
Research Engineering Position (M/F)
(Reference: CS_JH_ENG_5G_V2X_071220)

Research topics	5G V2X Prototype architecture on OpenAirInterface SDR Platform
Department	Communication Systems
Publication date	07/12/2020
Start date	ASAP
Duration	Fixed Term Contract 18 months
Description	<p>EURECOM's Communication System Department invites applications for a full-time, 18-month research engineering position (M/F) to work on a 5G-V2X prototype on the Open5G Software Defined Radio (SDR) platform OpenAirInterface.</p> <p>5G technologies are about to be deployed with the promise of a significant increase in capacity for end-users and unprecedented flexibility in the network management for network operators. 5G-based Vehicle-to-Everything (V2X) communications are also expected to radically impact the automotive industry, but also larger stakeholders, ranging from railways, unmanned aerial vehicles (UAV), industrial robotics or even agriculture.</p> <p>The objective of this position is to work on the 5G platform OpenAirInterface (http://openairinterface.org/) and extend the LTE V2X architecture to create the first open 5G V2X prototype supporting industrial wireless requirements. This would lead to prototype tests, contribution to standards and publications. The topic is also expected to integrate related aspects such as Time Sensitive Networks (TSN) and Internet-of-Things (IoT).</p> <p>This work will be carried out in the context of two large EU-wide rail projects called Safe4RAIL 3 (https://safe4rail.eu/) and IntelloT (http://www.intelliot.eu/), including European leading industry in IoT, Railway and 5G communications. The candidate will also closely work with the large OAI community of developers.</p> <p>Specifically, the focus of this position will be primarily to: (i) extend the OAI LTE V2X architecture and merge it with the OAI 5G architecture. (ii) integrate new 5G V2X schedulers and V2X services, (iii) contribute to the extension of the OAI toward TSN and IoT.</p> <p>EURECOM is an English-speaking school that enjoys a special status within the group of French Ivy League schools, or "Grandes Ecoles", as it is the only engineering school in France with a full English language curriculum. Besides teaching at the MSc and PhD levels, EURECOM's activities mainly revolve around research in the domains of networking, computer security, data-science and mobile communications. It has some 150 employees, including 125 scientists.</p>
Requirements	<p><u>Education Level / Degree</u>: Master-level degree or PhD degree, or their equivalent</p> <p><u>Field / specialty</u>: Computer Science, Electrical or Telecommunication Engineering.</p> <p><u>Technologies</u>: A very good background in Wireless and/or Wired Networks (WLAN, LTE/5G, Internet). Knowledge in C-ITS technologies, V2X communication and networks is highly appreciated.</p> <p><u>Languages / systems</u>: Good experience in C or C++ programming is required.</p>

Other skills / specialties: 3GPP and C-ITS standard knowledge

Other important elements: Strong communication skills and keen to operate in a multidisciplinary team. Fluent in English (speaking, writing), French not required.

Application

The application must include (I, II and III):

- I-Curriculum Vitae
- II-Motivation letter of two pages also presenting the perspectives of research and education
- III-Names and addresses of three references

Applications should be submitted by e-mail to secretariat@eurecom.fr with the reference : CS_JH_ENG_5G_V2X_071220

About EURECOM

EURECOM is a graduate school and a research center in communication systems located in Sophia Antipolis, a vibrant science park on the French Riviera. EURECOM is ranked among the world's top universities in the QS World University Rankings® 2019, considered one of the world's strongest universities in Computer Science & Information Systems and ranked 551/600 worldwide.

Organized as an Economic Interest Group (kind of consortium), EURECOM brings together in its consortium prestigious universities such as the schools from the Institut Mines Télécom group (Télécom Paris, Imt Atlantique, Télécom SudParis, etc.), Aalto University (Helsinki), Politecnico di Torino, Technische Universität München (TUM), Norwegian University of Science and Technology (NTNU), Chalmers University of Technology (Sweden), and Czech Technical University in Prague (CTU), ITMO University (St Petersburg), as well as industry members such as BMW Group, IABG, Orange, SAP, NortonLifeLock and the Principality of Monaco as an institutional member.

EURECOM has developed its expertise around three major fields: Digital Security, Data Science and Communication Systems. EURECOM is particularly active in research in its areas of excellence while also training a large number of doctoral candidates. Its contractual research, in which its industrial members actively participate, is widely recognized in Europe and contributes largely to its budget. It's strong links with various industries has enabled EURECOM, with the Institut Mines Télécom, to obtain the Carnot label, a label granted to research organizations which put partnership research at the heart of their strategy.