



February 2023
ISSN 2374-1082

CONFERENCE REPORT

2nd IEEE International Mediterranean Conference on Communications and Networking (IEEE MeditCom 2022)

5-8 September 2022, Athens, Greece

by Stefano Bregni and Hikmet Sari, MeditCom 2022 General Co-Chairs, Khaled B. Letaief, Past IEEE ComSoc President and MeditCom Steering Committee Chair, Jalel Ben Othman and Octavia Dobre, MeditCom 2022 TPC Co-Chairs

MEDITCOM: THE IEEE COMSOC REGIONAL CONFERENCE FOR THE MEDITERRANEAN REGION

The IEEE ComSoc Regional Conference for the Europe, Middle-East, Africa (EMEA) Region, named the International Mediterranean Conference on Communications and Networking (IEEE MeditCom), was founded at the beginning of 2019.

At that time, the IEEE ComSoc President Khaled Letaief started the project of launching this new Regional Conference and, at the end of the same year, announced it to the ComSoc Board of Governors. The preparation of the 1st MeditCom started under the leadership of Khaled Letaief and Stefano Bregni, ComSoc Vice President for Conferences, and took nearly two years to be completed, thanks to the hard work and commitment of many volunteers.

A strategic goal of ComSoc on Portfolio Conferences is to ensure the highest geographical diversity and maximum coverage for all Regions, aiming at giving all Members in all Regions the opportunity to attend highly relevant technical conferences nearby, regardless in what Region they live. As Stefano Bregni has been always used to repeat in his capacity of Vice President for Conferences: *"If members cannot travel to good conferences, let's bring good conferences to the members!"*

A key role in this strategy is played by Regional Conferences, which are ComSoc Portfolio Conferences organized each in a specific Region, drawing involvement from the local IEEE Sections, ComSoc Chapters, and Sister Societies. They have extensive coverage of the whole ComSoc technical scope. Their goal in the ComSoc overall strategy is to reach out all countries by paying extra attention to disadvantaged areas, and ultimately to drive membership development. Currently, there are five ComSoc Regional Conferences:

- IEEE Latin American Conference on Communications (IEEE LATINCOM);
- IEEE International Black Sea Conference on Communications and Networking (IEEE BLACKSEACOM);
- IEEE/CIC International Conference on Communications in China (IEEE ICC);
- IEEE International Conference on Advanced Networks and Telecommunications Systems (IEEE ANTIS) in India;
- IEEE International Mediterranean Conference on Communications and Networking (IEEE MeditCom) for the Region surrounding the Mediterranean Sea.

More Regional Conferences are now being considered under the current ComSoc Conference Leadership (Nelson Fonseca, Vice President for Conferences 2022-23) to cover additional areas of the world.



IEEE MeditCom 2022 banner: breathtaking night view of the Monastiraki square (<https://meditcom2022.ieee-meditcom.org/>).

IEEE MeditCom has been launched to be the reference conference on communications serving the whole Mediterranean Region, which consists of over 20 countries and around 480 million people living across three continents: Africa, Asia and Europe. The MeditCom series of conferences is organized every year, with an international stature and broad coverage of topics, bringing together visionaries in academia, research labs and industry from all over the world to the shores of the Mediterranean Sea, featuring a technical program of outstanding challenges in the areas of communications and networking.

MEDITCOM 2022: AGAIN IN ATHENS!

The second edition of IEEE MeditCom took place on 5-8 September 2022 in Athens, Greece, in the same venue as the first edition in 2021: the Electra Palace Hotel, which is located in the heart of the city, just a few minutes away from the Acropolis.

Athens has been really a fantastic location for the first two editions of MeditCom! Known as the "cradle of Western civilization," Athens and Greece are famous for their history, art master pieces and natural beauty.

While the first edition of MeditCom was hybrid, with only few participants attending in person due to the travel restrictions that were in place, IEEE MeditCom 2022 has been prevalently in presence, with most participants traveling to Athens to attend the conference, meet their fellow colleagues, and enjoy this marvelous city.

Before and after technical sessions, many attendees made the most of the tourism opportunity given by the conference. In Athens, one could not really miss to visit at least the Acropolis, the Ancient Agora and other main archeological sites, as well as the Acropolis Museum and the National Archaeological Museum. Moreover, Athens is the natural gateway for visitors to continental Greece as well as to the numerous Greek Islands, which attract tenths of millions of visitors each year, and early September is an ideal period to visit this city.

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 - Bruce Worthman, IEEE Communications Society, USA
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SOME CONFERENCE FACTS

IEEE MeditCom 2022 (<https://meditcom2022.ieee-meditcom.org/>) attracted high interest from the international technical community. It received 100 submissions just to the Main Technical Track, of which 49 were accepted for presentation and then publication in the Conference Proceedings on IEEE Xplore. Authors were 368 in total, from 42 countries from all 5 continents. As expected and confirming the regional focus of MeditCom, 70% of authors were from Europe, Middle East and Africa.

This high response from the research community allowed to strive for quality in planning the technical program, but also called for a demanding paper evaluation process. The 226 members of the Technical Program Committee worked responsibly and efficiently under tight time constraints to produce a total of 316 reviews for the 100 papers submitted to the Main Track, which provided the basis for the final technical paper selection.

The IEEE MeditCom 2022 program featured 6 keynote talks and 3 panels, in which industry leaders and prominent academics presented their visions on the future of wireless communications networks, 10 technical sessions presenting the latest research results, and 1 demo session. Prior to the start of the main conference, the program began with 2 tutorials and 2 workshops in parallel. In conjunction with the conference, panels were organized by the IEEE ComSoc Young Professionals (YP) and Women in Communications Engineering (WICE) Committees.

THE VENUE

Athens is a modern, vibrant metropolis and the principal centre of Greece for business and foreign trade. More than 30% of the overall Greece population resides in the Athens metropolitan area. Regenerated to hold the Olympic Games in 2004, it has the facilities, services and infrastructure to host the most demanding events.



The keynote speaker Marco Di Renzo giving his talk, while Stefano Bregni listens with attention.

Athens is the oldest new destination, fascinating visitors with its history, heritage and the contemporary experiences that it offers. It is an open-air museum of world-class cultural heritage attractions and a city with urban personality. 3000 years of history can be seen within 5 km walking distance.

Acropolis is one of the heritage monuments that date back to the prehistoric era, with the emblematic Parthenon being one of the most widely recognized monuments of the world. A visit is also recommended to the emblematic Ancient Roman Agora, the Temple of Olympian Zeus and a plethora of other monuments.

A visit to Athens would not be complete without visiting some of its amazing museums, showcasing the city's incredible history and its relationship with art and archaeology, beginning with the Acropolis Museum and the National Archeological Museum, which feature a number of unique master pieces of Classic Greek Art.

Several notable places can be visited starting from Athens for half or full-day tours: for example, the Meteora monasteries, on the UNESCO World Heritage list, built on immense natural pillars and hill-like rounded boulders that dominate the local area, the Ancient Olympia, that is the birthplace of the Olympic Games, and the Temple of Poseidon, that is one of the major monuments of the Golden Age of Athens. Other popular activities are cruises in the Argosaronikos Islands, for example to Poros, a.k.a the "little Venice" of Argosaronic, with its pine trees, tranquility and nobility, to Hydra, the beauty of a lilliputian Greek island that seduced the international jet set and artists, and to Spetses, one of the top travel destinations for summer holidays.

IEEE MeditCom 2022 took place in the aristocratic Electra Palace hotel in the heart of the city, at the footsteps of the Acropolis. Classical in its architecture and design, blending beautifully with the noble historical buildings of the Plaka area, the hotel's elegant luxury is complemented by the majestic views of the Acropolis that can be enjoyed from the rooftop restaurant, pool, rooms and suites.

TECHNICAL PROGRAM

This year's conference continues its tradition of being a stimulating forum for researchers from both academia and industry to share and exchange their experiences, discuss challenges, and report the state-of-the-art and in-progress research on all aspects of Quality of Service (QoS) and security for networks. The Technical Program Chairs have done their best to set up a solid technical program to foster discussion and research cross-fertilization.

The program committee accepted 50 full papers among 100 submissions covering a variety of topics in the fields of Propagation, QoS and security for networks. The TPC was composed of 226 experts. Each paper was evaluated with at least three reviews. We are confident that the conference proceedings will serve as a valuable reference for researchers and developers. All the accepted papers were presented either in person or remotely in ten technical sessions,

The technical program featured 6 exceptional keynote speeches, the first one being by Gunnar Peters, Senior Expert, Huawei, Sweden, the title of the presentation was Large Antenna Systems in Real Life. The second one given by Yonina Eldar, Weizmann Institute of Science, Rehovot, Israel. The talk was

on Communication and Sensing: From Compressed Sampling to Model-based Deep Learning. The third one was given by Marco Di Renzo, L2S-CentraleSupélec, Paris-Saclay University, France. His presentation was on Reconfigurable Intelligent Surfaces for Wireless Communications. The fourth one was given by Thierry Lestable, Technology Innovation Institute, Abu Dhabi, UAE, on Sustainability & Climate Change: Ask Not What 6G Can Do for You, But What You Can Do for 6G, while the fifth was given by Julien Colafrancesco, Director of Engineering, Qorvo, France. The topic of the presentation was on Expanding UWB Potential Through AI. The last one but not the least was presented by George C. Alexandropoulos, National and Kapodistrian University of Athens (NKUA), Greece. The given talk was on Full-Duplex MIMO Radios: From Efficient Spectrum Usage to Integrated Communications and Sensing.

Moreover, the program included two workshops, one demo session, YP and EMEA Joint Industry Fireside session, and YP and WICE Joint Mentoring Session.



From left to right: Hikmet Sari, General Co-Chair, Jalel Ben Othman, Technical Program Co-Chair, Stefano Bregni, General Co-Chair, and Rolland Vida, Finance Chair, during a coffee break between sessions in the beautiful garden of the conference hotel.



Breath-taking view of the Acropolis from the conference hotel terrace at breakfast time.

CHAPTER REPORT

Exclusive Talks on Lightwave & 5G Communications and Tripartite R&D Consortia by Keattisak Sripimanwat, IEEE ComSoc Thailand Chapter Chair

Throughout 2021 calendar, IEEE ComSoc Thailand organized three (online) special talks in order to jointly celebrate the 40th anniversary of the IEEE Thailand section (1981- 2021). They are based on optical and mobile communications as well as technology management.

Starting with a topic of “Connecting Us Through Light,” this first talk was given on June 28, 2021 by Paramin Sangwongngam. It contained about what light is, an advantage of using light, and how we guide light: wired and wireless in the internet environment which has a vast impact on people worldwide. Real deployment of optical communications around the world — space, airborne, terrestrial, and underwater were

shown. Finally, the audience then had a glimpse look at a hobby project building an optical transceiver. No prior knowledge of optics, communication engineering or physics is required for attending this event. Its recorded video is at <https://youtu.be/iuCxh5MhYHg>.

Next, “5G by the National Telecom (NT) Public Company’s team” was organized on November 22. This combined talk began with the introduction to a new emerged national TELCOS (former state-owned telecommunications companies; TOT & CAT), through “5G for smart city” to “5G security and digital platform.” A real use case for the Eastern Economic Corridor Office (EECO) that established a 5G special zone in Rayong’s Ban Chang district, was also shown attractively. It can be rewatched at <https://youtu.be/cICh8SMozhI>.

Lastly, a Thai quantum information forum’s annual seminar (Q-Thai SEM #4) was organized on November 25. “Tripartite R&D Consortia as a Vehicle for Economic Development” by Michael Leung, a co-founder of Synergia Associates and former

vice president of TRILabs (Telecommunications Research Lab, Canada: 1986 - 2019), was publicized. This talk focused on a special category of R&D consortia: tripartite consortia. That composed of governments, academia, large and small companies from manufacturers to service providers to user sectors and discussed how such tripartite consortia could bring benefits to all parties while at the same time, contribute to regional economic development. Since in the era of Industry 4.0 and globalization, R&D joint ventures/consortia have become more and more common. In addition, Q & A session via seven selected questions was delivered. Specially, speaker also recalled his two decades with TRILabs, one of the excellent model to gain tripartite collaboration by industry, government and academia. Those exclusive experiences were shared on Q-Thai.Org forum web with a video <https://youtu.be/MleolBgnrFA>.



ComSoc joint events in the forty anniversary of IEEE Thailand section: posters and video thumbnails.

DISTINGUISHED LECTURER

Events at IEEE Communication Society Karachi Chapter

by Umair Ahmed Korai, MUET Pakistan, Vice Chair IEEE Communication Society Karachi Chapter

During past months, the IEEE Communication Society (ComSoc) Karachi Chapter has organized 3 events which includes 2 full day workshops and a virtual lecture. The events were in collaboration with IEEE Professional Activities Committee (PAC) Region 10, IEEE R10 Conference and Technical Seminar (CTS) Committee, R10 Conference Quality and Management (CQM) Committee, and IEEE Karachi Section, and IEEE ComSoc Mehran University of Engineering and Technology (MUET) Jamshoro Student Chapter.

DISTINGUISH LECTURE SERIES TALK ON "EFFICIENT PLASMONIC CIRCUITS FOR DATA COMMUNICATION"

This virtual lecture was organized on June 07, 2022, on MS Teams. The guest speaker of this talk was Prof. Amr Helmy, University of Toronto, Canada. The online talk was formally started with recitation of the Holy Quran. Afterwards, Dr. Umair Ahmed Korai, Assistant Professor at Dept. of Telecommunication Engineering, MUET and Vice Chair IEEE ComSoc Karachi Chapter, welcomed the worthy Guest Speaker, Chief Guest, Guest of Honor, the Coordinators, the Organizers, and the Participants. The worthy Chair IEEE Karachi Section, Prof. Dr. Bhawani Shankar Chowdhry, attended the workshop as the Chief Guest, delivered his speech, and appreciated the Speaker for taking their time from their very busy schedule. He Also appreciated the efforts of Prof. Amr Helmy towards the research and activities related to IEEE ComSoc. The head of the Telecommunication department, MUET, Prof. Dr. Aftab Ahmed Memon, also attended this online talk as a guest of honor.

The online talk last about 60 minutes, which comprises of 45 minutes presentation and 15 minutes for the question/answer and discussion. Prof. Amr gave an excellent presentation about the Efficient Plasmonic Circuits for Data Communication in which he presented the work of his entire group and showed the results of their recent publications. Indeed, it was a very informative session on the recent advancement in Plasmonic Photonics.

In last, Dr. Umair Ahmed Korai gave the concluding remarks and vote of thanks to the chief guest, guest speaker, collaborators, volunteers, and participants. Whereas e-certificates were distributed among all the participants and volunteer.

HANDS-ON WORKSHOP ON MS INTERNET OF THINGS (IoT) KITS V0.4

The Hands-on Workshop on MS Internet of Things (IoT) Kits V0.4 was organized on September 13, 2022, at MUET Jamshoro. This workshop was funded by IEEE Region 10 Professional Activities



Chief Guest, Guest of Honor, Guest Speakers, Trainers, and Participants attending the IoT Workshop.



Engr. Parkash Lohana, Chair IEEE R10 Professional Activities Committee, delivering a talk on "Preparation, Recommendations & Future Collaboration" during IEEE Karachi Section R10 POCO workshop at IoBM.

ties Committee and IEEE Karachi Section. Following were the key objectives of this hands-on workshop: Provide basics of Internet of Things (IoT), Exposure to various sub-fields and technology stacks of IoT, Various real-time product ideas which have been converted to IoT, Perform real-time experiments on IoT Kits V0.4.

The total number of participants in this workshop were 61 in which 39 were IEEE members and 22 were non-IEEE members. The workshop was formally started with the recitation of the Holy Quran, followed by Naat-e-Rasool (SAW), and the national anthem of Pakistan. Afterwards, Dr. Umair Ahmed Korai, Vice Chair IEEE ComSoc Karachi Chapter, welcomed the Chief guest, Guest of Honor, Guest Speakers, Organizers, Participants, and Volunteers.

The Dean Faculty of Electrical, Electronics and Computer Engineering MUET, Prof. Dr. Mukhtiar Ali Unar, attended the workshop as the Chief Guest and delivered his speech, and appreciated the Speakers for taking their time from their very busy schedule deliver an important lecture on IoT. The Chairman, Department of Telecommunication Engineering MUET Prof. Dr. Aftab Ahmed Memon, Co-Chairman, Department of Telecommunication Engineering MUET, Dr. Fahim Aziz Umrani, and Treasurer, IEEE Karachi Section, Engr. Moiz Rahman

Memon, attended this workshop as Guest of Honors.

The first session was delivered by Guest Speaker, Prof. Dr. Muhammad Khurram. He is head of Smart City Lab also serving as Professor at the Department of Computer and Information Systems Engineering, NED University of Engineering and Technology, Karachi, and Director of Research Centre for Artificial Intelligence. Prof. Dr. Khurram gave an important lecture on IoT and showed some important applications and projects they have developed in NED University of Engineering and Technology, Karachi.

The second session was the hands-on workshop conducted by the team from Mindstorm Engineering Company Karachi. Mindstorm Engineering provides smart industrial solutions to optimize industrial processes and industrial automation, robotics, and STEM training academy to provide hands on skill-based training in our state-of-the-art lab. The team comprised of following members: Mr. Ghufuran Ul Islam, Ms. Khushbakht Jameel, Ms. Suhaana Younus.

The team gave a hands-on session on Internet of Things kits. They divided the registered participants in groups and each group comprised of 03 participants. A single MS IoT V0.4 kit was given to each group in which multiple experiments were performed. The participants learnt all about Internet of Things; Sensors, Microcontrollers, Gateways, Programming, Networking, and Securing IoT.

In the last session, Worthy Guest of Honor, Prof. Dr. Aftab Ahmed Memon, gave the concluding remarks of the workshop. In the end, Dr. Umair Ahmed Korai, gave the vote of thanks to the Chief Guest, Guest Of Honor, Speakers, Event Organizers, Collaborators, Volunteers, and Participants followed by shield and certificate distribution, and lunch.

IEEE KARACHI SECTION R10 PANEL OF CONFERENCE ORGANIZERS WORKSHOP

The IEEE Karachi Section R10 Panel of Conference Organizers (POCO) Workshop was organized on September 17, 2022, at Institute of Business Administration (IoBM), Karachi. This workshop was funded by IEEE R10 Conference and Technical Seminar (CTS) Committee, R10 Conference Quality and Management



Group picture with Guest of Honor, Organizers, Guest Speakers, and Participants of IEEE Karachi Section R10 POCO Workshop.

(CQM) Committee, and IEEE Karachi Section. The objective of the POCO workshop was to develop the skills of the attendees for conducting an IEEE conference in their respective universities. The total number of participants in this workshop was 57 in which 31 were IEEE members and 26 were non-IEEE members.

The workshop was formally started with the recitation of the Holy Quran. Afterwards, Prof. Dr. Tariq Soomro, Acting Rector & Dean CCSIS IoBM, welcomed the Chief Guest, Guest of Honor, Guest Speakers, Organizers, Participants, and Volunteers. The participants were the faculty members nominated by the Vice Chancellors of their respective universities of Sindh and Balochistan provinces. The worthy President of IoBM Karachi, Mr. Talib S. Karim, attended the workshop as the Chief Guest and the worthy Director Development, Pakistan Telecommunication Company Limited, Engr. Abdul Rahman Shaikh attended this workshop as Guest of Honor.

Worthy Guest of Honor, Engr. Abdul Rahman Shaikh, gave the concluding remarks of the workshop. He acknowledged the efforts of guest speakers, organizers, and volunteers and encouraged the participants to explore in more depth about IEEE and importance of IEEE conferences. In the end, Dr. Umair Ahmed Korai, gave the vote of thanks to the Chief Guest, Guest Of Honor, Speakers, Event Organizers, Collaborators, Volunteers, and Participants followed by shield and certificate distribution and evening tea.

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**IEEE
ComSoc**
IEEE Communications Society

www.comsoc.org/gcn
ISSN 2374-1082