Research Engineer/Post-Doctoral Position (M/F)
Reference: CS_JH_ING_V2XNextGen_070119

Research topics
Next Generation V2X Systems Design, Modeling and Simulation

Department
Communication Systems

Publication date
01/07/2019

Start date
ASAP

Duration
Fixed Term Contract 12 month (with possibility 6 months extension)

Description
EURECOM’s Communication System Department invites applications for a full-time, 12-month research engineering or post-doctoral position (M/F) to work on modeling and simulation of the Next Generation (V2X) communications, protocols and applications for Cooperative Intelligent Transportation Systems (C-ITS), notably the future cooperative automated vehicles.

The successful development of future C-ITS applications jointly requires a close understanding of standards and the capability to rapidly implement and test new V2X communication mechanisms. It therefore requires a perfect understanding of the state-of-art in V2X technologies to propose new mechanisms for standardization, but also adaptive and efficient simulation/testing platforms to test such new mechanisms. The iTETRIS C-ITS simulation platform (http://www.ict-itetris.eu/), federating simulators such as ns-3 and SUMO, has been developed in that perspective and is being used by various EU projects and automotive-related industries. This position will first actively follow C-ITS standardization activities, propose and evaluate next generation V2X communication protocols, resource management, adapting and integrating 5G concepts to future cooperative automated vehicles. Moreover, this position will also maintain and extend the iTETRIS simulation platform with standard compliant models and scenarios in order to validate and certify the proposed new V2X mechanisms and services.

This work will be carried out in the context of an industrial project with Renault SWLabs in close cooperation with standards developing organizations, such as ETSI, CAR 2 CAR and 5GAA. The candidate is therefore expected to provide EURECOM and Renault SWLabs expertise at technical meetings and standardization event. The candidate will also be expected to contribute to standardization by drafting or evaluating standards and will therefore be in close cooperation with various research and development centers in Europe.

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 equivalent, a PhD is a plus.
Field / specialty: Computer Science, Electrical or Telecommunication Engineering.
Technologies: A very good background in Wireless and/or Wired Networks (WLAN, LTE/5G, Internet). Knowledge in C-ITS technologies, V2X communication and networks, as well as good analytical skills is highly appreciated.
Languages / systems: Experience in C or C++ programming. Knowledge in simulators (ns-3,Omnnet++) is highly appreciated.
Other skills / specialties: 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_ING_V2XNextGen_070119

Postal address

CS 50193 - 06904 Sophia Antipolis, France

Contact

secretariat@eurecom.fr

Fax number

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EURECOM is a French graduate school and a research center in digital sciences based in the international science park of Sophia Antipolis, which brings together renowned universities such as Télécom ParisTech, Aalto University (Helsinki), Politecnico di Torino, Technische Universität München (TUM), Norwegian University of Science and Technology (NTNU), Chalmers University (Sweden) and Czech Technical University in Prague (CTU). The Principality of Monaco is a new institutional member. The Institut Mines-Télécom is EURECOM's founding member.

EURECOM benefits from a strong interaction with the industry through its specific administrative structure: Economic Interest Group (kind of consortium), which brings together international companies such as: Orange, BMW Group Research & Technology, Symantec, Monaco Telecom, SAP, IABG.

EURECOM deploys 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 is recognized across Europe and contributes largely to its budget.

Thanks to its strong ties set up with the industry, EURECOM was awarded the “Institut Carnot” label jointly with the Institut Telecom right from 2006. The Carnot Label was designed to develop and professionalize cooperative research. It encourages the realization of research projects in public research centers that work together with socioeconomic actors, especially companies.

EURECOM specifically encourages women to apply with a view towards increasing the proportion of female researchers.