UNIVERSITÄT PADERBORN

Paderborn University is a high-performance and internationally oriented university. Within interdisciplinary teams, we undertake forward-looking research, design innovative teaching concepts and actively transfer knowledge into society. As an important research and cooperation partner, the university also shapes regional development strategies. We offer our employees in research, teaching, technology and administration a lively, family-friendly and equal opportunity environment, a lean management structure and diverse opportunities. **Join us to invent the future!**

At the **Faculty of Computer Science, Electrical Engineering and Mathematics**, the Department of Electrical Engineering - Automated Control Group – offers a full-time position (100% of the regular working time), which will start at the earliest opportunity, as

Doctoral student (f/m/d)

(Salary level 13 TV-L)

Employment as a doctoral student is initially fixed to one year and adheres to the legal regulations laid out in the "Wissenschaftszeitvertragsgesetz" (WissZeitVG). This is a position, which serves the acquisition of scientific competences through the development of a dissertation topic in the field of design, analysis, and implementation of learning control algorithms for autonomous systems. An extension to complete the PhD is possible within the time limits of the WissZeitVG.

We are looking for a Ph.D. candidate to develop safe, learning based control algorithms for autonomous robots.

Position description and responsibilities:

- Research in learning control
- Exploring model-free and model-based hybrid learning approaches
- Writing scientific papers for journals and conferences
- Contribution to teaching activities through control-related courses (usually 4 semester hours per week)
- Active contribution to the joint acquisition of third-party projects.

Your profile:

- MSc degree in the field of control engineering, computer science, applied mathematics, or related areas.
- Solid knowledge of machine learning and system and control theory
- Strong passion for optimization, control systems, programming, and abstract thinking
- Programming skills in C/C++ and Python
- Experience with Robot Operating System (ROS)
- Very good command of English, both written and spoken

We provide:

- An international group that seeks to push the boundaries of single and multi-agent robotic systems by leveraging autonomy towards smarter systems that will learn and interact with an environment.
- An interdisciplinary research team with backgrounds ranging from applied robotics and robot vision to strong foundations in modern control theory and stochastic approximation algorithms.
- A new research lab with a high-precision motion capture ground-truth camera system and multiple GPU-based workstations for learning, control, and AI algorithm design.

Applications from women are particularly welcome and, in case of equal qualifications and experiences, will receive preferential treatment according to to state law (LGG), unless there are preponderant reasons to give preference to another applicant. Part-time employment is generally possible. Applications from disabled people with appropriate suitability are explicitly welcome. This also applies to people with equal opportunities in accordance with the German social law SGB IX.

Applications with complete documents (cover letter, CV with the full publication list, contact details of two references in a single PDF file: name_surname.pdf) should be sent via email with the subject "PhD in learning control" quoting **reference number 6595** by **August 9th 2024** to: erdal.kayacan@uni-paderborn.de.

Information regarding the processing of your personal data can be located at:
https://www.uni-paderborn.de/en/zv/personaldatenschutz.

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