

Project Assistant Post-Doc (all genders)

40-hours/week | limited to 2 years

At the **Institute of Telecommunications, Research Unit Wireless Communication**, TU Wien is offering a 40-hours/week position as a **Project Assistant (Post-Doc)** financed from a research project (ESSENCE) funded by the Vienna Science and Technology Fund (WWTF), limited to 2 years - with a possible extension by an additional 6 months. Expected start: June to September 2026.

TU Wien is Austria's largest research and higher education institution in the fields of technology and natural sciences. With over 26,000 students and more than 4000 scientists, research, teaching and learning dedicated to the advancement of science and technology have been conducted here for more than 200 years, guided by the motto "Technology for People". As a driver of innovation, TU Wien fosters close collaboration with business and industry, and contributes to the prosperity of society. <https://tuwien.ac.at/en>

Background on research project ESSENCE:

Efficient Self-Supervised Machine Learning for Adaptive Wireless Communication Systems

This project investigates self-supervised learning (SSL) for wireless communication systems to improve the adaptability, efficiency, robustness, and scalability of next-generation networks. While deep neural networks tailored for specific tasks have shown strong performance, advances in fields such as natural language processing and computer vision reveal the even greater potential of general-purpose foundation models. These models, pre-trained by SSL on diverse datasets and fine-tuned for specific tasks, offer superior generalization and transferability with minimal human intervention. By leveraging channel state information (CSI), this project aims to realize SSL techniques for wireless systems, with a particular focus on optimization tasks at the physical (PHY) and medium access control (MAC) layers, laying the groundwork for compact, locally deployable, and adaptive foundation models capable of sustainably addressing the growing complexity of modern wireless networks. <https://www.wwtf.at/funding/programmes/ict/ICT25-005>

Your tasks:

- Conduct research on AI-enhanced 6G mobile wireless communication systems, with emphasis on PHY and MAC layer methodologies.
- Develop scalable hierarchical learning methods for wireless systems, integrating self-supervised adaptation with cross-level knowledge transfer.
- Publish research results in leading journals and conferences and contribute to collaborative scientific dissemination activities.
- Supervise Bachelor, Master, and PhD students, particularly in thesis projects, and support collaborative research within the group.
- Contribute to the development of follow-up research proposals and funding applications.
- Contribute to teaching and curriculum-related activities in the areas of communications and machine learning.
- Deepen and broaden scientific expertise through independent research and engagement with current literature.
- Support organizational, administrative, and project-related tasks within the research group.

Your profile:

- PhD in Electrical Engineering and Information Technology (Communications) or PhD in Computer Science / Informatics (AI/ML Systems) or an equivalent field.
- Research expertise in two or more of the following areas:
 - Wireless communications and signal processing
 - AI/ML for communication systems
 - Self-supervised ML, meta learning
 - PHY/MAC optimization of wireless communication systems
 - Robust, reliable, or explainable ML
- Experience with large-scale simulation frameworks or HPC/GPU-accelerated ML.
- Proficiency in scientific software development (Python/ML stack, MATLAB for wireless simulation, reproducible workflows, version control).
- Strong publication track record in wireless communication systems, machine learning, or related fields.
- Ability to work independently and co-supervise PhD students.
- Excellent command of the English language, both written and spoken.

We offer:

- A creative environment in one of the most livable cities in the world.
- Excellent research opportunities in a thriving research area.
- A range of attractive social benefits (see [Benefits](#)).
- Internal and external training opportunities and various career options.
- Central location of the workplace as well as good accessibility (U1/U4 Karlsplatz).
- Hybrid working environment with up to 60% home office.

Entry-level salary is determined by the pay grade B1 of the Austrian collective agreement for university staff. This is a minimum of currently EUR 4,932.90/month gross, 14 times/year for 40 hours/week. Relevant working experiences may increase the monthly income.

Application:

We look forward to receiving your application no later than Jan. 31, 2026. Your application package should be uploaded under the following link as a single PDF file or a single ZIP file (max. 10MB) and include your CV, motivation letter, academic degrees, recommendation letters and other relevant information: <https://tucloud.tuwien.ac.at/index.php/s/gbjrieAwRAp643R>

Naming convention for your file: firstname_lastname.pdf or firstname_lastname.zip

Contact:

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web: <https://www.tuwien.at/etit/tc/en/>

TU Wien is committed to increasing the proportion of women, in particular, in leadership positions. Female applicants are explicitly encouraged to apply. Preference will be given to women when equally qualified unless reasons specific to a male applicant tilt the balance in his favor.

People with special needs are equally encouraged to apply. In case of any questions, please contact the confidant for disabled persons at the university, Mr. Gerhard Neustätter.

By submitting your application, you agree that your data may be stored and processed for the purpose of filling the vacancy. You can find our privacy policy on our webpage.