



# Open PhD Positions

## Anticipatory Networking Techniques in 5G and Beyond



The ACT5G Consortium is starting the recruiting process for **four PhD students** as “**Early-Stage Researchers**” (ESRs) at Linköping University (LiU - Sweden) and Politecnico di Milano (Polimi - Italy), on the research area of Anticipatory Networking, aiming at predicting traffic and environment changes in order to optimize wireless network resources and operations.

In particular the following four topics will be assigned to the recruited researchers:

**ESR1:** Network Data Analytics [Academic Site: **Polimi**]

**ESR2:** Wireless Link Status Anticipation [Academic Site: **LiU**]

**ESR3:** Resource & Management Optimization for Wireless Software-defined Networking [Academic Site: **LiU**]

**ESR4:** Performance and Enablers of Infrastructure and Resource Sharing [Academic Site: **Polimi**]

Each post is **funded for 36 Months** by the EU under the rules of the MSCA ITN EID Scheme<sup>1</sup> and provides a **very competitive salary** (3710 euro/month before taxes and social security fees, +600 euro/month if family obligations exist). The recruited researchers are required to:

- follow a PhD program at the respective academic sites and
- spend **50%** of their project involvement at **Alcatel Lucent - Bell Labs**, in Stuttgart, Germany.

**The recruitment must start at the latest by Fall semester of 2015.**

Eligibility rules:

### **1. Career Stage:**

The Applicants, at the time of recruitment by the host organization, must be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree

### **2. Mobility Requirement:**

At the time of recruitment, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their recruiting organisation for more than 12 months in the 3 years immediately prior to the reference date. Compulsory national service and/or short stays such as holidays are not taken into account.

### **3. PhD Application and Enrolment:**

Once selected by the ACT5G consortium for the ESR positions the applicants must apply for PhD studentship at the respective recruiting sites; failure to comply with the admittance procedure and requirements in a PhD program of Linköping University or Politecnico di Milano will render the candidate ineligible to be offered the position.

### **4. Required skills**

Applicants should be fluent in communicating in English both in speaking and writing. A strong mathematical background in particular on stochastic models and optimization is required. Solid skills in communication and networking technologies as well as on software development are also required. Competences in game theory and data analysis are preferable skills.

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<sup>1</sup>Details can be found in: [http://ec.europa.eu/research/participants/portal/doc/call/h2020/h2020-msca-itn-2014/1590152-itn\\_2014\\_guide\\_for\\_applicants\\_1.2\\_en.pdf](http://ec.europa.eu/research/participants/portal/doc/call/h2020/h2020-msca-itn-2014/1590152-itn_2014_guide_for_applicants_1.2_en.pdf). Each recruiting site will provide the funds for the non-EU funded part of the project.

### **Application Procedure:**

The recruitment will follow a three-step procedure:

#### **Step 1.** Researcher application

Applicants should send an e-mail to [act5g@itn.liu.se](mailto:act5g@itn.liu.se) with subject “**ACT5G application**” containing a single .pdf file with the following in English:

- 1) CV\*
- 2) Transcript of MSc/BSc studies
- 3) Motivation Letter
- 4) Up to 3 reference letters

\* CV must be in the Europass format and contain

- Bachelor degree, date, topic, university
- Master degree, date, topic, thesis, university
- Publications (if any)
- Projects (description, role, acquired skills)
- level and tools experience of the following Skills (where applicable):
  - Mathematical Optimization
  - Stochastic processes
  - Signal processing
  - Game theory
  - Information theory
  - Databases and data analysis
  - Networking
  - Other

Application deadline for Step 1: **March 15, 2015**

#### **Step 2.** Research proposal and interview

After the first phase a notification letter will be sent to a short list of candidates and they will be invited to provide a short research proposal on the topics of the project. The selection committee will then arrange an interview by remote with each of the candidates.

After this phase, the selection committee will select the candidates admitted to the final step.

#### **Step 3.** PhD studentship application

Once selected by the ACT5G consortium for the ESR positions the applicants will be encouraged to apply for PhD studentship at the recruiting site. By the EU-H2020 MSCA funding scheme rules, failure to comply with the admittance procedure and requirements in a PhD program of Linköping University or Politecnico di Milano will render the candidate ineligible to be offered the position. Note that for Politecnico di Milano an application process separate from the general call for PhDs will be applied; instructions will be provided to selected candidates.

For more information of ACT5G, the ERS projects, the recruiting sites, and the application process visit our [project website](#) or email us at [act5g@itn.liu.se](mailto:act5g@itn.liu.se). Both recruiting sites are equal opportunity employers; recognizing the current gender imbalance in the engineering domain, ACT5G will strive for gender balance in the recruited applicants.

**Contacts:**

Politecnico di Milano:

Prof. Antonio Capone – [antonio.capone@polimi.it](mailto:antonio.capone@polimi.it)

Prof. Matteo Cesana – [matteo.cesana@polimi.it](mailto:matteo.cesana@polimi.it)

Linköping University:

Prof. Di Yuan – [di.yuan@liu.se](mailto:di.yuan@liu.se)

Prof. Vangelis Angelakis - [vangelis.angelakis@liu.se](mailto:vangelis.angelakis@liu.se)

Bell Labs - Alcatel Lucent:

Ulrich Barth – [ulrich.barth@alcatel-lucent.com](mailto:ulrich.barth@alcatel-lucent.com)

Dr. Ilaria Malanchini - [ilaria.malanchini@alcatel-lucent.com](mailto:ilaria.malanchini@alcatel-lucent.com)