Enhancements of the 5G Core Network

5GC Software Developer

**Supervisor:** Prof. David Gomez-Barquero

**Payroll:** 22k€-28k€/year (gross salary) based on qualification/experience

---

**Job Overview**

The Mobile Communications Group (MCG) of the iTEAM Research Institute will coordinate the European 5G-PPP project **FULLy DisinteGrated private nEtworks for 5G verticals (FUDGE-5G)**, which will make a leap forward in realizing the notion of highly-customized cloud-native 5G private networks. The candidate **will join a team that will develop new functionalities into the Open5GCore**, a worldwide-first SW-based implementation of the 3GPP 5G Core (5GC) network developed by the Fraunhofer FOKUS research institute, with focus on **5G Local Area Networks (5GLAN)**, **5G Time Sensitive Networking (5G-TSN)**, and **5G Multicast communications**. The new 5GC solutions will be tested over the premium end-to-end 5G NR facility 5G-VINNI operated by Telenor.

---

**Job Main Goals**

- To **design, implement** and **validate** new functionalities in the Open5GCore, such as 5G-Multicast, 5GLAN and 5G-TSN
- To participate in validation 5G trials in the 5G Campus of iTEAM, the 5G Playground of Fraunhofer FOKUS, and the 5G-VINNI test-bed of Telenor

---

**Candidate requirements**

- Degree in Telecommunications or Computer Science
- Advanced knowledge of C++ programming language
- Knowledge of mobile core networks and cloud technologies will be highly valued
- Fluent in English, both writing and speaking

---

**FUDGE-5G**

- FUDGE-5G is a 5G-PPP (www.5g-ppp.eu) research project, formed by 12 partners from 10 countries (50% high-technology SMEs) with major vendors
- The project will develop new solutions for the 5G Core from Release 16 and beyond, focused on **5G private networks**
- Key technology enablers are **unified SBA** (Service-Based Architecture), 5GLAN, 5G-TSN, and 5G-Multicast
- Validation will take place in the 5G-VINNI test-bed of Telenor in Norway, with innovative use cases

---

**Duration:** 30 months (Sept. 2020 – Feb. 2023)

---

If you are interested: send your CV and motivation letter as soon as possible to dagobar@iteam.upv.es