

## Open Position: **Evaluation of Human Exposure to EM Fields for 5G Use Cases**

The **Mobile Communications Group (MCG)** of the **iTEAM** is looking for a **Telecommunications Engineer (or equivalent)** to work on **EMERGE-5G**, a project funded by the Spanish National Research Agency (Agencia Estatal de Investigación). He/she will integrate on the tasks of the project as well as in the activities performed in the MCG group related to 5G, radio communications, and the interaction between wireless communications and health.

### Project Description

International Commission of Non-Ionizing Radiation Protection (**ICNIPR**) published in 1998 their guidelines for limiting exposure to EM fields, and in **May 2020 updated their recommendations in order to better adapt them to future 5G transmissions**. The techniques for the assessment of human exposure to EM fields have been regulated by international organisms and can be performed by different methodologies. However, due to the several novelties of the radio interface of 5G (massive MIMO, beamforming, time division duplexing, among others), it is not clear yet whether existing methodologies can evaluate properly the EMF in 5G.

The objective of EMERGE-5G project is **the proposal and development of new methods and guidelines for the assessment of human exposure** to the different novel used **cases envisioned in 5G** communication networks. To achieve this goal, firstly **measurements in commercial and private 5G networks** will be performed with different methodologies and equipment in order to compare them and obtain guidelines that can be translated to other use cases. Next, **particular scenarios will be evaluated by means of software simulations or laboratory measurements** with the aim of deducing recommendations for evaluating 5G exposure in such scenarios.

### Candidate requirements

Telecommunications Engineer of equivalent with skills on:

- Radiofrequency equipment for testing
- Electromagnetism and antennas
- FDTD software (CST, Sim4Life...)
- Signal processing
- Mobile Communications
- Fluent in English.

### Starting

Autumn 2021

### Salary

Depending on the skills/qualification of the candidate

### Other information

Possibility of performing the PhD on the topic

**For more information** or to apply, please, contact [cgpardo@iteam.upv.es](mailto:cgpardo@iteam.upv.es), [ncardona@iteam.upv.es](mailto:ncardona@iteam.upv.es)