
Industrial PhD Position with Huawei Munich: Advanced Deterministic Network Communications

(Ref: CS_TS_PhD_Huawei_Feb2020)

Research Topics	Deterministic communication, ultra low latency, IoT, beyond 5G, SDN/NFV
Department	Communication Systems
Web Site	http://www.eurecom.fr/cm/
Starting Date	2 nd quarter of 2020
Duration	Duration of the thesis
Description	<p>This position will be funded by Huawei's German Research Center, Munich. The selected candidate will be employed by Huawei, but will be a PhD student of the Comm. Systems department at EURECOM, Sophia-Antipolis (http://www.eurecom.fr/en). The thesis relates to taking ultra-low latency communication (proposed in 5G for sensitive IoT and other machine-based communication applications) a step further towards fully deterministic communication schemes. The methodology will involve a balance between theoretical tools (e.g., advanced queueing theory, network calculus, etc.) and practical implementation. It offers a unique opportunity to do quality research on a novel 5G+ related topic, while also gaining valuable hands-on experience with a major networking vendor.</p>

The key objectives of this thesis will be the following:

- Research related academic work and understand current and future technology trends in **deterministic communications**.
- **Optimize the network procedures inside a new cloud-based virtualized IoT environment.**
- Investigate and prototype new techniques and algorithms for advanced networking technologies.
- **Optimize configuration network procedures based on the Software Defined (SDN)/Network Function Virtualization (NFV) design paradigm.** Participate in new protocols design.
- Design and develop proof of concepts, demonstrators, and testbeds.
- Actively participate in international conferences and standardization organizations like IIC, IETF, OPC-F etc.

Requirements Applications are welcome from individuals with a relevant engineering or applied science discipline, a master's degree or relevant industrial experience.

We are seeking applicants with a solid background in networking fundamentals and protocols, and strong analytical and programming skills. Prior research experience in the area would be an advantage. Priority will be given to applicants with demonstrated practical engineering skills and experimental experience.

- M.Sc.(Eng.) in Computer Science or Telecommunications or at least 3 years' experience as research engineer.
- Very good programming skills (C/C++, Java, Python etc.)
- Network protocols, TCP/IP stack
- Network modeling methodologies (network optimization, queueing theory etc.)
- Applied knowledge of Software Defined Networking techniques and virtualised environments would be a plus.
- Fluency in English (written and spoken).
- Team player, excellent intercultural communication and coordination skills.

Application

The position is available immediately, and the selected candidate will be expected to join as soon as possible. Application evaluation will start immediately and will continue until position is filled. Interested individuals should submit:

- 1-2 page summary of research interests.
- Detailed CV including publications.
- At least 2 recommendation letters.
- Transcript of courses taken at graduate and undergraduate levels and their grades.

Applications should:

1) be sent to spyropou@eurecom.fr, kostas.katsalis@huawei.com mentioning the following reference in the title

[Deterministic Networking PhD**]**

2) also be made through the Huawei web site : <https://apply.workable.com/huawei-16/j/F607DD0C18/>

Contact

If you have questions or need more information about the position, we encourage you to visit the websites of the supervisors, or to contact them directly:

- Thrasyvoulos Spyropoulos (<http://www.eurecom.fr/~spyropou/>)
- Kostas Katsalis (kostas.katsalis@huawei.com)

Postal Address

EURECOM, Campus SophiaTech, 450 route des Chappes, 06410 BIOT, France

Web page

<http://www.eurecom.fr/en/eurecom/eurecom-recrute>

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 Paris, Aalto University (Helsinki), Politecnico di Torino, Technische Universität München (TUM), Norwegian University of Science and Technology (NTNU), Chalmers University (Sweden), Czech Technical University in Prague (CTU) and Technische Universität Wien (TU Wien). 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, 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.