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CONFERENCE REPORT

1st IEEE International Mediterranean Conference on Communications and Networking (IEEE MeditCom)

7-10 Sept. 2021, Athens, Greece

By Stefano Bregni, ComSoc Vice-President for Conferences, Khaled B. Letaief, Past ComSoc President and MeditCom General Co-Chair, Christos Verikoukis, MeditCom General Co-Chair, Yacine Ghamri-Doudane and George Rouskas, TPC Co-Chairs

The New ComSoc Regional Conference for the Mediterranean Region

The creation of the new IEEE ComSoc Regional Conference for the Europe, Middle-East, Africa (EMEA) Region, named the International Mediterranean Conference on Communications and Networking (IEEE MeditCom), dates back to early 2019. At that time, the IEEE ComSoc President, Khaled Letaief, started the project of launching this conference and, at the end of the same year, announced it to the ComSoc Board of Governors. The preparation of its first edition started under the leadership of Khaled Letaief and Stefano Bregni, ComSoc Vice President for Conferences, and it took nearly two years to bring this initiative to fruition, thanks to the hard work and commitment of many volunteers, particularly the organizing committee members whose names are listed below.

A strategic goal of ComSoc with Portfolio Conferences is to ensure the highest geographical diversity and maximum coverage for all Regions, aiming to give all members in all Regions the opportunity to attend highly relevant technical conferences nearby, regardless in what Region they live. As Stefano Bregni has often said: "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 ComSoc's entire technical scope. Their goal in ComSoc's overall



From left to right: the TPC Co-Chair Yacine Ghamri-Doudane, the IEEE ComSoc Vice President Stefano Bregni, and the Keynote Chair Hikmet Sari during a coffee break between sessions in the conference hotel garden.



IEEE MeditCom 2021 banner: breathtaking night view of the Acropolis (<https://meditcom2021.ieee-meditcom.org/>).

strategy is to reach out to 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 ANTS) in India
- IEEE International Mediterranean Conference on Communications and Networking (IEEE MeditCom) for the Region surrounding the Mediterranean Sea

IEEE MeditCom has been launched to be the reference conference, with an international stature and broad coverage of topics, 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 will be organized every year, 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.

After two years of preparation, the first edition of IEEE MeditCom took place on 7-10 September 2021 in Athens, Greece. This was really a fantastic location for the inauguration of MeditCom! Known as the "cradle of Western civilization," Athens and Greece are famous for their history, art masterpieces, and natural beauty.

Organizing Committee

- General Co-Chairs
Khaled B. Letaief, HKUST, Hong Kong
Christos Verikoukis, University of Patras, Greece
- TPC Co-Chairs
George Rouskas, North Carolina State University, USA
Yacine Ghamri-Doudane, La Rochelle University, France
Diomidis Michalopoulos, NOKIA Bell Labs, Germany (Vice-Chair)
- Executive Chair
Symeon Papavasiliou, NTUA, Greece

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- Senior Advisor
Stefano Bregni, Politecnico di Milano, Italy
- Keynote Speakers Chair
Hikmet Sari, Nanjing University of Posts and Telecommunications, China
- Tutorials Co-Chairs
Fabrizio Granelli, University of Trento, Italy
Imad Elhaj, AUB, Lebanon
- Demo Co-Chairs
Lena Wosinska, CTH, Sweden
Harilaos Koumaras, NCSR Demokritos, Greece
- Workshops Co-Chairs
Filippo Cugini, CNIT, Italy
Anna Tzanakaki, UoA, Greece
- Publicity Co-Chairs
Mustapha Benjillali, INPT, Morocco
Berk Canberk, Istanbul Technical University, Turkey
Khaled Rabie, Manchester Metropolitan University, UK
Christos Tselios, Citrix, Greece
- Panels Co-Chairs
Maurizio Cecchi, PIU, Italy
Roberto Minerva, Institut Mines Telecom, France
- Young Professionals Chair
Periklis Chatzimisios, IHU, Greece
- Publications Chair
John Vardakas, Iquadrat, Spain
- Web Co-Chairs
Niovi Lambrou, eBOS, Greece
Farhad Rezazadeh, CTTC, Spain
- Financial Chair
Melani Gurdziel, Iquadrat, Spain
- ComSoc Staff
Bruce Worthman, IEEE Communications Society, USA
Tina Gaerlan, IEEE Communications Society, USA

A Great Success!

IEEE MeditCom 2021 (<https://meditcom2021.ieee-meditcom.org/>) attracted high interest among the community and received a total of 242 submissions, including technical papers, abstracts, and project demos, from 50 countries from five continents. This high response from the research community provided an excellent opportunity for a quality program, but also called for a demanding paper evaluation process. The 165 members of the Technical Program Committee worked responsibly and efficiently under tight time constraints to produce a total of approximately 650 reviews, which provided the basis for the final technical paper selection. All papers included in the Proceedings published in IEEE Xplore received at least three reviews each.

Additional facts highlighting the success of IEEE MeditCom 2021 include: nearly 160 paid registrations, of which more than 30 registered for in-person attendance, impressive numbers given that the conference was launched in the midst of the pandemic; 10 project demos; and three tutorials, two industry panels, five workshops, six special sessions, and two Young Professional pan-



The Keynote Speakers Chair introducing the first keynote Maurizio Decina.



The General Co-Chair Christos Verikoukis opening the conference.

els, complementing the main track program. The program also featured 10 EC-funded projects on 5G, 6G, security, and many other hot topics in communication and networking.

The Location

Athens is a modern, vibrant metropolis and the principal center of Greece for business and foreign trade. Regenerated to hold the 2004 Olympic Games, it has the facilities, services and infrastructure to host the most demanding events.

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

The Acropolis is one of the heritage monuments dating back to the classical era, with the emblematic Parthenon being one of the most widely recognized monuments in 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 masterpieces of classic Greek art.

Several places can be visited around Athens for half- or full-day tours: the Meteora, which is one of the largest complexes of monasteries; Ancient Olympia, which is the birthplace of the Olympic Games; and the Temple of Poseidon, which is one of the major monuments of the Golden Age of Athens. We would also suggest a cruise to the Argosaronikos Islands, including Poros, a.k.a the "little Venice" of Argosaronic, with its pine trees, tranquility, and nobility, and Hydra, the beauty of a Lilliputian Greek island that has seduced the international jet set as well as artists, and also Spetses, one of the top travel destinations for summer holidays.

IEEE MeditCom2021 took place in the hospitable and aristocratic Electra Palace hotel in the heart of the city. 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

The technical program featured five exceptional keynote speeches, the first by Maurizio Decina from Politecnico di Milano, who addressed the conference audience on gigabit connectivity, covering more specifically the recovery and resilience plan to reach all households and businesses in Italy. Next, Bernard Barani, from the European Commission, delivered a talk on the European Pathway toward 6G in which he gave the vision of the Commission for 6G and described the research activities within the Horizon Europe Program. The third keynote, by Mer-

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Virtual Distinguished Lecturer Tour Season at ComSoc Chile Chapter: August 2021 Highlights

By Diego Dujovne, Universidad Diego Portales, ComSoc Chile Chapter Chair

For the northern hemisphere, August mostly means well-deserved holidays, while for us southern world inhabitants, the eighth month of the year means regular working days, and this includes ComSoc activities too.

During this month, we had virtual visits of two Distinguished Lecturers: César Vargas Rosales from Tecnológico de Monterrey (México) and Fabrizio Granelli from the University of Trento (Italy). We can say that both talks were dynamic and engaging for the attendees, showcasing the state of the art on each topic.

César Vargas Rosales, currently Leader of the Strategic Research Group on Telecommunications at Tecnológico de Monterrey, offered the talk “Error Correcting Codes for Communications and Storage” on August 24, 2021. During his talk, he described the relevance of error correcting codes in telecommunications and their fundamental role in the efficiency and robustness of communications links. He also showed a number of these techniques on storage applications, specifically for optical media such as DVDs and Blu-Rays. One of the strong aspects of the talk was the right balance between technical depth and the application context. Prof. César Vargas Rosales belongs to Region 9, so his views on telecommunications reality are closer to what local industry professionals observe on a daily basis and the future



CHARLA TÉCNICA

Error correcting codes for communications and storage

24 de agosto, 15:00 hrs.

Transmisión online.

Expone:
César Vargas Rosales
Líder en Telecomunicaciones
para la Transformación Digital,
Tecnológico de Monterrey, México.



CHARLA TÉCNICA

Automating network management in 5g and beyond mobile networks

31 de agosto, 11:00 hrs.

Transmisión online.
Charla en idioma inglés.

Expone:
Fabrizio Granelli. Profesor asociado, Departamento de Ingeniería Informática y Ciencia de la de Computación, Universidad de Trento, Italia.

reality of students. In this talk, there were attendees from all over Latin America, from both industry and academia.

Fabrizio Granelli, currently Associate Professor in the Department of Information Engineering and Computer Science (DISI) at the University of Trento and Lab Coordinator, discussed the topic “Automating Network Management in 5G and Beyond Mobile Networks” in his talk on August 31, 2021. Recently, we have seen 5G promoted all over the world as the natural evolution from 4G, denoting the most relevant features at the service level, while the management and automation side has not had the same degree of public awareness it deserves. In his talk, Professor Granelli first walked the attendees through 5G architecture, incorporating the concepts of software defined networking and network function virtualization, combining them when he introduced network slicing mechanisms. Then, as he progressed through the talk, he arrived at the fundamental need on the 5G backstage: network management and automation. After the talk, there were a number of technical questions regarding the increasing complexity of telecommunication systems, cloud RAN availability, the space for new optimization techniques given the existence of self-organizing networks, and finally, the possible connections with control theory, specifically to address stability issues.

To sum up, we had the great honor of listening to and interacting with Professors Vargas Rosales and Granelli during their talks. We are grateful for their openness and their interest in sharing their knowledge and experience with us.

At the IEEE ComSoc Chile Chapter, we would like to thank the Virtual DLT Program organizers, the IEEE ComSoc Region 9 volunteers for their support, and especially Fabricio Braga, who is the current Virtual DLT Regional Coordinator, for all the work they have done to make this possible.

Five-Day National Online Program On 5G Colloquium

By Dr. Pradeep B. Mane, IEEE ComSoc Pune Chapter Chair, India

The Colloquium was hosted by the Vishwakarma Institute of Information Technology, Department of Electronics and Telecommunication Engineering in the online mode from 27 July to 31 July 2021. More than 100 participants were present. The inauguration session began with Goddess Mother Shri Saraswati vandana. The convener of FDP, Dr. Radhika Purandare, spoke about the objectives of the 5G Colloquium. Professor Dr. Vivek Deshpande, Director, VIIT, spoke about the college and also spoke about 5G technology. Dr. Pradeep B. Mane (Chairman of the IEEE ComSoc Pune Chapter) and Dr. Sunil Soman (Vice Chairman of the IEEE ComSoc Pune Chapter) explained the role of the Communication Society and urged participants to join IEEE ComSoc, highlighting the benefits to members.

SESSION 1: AI/ML- Enabled Connected Vehicles and 5G as an Enabler
 SESSION 2: Challenges for 5G Implementation
 SESSION 3: Antenna Booster Technology
 SESSION 4: RF Trends on 5G Using CST Studio Suit 2021.v4.
 SESSION 5: Security Challenges of 5G in the Healthcare Sector
 SESSION 6: Simulation of Wireless Networks on NS2
 SESSION 7: NS2 Session
 SESSION 8: Future Internet Architecture: Observations, Challenges and Possible Solutions
 SESSION 9: Network Slicing in 5G
 SESSION 10: 5G & AI together – Key to India's Industry 4.0 Revolution

Panel Discussion: Impact of 5G on the Healthcare Sector

Dr. Archana Ratnaparkhi and Mrs. Pruthi Kulkarni introduced the various speakers in the panel, highlighting their involvement in diverse areas of development.

Panellists included:

Dr. Shikoun Zhou-School of Computing, University of Portsmouth, UK

Ms. Rupali Deshpande- Global Partner, Business Manager, Healthcare NVIDIA

Dr. Merih Palandöken- Izmir Katip Çelebi University, Turkey

Dr. A. T. Kishore - Vidhya Sangh Technologies Pvt. Ltd.

Valedictory Ceremony

In the valedictory address, Dr. Mrs. Radhika G. Purandare, convener of the program, stated the importance of 5G in this fast-growing world. She summarized the points mentioned by speakers related to 5G implementation, challenges, and opportunities, and thanked all the participants who took great effort in attending all the sessions and making the program a grand success. Finally, Dr. Mrs. Archana Ratnaparkhi, Coordinator, gave the vote of thanks and appreciation for the support rendered by IEEE Communication Society for the Colloquium.

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ouane Debbah from Huawei, addressed the theoretical foundations of communications and computing and insisted on the need for fundamental breakthroughs to address the challenges in the new century. Next, Mischa Dohler, from King's College London, focused on self-synthesizing networks that will shorten the innovation cycles for the development of future network generations. Finally, the keynote by Matti Latva-aho, from the University of Oulu, gave the vision of the National 6G Flagship Program in Finland addressing the key drivers for 6G, the societal challenges, and the business opportunities.

The three tutorials covered very interesting cutting-edge topics: "Task-Oriented Communication for Edge AI: From How to Communicate to What to Communicate" by Jun Zhang; "Towards Global Connectivity Using Aerial Ad Space Networks" by Mohamed-Slim Alouini and Mustafa Kishk; and "Safe Drone Operations Supported by Cellular Networks" by Evgenii Vinogradov and Sofie Pollin.

As mentioned earlier, a total of 242 submissions were received, including technical papers, abstracts, and demos. Of these, 107 full technical papers were submitted to the main conference track, and the remaining submissions were submitted to the incorporated five workshops, six special sessions, and a demos session.

While 86 percent of submitted authors (87 percent of accepted authors) were from the EMEA region, reaching the target to offer a regional venue for EMEA ComSoc members, all five continents were represented in both the received submissions and the accepted papers.

As a result of this impressive number of submissions, a rigorous review process allowed the construction of a main track program hosting 11 technical sessions, including 53 technical papers selected with a 49 percent acceptance ratio. These high-quality papers covered a broad range of topics across the ComSoc portfolio, including software-defined networks and their management, including 5G and beyond networks; AI/ML in networking; energy-aware networking; security and privacy; IoT and vehicular networks as well as their most recent advancements; and the latest achievements at the physical layer of wireless and optical networks.

Besides the main track, during the first and last days of the program, six Special Sessions and five Workshops were hosted, mainly organized by projects funded by the European Commission. The presentations by authors were presented in very interactive sessions showcasing early results and abstracts of ongoing projects in different areas of 5G, 6G, and security.

Also, a demo program hosted 10 demo papers in different 5G and beyond areas, mainly from EC funded projects, and they gave a more hands-on flavor to the conference.

Last but not least, the IEEE MeditCom 2021 Program also included two very interesting Young Professionals Sessions, thoughtfully organized by Periklis Chatzimisios, International Hellenic University, Greece, and the University of New Mexico, USA. The two sessions, "Exploring Excited Career Paths for Young Professionals" and "5G Towards 6G: What Can We Expect?", featured outstanding panels of speakers from academia, industry, and public administration, even including two MeditCom 2021 keynote speakers (Bernard Barani and Mérouane Debbah).

GLOBAL COMMUNICATIONS NEWSLETTER

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