สัมมนาไอทีควอนตัมครั้งที่ ๕

รหัสลับเชิงควอนตัมญี่ปุ่น
PROOF OF CONCEPT OF QKD*
 (USE CASES IN TOKYO QKD NETWORK)

QUANTUM KEY DISTRIBUTION | QUANTUM ICT LABORATORY - NICT

PRESENTED BY MIKIO FUJIWARA | PROJECT BY IEEE COMSOC THAILAND | ORGANIZED BY KEATTISAK SRIPIMANWAT

IEEE COMSOC THAILAND CHAPTER PRESENTS A QUANTUM IT TALK IN ASSOCIATION WITH QUANTUM ICT LAB - NICT

‘ขับโตเทิดถาวรอังกฤษ’
 WEB: FACEBOOK.COM/URSDCOMS20TH
NOV 30, 2022
 9:00 - 9:40 pm (GMT+7)

Sponsors: IEEE Communications Society, IEEE THAILAND SECTION, QOC Academy, NICT (National Institute of Information and Communications Technology)

Quantum Key Distribution (QKD) 2022
Dr. Mikio Fujiwara

Q-THAI SEMINAR #5
QUANTUM CRYPTOGRAPHY
DIRECTOR'S TALK
PROOF OF CONCEPT OF QKD*
 (USE CASES IN TOKYO QKD NETWORK)

Speaker: Dr. Mikio Fujiwara, Director, Quantum ICT Laboratory, NICT
 Target Audience: Policy makers, researchers, students & others
 When: Online on www.facebook.com/QuantumCryptographyThailand
 Nov 30, 2022
 9:00-9:40pm (GMT+7)
 www.facebook.com/QuantumCryptographyThailand

Co-organizer: IEEE THAILAND SECTION
 Project: IEEE COMSOC THAILAND CHAPTER
 Organized by: KEATTISAK SRIPIMANWAT
 Sponsors: IEEE COMMUNICATIONS SOCIETY, IEEE THAILAND SECTION, QOC ACADEMY, NICT

IEEE ComSoc joint events, Q-Thai SEM#5 2023: a) PR poster; b) video thumbnail.

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