2 PhD Positions for the Innovative Training Network "SPOTLIGHT"for Beyond 2020 Mobile Data Networks (M/W)

(Ref : CS_LC_phd_mar2017)

Research topic	**Novel PHY techniques and low complexity antenna design for fully-uncoordinated uplink transmissions in massively distributed MIMO systems**
Department	Communications Systems
Opening date	March 2017
Start date	2nd semester 2017
Duration	Thesis duration

Description

"SPOTLIGHT" is a European Training Network for Beyond 2020 Mobile Data Networks. A consortium of 10 European Research Institutions, including EURECOM, will create a fully-integrated and multi-disciplinary network of 15 Early Stage Researchers (ESRs) that will analyze, design, and optimize the performance of a disruptive new mobile network architecture: the SPOTLIGHT architecture. The ultimate object is to meet and surpass the requirements set for the 5G and Beyond mobile data network. For further details on this project see http://gain.di.uoa.gr/spotlight/index.html .

EURECOM offers two PhD positions or ESR positions to study two fundamental aspects of the SPOTLIGTH architecture: (ESR1) the analysis and design of novel physical layer techniques for fully-uncoordinated uplink transmissions in massively distributed MIMO systems with centralized processing and (ESR2) the low-complexity antenna design for massively distributed MIMO systems (see
http://gain.di.uoa.gr/spotlight/files/SPOTLIGHTpositions.pdf)

Those two positions offer the unique opportunity to work on a vibrant international and multi-disciplinary project while working on the most advanced techniques for emerging wireless communications networks that will dominate the market in the next years in a very early stage of their development.

Requirements

We are looking for highly motivated and creative people with master degrees in communications and information technology or related fields. The key prerequisites are both solid mathematical skills and an excellent background in communications and information theory and signal processing. Relevant prerequisites are also a certain degree of independence, capability to take initiative, and good English command.

Additionally, the eligible candidates should also satisfy the requirements for the Marie Curie Early Career Research Fellowships, i.e. : 1) be in the first four years (full time equivalent research experience) of their research careers; 2) be of any nationality, but not having resided or carried out their main activity in the country of the host institution of the position they are applying to for more than 1 year in the past 3 years; 3) have not yet been awarded a PhD degree.

Application   The positions appear at https://euraxess.ec.europa.eu/jobs/178608. Applicants are expected to submit the application form that can be downloaded at https://cdn5.euraxess.org/sites/default/files/application-forms/spotlight_-_applicationform-new.pdf , indicating their preference to the available positions, along with a motivation letter, full CV, degrees, recommenders' contact details (up to 3), and any other relevant documents, at itn.spotlight@gmail.com , not later than **May 31st, 2017**.

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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, ST Microelectronics, BMW Group Research & Technology, Symantec, Monaco Telecom, SAP, IABG.

EURECOM deploys its expertise around three major fields: Security, Data Science and Mobile Communications. 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.

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