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## Industrial PhD Position with Huawei Munich:

### Advanced Deterministic Network Communications

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<b>Research Topics</b>	<b>Deterministic communication, ultra low latency, IoT, beyond 5G, SDN/NFV</b>
<b>Department</b>	Communication Systems
<b>Web Site</b>	<a href="http://www.eurecom.fr/cm/">http://www.eurecom.fr/cm/</a>
<b>Starting Date</b>	2 <sup>nd</sup> quarter of 2020
<b>Duration</b>	36 months
<b>Description</b>	<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 (<a href="http://www.eurecom.fr/en">http://www.eurecom.fr/en</a>). 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](mailto:spyropou@eurecom.fr), [kostas.katsalis@huawei.com](mailto: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/F607DDOC18/>

## 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](mailto: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 est une école d'ingénieurs et un centre de recherche en systèmes de communication, située au cœur de la technopole internationale de Sophia Antipolis. Fondé en 1991 par TELECOM ParisTech (Ecole Nationale Supérieure des Télécommunications) et l'E.P.F.L. (Ecole Polytechnique Fédérale de Lausanne) EURECOM est un groupement d'intérêt économique (GIE) qui associe partenaires académiques et industriels internationaux<sup>1</sup>..*

*Les activités d'enseignement et de recherche d'EURECOM sont organisées autour des trois grands domaines de spécialisation: Réseaux et sécurité, communications multimédia, communications mobiles. EURECOM se caractérise par une vocation et une stratégie internationale affirmées.*

*EURECOM est particulièrement actif en recherche dans ses domaines d'excellence et forme un grand nombre de doctorants. Sa recherche contractuelle, à laquelle participe activement ses membres industriels, est largement reconnue en Europe et contribue pour une large part à son budget.*

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<sup>1</sup> Partenaires académiques : TELECOM ParisTech, EPFL, Politecnico di Torino, Helsinki University of Technology, Technische Universität München, Norwegian University of Science and Technology, Vietnam National University, Ho chi Minh ville) –

Partenaires industriels : Swisscom, Orange, SFR, ST Ericsson, CISCO, BMW Group research & technology, SAP, Monaco Telecom, Symantec