Job Description

iTENTE

(Universitat Politècnica de València, Spain)

The Institute of Telecommunications and Media Applications (iTEAM) at the Universitat Politècnica de València, València, Spain is seeking to appoint three high-calibre Early-Stage Researchers (ESR) to join a project on 'Terrestrial and Non-terrestrial Networks for Aerial and Ground Wireless Connectivity - (iTENTE)'.

This project —iTENTE— aims at advancing the frontier of knowledge, beyond fifth generation (5G) networking, laying the foundations for next-generation 3D vertical networks, as they break the boundary of the current ground-focused paradigm, and fully embrace ultra-reliable low-latency control and high-capacity uplink support of UAVs flying over different heights and in all latitudes. Enabling this vision entails an integrated terrestrial and non-terrestrial network, where not only ground, but also aerial and spaceborne network nodes are intelligently and jointly operated and optimized to achieve seamless and limitless UAV connectivity anytime, everywhere. Such ambitious undertaking requires advancing and merging the interdisciplinary fields of wireless terrestrial, aerial and spaceborne communications, advanced large-scale network modelling and optimization, as well as UAV robotics and machine learning in a new, holistic manner. Energy efficiency is an important part of the project.

The Role

The role is based at Universitat Politècnica de València, València, Spain, with potential secondments to project partners in the EU. The Candidate will be enrolled on a PhD programme at the Communications Department of Universitat Politècnica de València, València, Spain. The Candidate will undertake postgraduate research in support of the agreed doctoral research project, and the main research topics will be in the area of:

- Integrated terrestrial and non-terrestrial network modelling, performance analysis, optimization and coexistence
- UAV-aware 3D network algorithm design

The successful Candidates are expected to be able to publish, present and discuss research results to/with both academic and non-academic audiences. The Candidate should also be able to prepare progress reports for funding bodies, attend and participate in training events and actively participate in outreach activities.

Key Application Requirements

Applicants should have a Bachelor or Master's degree (or equivalent) in Telecommunications engineering, ideally with a background in wireless communications. Applicants with Computer Science, Maths or Physics degrees are also welcome to apply. Optimization and/or machine learning skills are a plus. The applicants should be proficient in English language skills. The ability to think logically, create solutions and make informed decisions is essential as are excellent organisational skills and the ability to travel.

The targeted starting data is around Sep 2023 (but earlier dates are possible).

The application must include:

1. A cover letter explaining your motivation for applying.
2. A Curriculum Vitae setting out your educational qualifications as well as any additional scientific achievements and publications.

3. Evidence of Advanced-level English – IELTS (or equivalent) overall grade of 7.5 with a minimum of 6.5 in each of the subtests. If not initially available, this requirement may be satisfied during the recruitment process.
4. A copy of your Bachelor or Master's certificate (or equivalent) or certificate of graduation.
5. An official transcript of the completed subjects and grades achieved in the course of the Master's programme.
6. Two letters of recommendation from researchers familiar with your academic activities, e.g. the advisor of your Master's thesis.

The applications will be analysed after the application deadline, and the shortlisted candidates will be invited to a Video and/or a personal interview. Applications close on April 15th 2023.

By applying for this position, you give consent to circulate your application within the consortium members.

Further Information

For more information about the post, please contact David López-Pérez at d.lopez@iteam.upv.es

Dr. David López-Pérez is a Distinguished Researcher at Universitat Politècnica de València. Prior to this, David was an Expert and Technical Leader at Huawei Technologies, Paris, and a Distinguished Member of Staff at Nokia Bell Labs, Dublin. David has devoted most of his career to the study of both cellular and Wi-Fi networks, where his main research interests are in network performance analysis, both theoretical- and simulation-based, network planning and optimisation as well as green networking and technology and feature development. David's main contributions are around the understanding of small cells and ultra-dense networks as well as green communications. He has also pioneered work on cellular and Wi-Fi inter-working, and investigated both multi-antenna capabilities and ultra-reliable low latency features for future indoor networks. David was recognised as Bell Labs Distinguished Member of Staff in 2019, has authored a book on small cells, a book on ultra-dense networks, and has published more than 150 research manuscripts on a variety of related topics. David has filed 59 patents applications with more than 25 granted as of today, and has received a number of prestigious awards (IEEE WCNC 2019 Best student paper award, IEEE Globecom 2022 best paper award). Among others, David has also been project lead at Next Generation Mobile Networks (NGMN) Alliance, and is a retired editor of IEEE TWC.