
Research topics	5G NR D2D Networks
Position (M/F)	Post-Doctoral / Research Engineer
Reference offer	CS/JH/ENG/5G/V2X/022023
Research Department	Communication Systems
Publication date	27/02/2023
Start date	ASAP
Duration	Fixed Term Contract 18 months

Description

EURECOM's Communication System Department invites applications for *multiple full-time, 18-month research engineering positions (M/F)* to work on a 5G NR D2D/V2X on the Open5G Software Defined Radio (SDR) platform OpenAirInterface.

5G and Beyond5G technologies promise a significant increase in capacity for end-users and an unprecedented flexibility in the network management for network operators. 5G-based Device-to-Device (D2D) or 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.

The objective of this position is to work on the 5G platform OpenAirInterface (<http://openairinterface.org/>), extend it with a 3GPP rel.17/18 5G D2D/V2X architecture and create an open 5G NR D2D/V2X prototype supporting industrial wireless requirements. This would lead to prototype tests, contribution to standards and publications.

More specifically, the focus of the multiple positions will be primarily to: (i) extend the 5G NR protocol architecture with 3GPP D2D/V2X functions; (ii) extend the 5G NR PHY layer to support D2D/V2X; (iii) develop a 5G D2D/V2X standard scheduler (iv) integrate 5G NR D2D relaying functionalities (v) develop a 5G Proximity Services (ProSe) architecture;

This work will be carried out in the context of various international projects, including European leading industry in IoT, Railway and 5G communications. The candidate will also closely work with the large OAI community of developers.

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.

Requirements

- Education Level / Degree: Master-level degree or PhD degree, or their equivalent
- Field / specialty: Computer Science, Electrical or Telecommunication Engineering.
- Technologies: A very good background in wireless communication systems (4G/5G) in at least one of these domains - physical, protocol or service layers. Knowledge in C-ITS technologies, V2X communication and networks is highly appreciated.
- Languages / systems: Good C or C++ programming skills are required.
- 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/022023



About EURECOM

EURECOM is a major Engineering School and a Research Center in digital sciences founded in 1991 as a consortium in the international technology park of Sophia Antipolis. The IMT is a founding member of the GIE. Teaching and research activities are organized around 3 promising fields: digital security, communication systems and Data Science.

EURECOM has a staff of 150 (researchers and support teams) and welcomes 400 international students on the Campus Sophia Tech, the largest information science and technology campus of the region. EURECOM enjoys a privileged geographical environment on the French Riviera (Côte d'Azur), between sea and mountains, at the heart of a dynamic and multidisciplinary ecosystem that promotes high-level scientific and technological innovation.

Social advantages

- Attractive salary
- Employee profit sharing policy
- Company health cover (mutuelle) with high levels of guarantees for the whole family (employer participation of 60%)
- Restaurant vouchers (60% employer contribution)

EURECOM has a dynamic policy in terms of inclusion and quality of life at work, committed to diversity and gives the same consideration to all applications, without discrimination.

EURECOM has a "Mission Handicap" policy. All our positions are open to people with disabilities. A designated disability referent welcomes and provide support to employees and students suffering from a disability. He puts in place the necessary arrangements and makes positive commitments in favour of a personalized integration.

EURECOM, as part of its Annual Gender Equality Plan, practices inclusive recruitment without any kind of gender discrimination. The conditions of employment are identical for women and men. In order to promote the diversity in its teams, EURECOM encourages male applications for administrative positions, traditionally occupied by women, and female applications for teaching/research positions, traditionally occupied by men.

EURECOM carries out positive actions within the framework of its CSR policy. A CSR referent steers EURECOM's policy in terms of CSR and energy transition (electric charging stations, solar panels, selective sorting, etc.).