

This issue represents the involved project activities from April to June 2019. During this period, the mid-term meeting and School 2 were held in Barcelona, two ESRs from Iquadrat and III-V Lab presented the project in EUCNC 2019 conference, and two new ESRs joined the project.

## *Mid-term Meeting*

*May 7, 2019 - Barcelona, Spain.*

The project's Mid-Term-Meeting took place in Castelldefels (Barcelona), hosted by CTTC. The project officer (PO) attended the meeting and gave a positive feedback on the work progress. The project Consortium and all ESRs attended the meeting.



## *The Third Project Training event*

*May 8-9, 2018 - Barcelona, Spain.*

The third Project Training School for the ESRs took place in Castelldefels (Barcelona), hosted by CTTC. The title of School was "An overview of mmWave communications for 5G: Benefits and Challenges". The ESRs were provided with useful materials regarding the research challenges of mmWave communication in the 5G mobile networks. Moreover, the challenges related to the efficient exploitation of spectrum, coverage limitations, channel propagation characteristics, cost and energy efficiency aspects, were discussed. Apart from these, various technologies including adaptive beam-forming, multi-hop relaying, carrier aggregation were presented.



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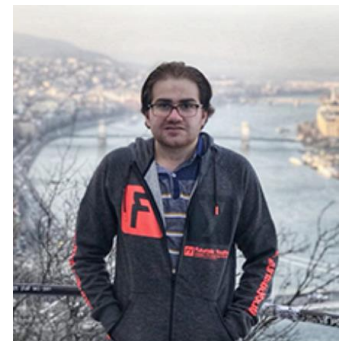
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## ***Recruited ESRs***

1. **Mr. Shafiullah Malekzai** received his B.Sc. degree in Telecommunication Engineering from Istanbul Technical University, Istanbul – Turkey; and the M.Sc. degree in Electrical and Electronics Engineering from Ondokuz Mayıs University, Samsun – Turkey; in 2013 and 2016, respectively. He also participated in the Erasmus+ Study Program at the AGH University of Science and Technology, Krakow – Poland, in 2015. After graduation, he worked as a Telecom Engineer in different Telecom Service Providers in Kabul Afghanistan, for two years. From 2018 to 2019, he worked as a lecturer and volunteer lecturer in different public/private universities in Kabul – Afghanistan. Since April 2019, he has been working as an Early Stage Researcher in MSCA ITN 5G STEP FWD project at the OTE Academy, Athens – Greece.



2. **Mr. Farhad Rezazadeh** received his BSc Degree in IT, specializing in Software Engineering from Salman Farsi University of Kazerun, Iran and his MSc Degree in IT majored in Networks and Telecommunication Engineering at Azad University of Qazvin, Iran with honors. His education instilled a passion for research on Hi-Tech Technologies and learning more that brought him to Europe and he joined the Marie-Curie ITN 5G STEP-FWD program as a PhD student at CTTC. In addition, he is TPC member of some international conferences and has 7+ years work experience in IT at Petrochemical Plant, Power Plant, Startup/IT Companies, Research Groups and Teaching in University. Furthermore, he was co-founder of two tech startup companies as ModirOnline and ImenDadeh in 2011 and 2016 respectively.



## ***Project Presentation at EUCNC 2019***

*June 18, 2019 - Valencia, Spain*

The EuCNC conference is one of the most prominent communications and networking conferences in Europe, which efficiently brings together cutting-edge research and world-renown industries and businesses.

Massimiliano, ESR from Iquadrat participated to the workshop “Photonic Technologies for 5G and Beyond ” at EuCNC 2019, in Valencia, Spain. He presented his work on Real-time Dynamic Network Slicing for the 5G Radio Access Network representing a hot topic for the future 5G network system. There, he had the chance to interact with institutions, research canterers and companies that are working on innovative solutions for the 5G network.



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Kebede, the other ESR, presented III-V Lab's 25 Gb/s colorless transmitter based on reflective electroabsorption modulator (EAM) monolithically integrated with semiconductor amplifier (SOA) during the special session of EUCNC2019 conference in Valencia. The devices are intended for ultra-dense WDM-PON applications to support low-cost deployments such as 5G fronthaul network. The transmitter is realized with semi-insulating buried heterostructure (SIBH) and butt-joint integration technologies. 25 Gb/s transmission with non-return-to-zero (NRZ) modulation is demonstrated. Dispersion limited 10 km transmission over a standard single mode fiber is achieved with the reflective EAM-SOA. Kebede Atra, an ESR in the 5GSTEP-FWD project, presented the results.



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