

The University of Klagenfurt, with approximately 1,500 employees and over 12,000 students, is located in the Alps-Adriatic region and consistently achieves excellent placements in rankings. The motto “per aspera ad astra” underscores our firm commitment to the pursuit of excellence in all activities in research, teaching, and university management. The principles of equality, diversity, health, sustainability, and compatibility of work and family life serve as the foundation for our work at the university.

The University of Klagenfurt is pleased to announce the following open position at the **Department of Networked and Embedded Systems**, Mobile Systems Group, at the Faculty of Technical Sciences, with a negotiable starting date, commencing on **March 1, 2025**, at the latest:

University assistant predoctoral (all genders welcome) (in German: Universitätsassistent:in)

Level of employment: 100 % (40 hours/week)

Minimum salary: € 50,103.20 per annum (gross); classification according to collective agreement: B1

Contract duration: 4 years

Application deadline: December 11, 2024

Reference code: 297/24

Tasks and responsibilities:

- Perform research into future **wireless networked systems**, for example with emphasis on self-organized synchronization and swarming or wireless sensing
- Perform independent scientific work with the aim to submit a dissertation and acquire a doctoral degree in technical sciences
- Teach exercise and lab courses such as:
 - “Mobile Communications” and “Wireless Networks” in the Master’s programme “Information and Communications Engineering”
 - “Physics for Engineers: Electricity and Magnetism” in the Bachelor’s programmes “Informationstechnik” and “Robotics and Artificial Intelligence”
- Participate in research projects of the group
- Participate in administrative and organisational tasks of the department (e.g., website, research database, organisation of workshops)
- Mentor and co-advise students
- Assist in public relations activities of the department and the faculty

Prerequisites for the appointment:

- Completed Diploma or Master’s degree from a recognised university in the field of information and communications engineering, electrical and computer engineering, or closely related fields. This requirement must be fulfilled two weeks before the starting date at the latest; hence, the last possible deadline for meeting this requirement is **January 17, 2025**.
- Fundamental knowledge in at least four of the following areas:
 - Wireless communications (e.g., radio propagation, physical layer techniques)

- Wireless networks (e.g., Wi-Fi, cellular, ad hoc networks, sensor networks)
- Communication protocols (e.g., medium access, routing, higher layers)
- Self-organization in networks (e.g., synchronization, swarming, bio-inspired algorithms)
- Simulation of dynamic and stochastic networks (e.g., simulation tools, simulation methodology, emergence, tipping points, performance)
- Mathematical analysis of dynamic and stochastic networks (e.g., network theory, stochastic processes, stochastic geometry, nonlinear dynamics)
- Advanced programming skills in Python, C/C++, or R
- Fluent in written and spoken English
- Very good scientific communication and dissemination skills (scientific writing and oral presentations)

Additional desired qualifications:

- Knowledge of German (on a level suited for undergraduate teaching and PR activities)
- Good social competences and ability to work in a team
- Expertise in wireless sensing, machine learning, experimental/hands-on work with wireless systems or robotics
- Relevant experience abroad
- First scientific contributions like co-authorship in publications

Our offer:

This position serves the purposes of the vocational and scientific education of graduates of Master's or Diploma degree programmes and sets the goal of completing a Doctoral degree/a Ph.D. in Technical Sciences. Applications by persons who have already completed a subject-specific Doctoral degree or a subject-relevant Ph.D. programme can therefore not be considered.

The employment contract is concluded for the position as university assistant (predoctoral) and stipulates a starting salary of € 3,578.80 gross per month (14 times a year; previous experience deemed relevant to the job can be recognised in accordance with the [collective agreement](#)).

The **Mobile Systems Group** led by Professor Bettstetter focuses on the design, modelling, and analysis of novel techniques for wireless connectivity, networking, and networked control with applications in telecommunication, mobile robotics and drone systems, and industrial networks. The group is part of the Department of Networked and Embedded Systems, which is a leading partner of the university's key research strength "Networked and Autonomous Systems". The group is also part of the interdisciplinary research cluster "Self-Organizing Systems". The team is international with English as the working language and is dedicated to high quality in research and teaching. Expertise includes stochastic modelling and analysis, distributed algorithms and protocols, network simulation and performance analysis, protocol engineering, prototyping on programmable hardware, and wireless measurements. The project portfolio ranges from fundamental concepts and theories to experimental work with industry partners. Current projects are on the following topics: self-organized synchronization and swarming (swarmalator systems), drones in cellular 5G/6G networks, Wi-Fi sensing, interference dynamics in wireless networks, and resilience and self-fulfilling prophecies in a digital world. The group has received several *Best Paper Awards* over the past few years. Teaching activities include lectures, courses, labs, and seminars for the established Bachelor's programme "Informationstechnik" (in

German) and the recently launched Bachelor's programme "Robotics and Artificial Intelligence" (in English) as well as for the Master's programme and Doctoral programmes in "Information and Communications Engineering" (in English). The engagement in teaching was recognised with the *Excellence in Teaching Award* of the university. The offices and laboratories are in the modern and well-equipped [Lakeside Science & Technology Park](#).

The University of Klagenfurt also offers:

- Personal and professional advanced training courses, management and career coaching
- Numerous attractive additional benefits, see also <https://jobs.aau.at/en/the-university-as-employer/>
- Diversity- and family-friendly university culture
- The opportunity to live and work in the attractive Alps-Adriatic region with a wide range of leisure activities in the spheres of culture, nature and sports

The application:

If you are interested in this position, please apply in English providing the following documents:

- Letter of application
- Curriculum vitae (with clear information about the degrees including date/place/grade, the experience acquired, the thesis title, the list of publications if any, and other relevant information)
- Copy of the degree certificates and transcripts of the courses
- Any certificates that can prove the fulfilment of the required and additional qualifications listed above (e.g., the submission of the final thesis/dissertation if required by the degree programme, copy of publications, programming skills certificates, language skills certificates etc.)
- Final thesis or other study-related written work (like seminar reports) or excerpts thereof
- If an applicant has not received the Diploma or Master's degree by the application deadline, the applicant should provide a declaration, written either by a supervisor or by the candidate himself/herself, on the feasibility of finishing the Diploma or Master's degree by **January 17, 2025, at the latest**.

To apply, please select the position with the **reference code 297/24** in the category "Scientific Staff" using the link "Apply for this position" in the job portal at jobs.aau.at/en/.

For further information on this specific vacancy, please contact Professor Christian Bettstetter (see [nes.aau.at](https://jobs.aau.at/en/the-university-as-employer/)). General information about the university as an employer can be found at <https://jobs.aau.at/en/the-university-as-employer/>. At the University of Klagenfurt, recruitment and staff matters are accompanied not only by the authority responsible for the recruitment procedure but also by the [Equal Opportunities Working Group](#) and, if necessary, by the [Representative for Disabled Persons](#).

The University of Klagenfurt aims to increase the proportion of women and therefore specifically invites qualified women to apply for the position. Where the qualification is equivalent, women will be given preferential consideration.

People with disabilities or chronic diseases, who fulfil the requirements, are particularly encouraged to apply.

Travel and accommodation costs incurred during the application process will not be refunded.

Translations into other languages shall serve informational purposes only. Solely the version advertised in the University Bulletin ([Mitteilungsblatt](#)) shall be legally binding.