

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
DOTTORATO DI RICERCA / PHD PROGRAM IN
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING

Seminar announcement

Monday 18 May 2020, Time: 14:30 - 16:30

Microsoft Teams, Code: z0gg220



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Planning 5G under EMF constraints: challenges and opportunities

Abstract: 5G networks are currently facing the first installation steps in many countries. From a user perspective, there is a growing concern about the health impact of the ElectroMagnetic Fields (EMFs) generated by 5G. In this context, different countries in the world adopt EMF limits defined by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), but many countries, including Italy, adopt much more stringent regulations, by following precautionary principles. In this talk, we will focus on the planning of 5G networks under strict EMF limits.

We will start from the discussion of the main allegations against the planning of 5G networks from a scientific point of view. We will then analyze with two realistic case studies the impact of strict regulations on the planning and on the resulting level in terms of Quality of Service in current pre-5G networks. We will then present the 5G planning problem, by analyzing the impact of the main 5G features and the different steps involved in the planning phase. Finally, we will conclude our talk by overviewing the impact of planning under EMF constraints at the societal, government, technology and scientific levels.

Lecturer short bio: *Luca Chiaraviglio is Associate Professor at the Department of Electronic Engineering of the University of Rome Tor Vergata. He holds a Ph.D. in Electronics and Communications Engineering from Polytechnic of Turin, Italy. In the previous years, he has held positions in different institutions, including Polytechnic of Turin (Italy), INRIA Sophia Antipolis Mediterranee (France), University of Rome Sapienza (Italy) and University of Cassino and Southern Lazio (Italy). He has also spent research periods at the Boston University (USA) and at the Auckland University of Technology (New Zealand). He has published more than 130 papers in the area of networking. His research interests include optimization techniques, health risks from 5G exposure, measurement of electromagnetic fields and Quality of Service in cellular networks, and Internet architectures to reduce the digital divide in rural and low income area.*

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