Always Look on the Bright Side of NewG (Despite Everything)

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Abstract

In my personal opinion, these 2020 strange months have been the climax for conspiracy against wireless communications, focusing on 5G. Used to 3G and 4G controversy expressed by the misinformed “expert”, the believer, the inquisitor, the speculator...together with the geopolitical and economical fights, the intensity of the last campaign against 5G shows no precedents. While everybody was using and thanking to 4G during confinement period, we, the NG researchers, have been confined twice, one due to covid, and the second due to our research field. But we are proud of our activity and our contribution to research and innovation, even if this is something that at this moment we can only share with those that work on the same, so you! This presentation is a summary of the last two years of research activity done by the research team which I am responsible at UPC: WiComTec. With a lot of fun (not a lot of funds, unfortunately), looking always to the bright side of NG (and of course of life), and trying to make the world a better place to live (despite everything) we have been working on: Dense IoT BLE Mesh Networks optimisation for tracking applications, optimisation of BLE neighbour discovery process, Software Radio (USRPs) Channel estimation for LTE/5G DL, 5G mmWave V2N communication, remote driving application over dense 5G roadside networks, Artificial Intelligent (ML) applied to: detection of mobility related anomalies in 4G/5G commercial networks, tracking area list management in 4G/5G, resource management optimization in 5G C-RAN, 5G ultra-dense cell optimal configuration..

Bio

Silvia Ruiz received the Engineer and Doctor Engineer degrees in Telecommunication from the Technical University of Catalonia (UPC), Spain, in 1986 and 1989 respectively. She joined the Signal Theory and Communications department becoming Associate Professor in 1992. She is the founder and responsible of the Wireless Communications and Technologies Research Group from UPC (WiComTec) since 2008. Her research interests are in the field of mobile communication systems, especially radio network planning issues and optimization of 4G and 5G heterogeneous networks. She has been elected as spanish delegate for several European COST Actions as well as chair-person of the Working Group on Network Layer. She has been active on COST231, COST259, COST273, COST2100. COST IC1004, COST15104 IRACON. She has more than 200 publications in journals, books and international conferences and has participate in 27 competitive projects funded by national and international organizations, from which 15 have been funded by the EU in different programs, as well as in more than 20 projects funded by companies. She has also strongly collaborated in university management issues during 16 years and has been the Assistant Director of Academic Affairs and Assistant Director of International Relations and Enterprise at EETAC-UPC school. She is also in close collaboration with ICE (Education Science Institute) and has given more than 80 courses abroad addressed to professors from other universities.