



TECHNISCHE
UNIVERSITÄT
WIEN



institute of
telecommunications

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21/06/24

Assistant (Prae-Doc)

30-hours/week | limited to 4 years

TU Wien is Austria's largest institution of research and higher education 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.

At the **Institute of Telecommunications, Research Unit Wireless Communication**, TU Wien is offering a 30-hours/week position as an Assistant (prae-doc) financed from a research project, limited to 4 years for 30 hours/week. Expected start: November 2024.

Distributed Coordination of Mobile Systems in Reconfigurable Wireless Propagation Environments: This project investigates the complex dynamics of coordination and competition between mobile network operators in wireless transmission environments influenced by reconfigurable intelligent surfaces (RIS), and develops methods for coordinated RIS configuration to minimize conflicts and optimize network performance through auction-based and reinforcement learning approaches.

Your tasks:

- Research in 6G-PHY multi-antenna technology in the context of mobile wireless communication systems supported by reconfigurable intelligent surfaces.
- Development of approaches for the coordination of multi-user and multi-operator networks in reconfigurable wireless propagation environments through the use of signal processing methods, machine learning, and mathematical optimization.
- Participation in research and teaching tasks.
- Deepening of scientific expertise.
- Supervision of students, particularly in final theses.
- Scientific publication activities (journals, conferences, dissertation).
- Participation in scientific events.
- Assistance with organizational and administrative tasks.

Your profile:

- Completion of a relevant Master's or Diploma degree program in fields such as Telecommunications, Communication Engineering, Information Technology, RF Engineering, Computer Science, Technical Physics, or similar.
- Knowledge of scientific work methods.
- Expertise in one or more of the following disciplines: Telecommunications, Machine Learning, Signal Processing, Mathematical Optimization.
- Proficiency in programming and simulating wireless communication systems, especially with Matlab or Python.
- Excellent command of the English language, both written and spoken.
- Interest in academic research and teaching.
- Teamwork, problem-solving skills, and innovation capability.

We offer:

- A broad range of opportunities in a thriving research area.
- A range of attractive social benefits (see [Fringe-Benefit Catalogue of TU Wien](#)).
- 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.

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 favour.

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.

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 2,684.10/month gross, 14 times/year for 30 hours/week.

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.

Application

We look forward to receiving your application until 31/08/24. Your application package should be sent as a single PDF file (max. 10MB) and include your CV, motivation letter and academic degrees.

Email: E389.office@tuwien.ac.at