Academic Researcher (m/f/d)

(TV-L E 13, 100%, Service Location: Clausthal-Zellerfeld)

The research group **D**ependable and **A**utonomous **C**yber-physical **S**ystems (DACS) at the **I**nstitute for **S**oftware and **S**ystems **E**ngineering (ISSE), Clausthal University of Technology (TU Clausthal), is seeking to fill a position as

Academic Researcher (m/f/d)

in the field of Software Engineering for Dependable AI-Based Automated Driving Systems with Autoware

(EG 13 TV-L, full-time (39.8 hours / week), limited for a period of up to 3 years)

Part time is negotiable.





With these positions, we invite YOU to join our team, which is working in close collaboration on the **development of our real AI-based automated shuttle** (see image) with **Autoware-stack** for **deployment on public roads**, while researching and developing dependable automated driving systems based on **software and systems engineering approaches**.

The **I**nstitute for **S**oftware and **S**ystems **E**ngineering (ISSE) is one of the two computer science institutes at TU Clausthal, hosting several research groups. For more information about the ISSE Institute, please visit our website: https://www.isse.tu-clausthal.de/.

Your tasks are

- Research and development in the field of **software engineering** for dependable and safe automated driving systems.
- **Conception, design**, and **implementation** of **software architectures** and **prototypes** in interdisciplinary projects.
- **Development, testing, and evaluation of methods and software systems directly on our real test vehicles** (see image) for automated driving.
- Application of modern **software engineering approaches** (e.g., agile methods, model-based development, CI/CD pipelines) in concrete research projects.
- Publication of research results at national and international conferences.

- Assistance in preparing lectures, supervising exercises, and mentoring students in our B.Sc. and M.Sc. programs.

Your profile

The following are required:

- Completed **Master's degree or diploma** (with excellent to good results) in **Computer Science**, **Software Engineering**, Information Systems, or a related field.
- **Strong knowledge of software engineering** (e.g., software architecture, development processes, quality assurance).
- Very good programming skills (at least in **Python and C++**); ideally strong hands-on experience with **ROS2**.
- Experience in **AI development**, especially with neural networks.
- Experience with standard **software development tools** (Git, CI/CD, IDEs, issue tracking).
- Strong interest in academic research and willingness to pursue a **PhD**.
- Independent, structured way of working, quick comprehension, and ability to adapt to new concepts.
- Excellent **German language skills (at least C1)** and good English skills, both written and spoken
- A **Category B driving license** valid for driving in **Germany**.

Desirable qualifications:

- Practical experience in one or more of the following areas: **software testing, runtime monitoring, or development of automated driving systems** – ideally with relevance to a current development and assurance processes.
- Knowledge of modern **software development methods** (e.g., Scrum, model-based development) and experience in **modeling system structures and behaviors**.
- Initial experience with **scientific publications** or **project work in the development of complex software systems**, particularly in the **software architecture design**.

What we offer

- A family-friendly, collegial working environment in dedicated teams as well as interdisciplinary and varied tasks.
- The opportunity not only to **develop innovative software engineering approaches** but also to practically **test them directly on real test vehicles** – from first simulation to real-world driving.
- An innovative working environment with modern laboratories and simulation environments, as well as direct access to a **real automated shuttle** used as a **test platform for research and development**.
- The opportunity to directly apply and evaluate your results in industrial projects.
- The opportunity to pursue a **doctorate (PhD)** in cooperation with national and international research partners and industry.
- Lounge area, group activities, and team events
- Compensation in accordance with the collective bargaining agreement for state government employees (TV-L), as well as an annual bonus at the end of the year under the TV-L and a

separate supplementary pension plan (VBL), 30 days of vacation, and time off on Christmas Eve and New Year's Eve
- A varied and challenging role in the dynamic environment of a university
- Work-life balance through flexible work arrangements, part-time options, and remote work within the scope of institutional possibilities
- Employee health management programs, university sports programs, and corporate benefits
- Future-oriented development and training opportunities
- The opportunity to actively contribute to the further development of our university

Have we aroused your interest?
Apply on our homepage using the "Online application" button (see below).

Equality with its facets, equal opportunities, diversity and family-friendliness is an important concern for TU Clausthal. People with severe disabilities will be given priority if they are suitable. Applications from people of all nationalities are welcome.

We look forward to seeing you!

Contact:
If you have any questions, please contact Mr. Meng Zhang by e-mail (meng.zhang@tu-clausthal.de). Applications, including the usual supporting documents, may also be submitted directly to Mr. Zhang.

Your application documents should definitely include: **Short resume** (including the **grade** point average of all **degrees** and subjects as well as **grades** of all final theses); **Certificates** of all university degrees; **Transcript of Records** with a detailed grade overview of all courses; If applicable, **certificates from internships**; All documents in German or English.

Unfortunately, application costs cannot be refunded. The application documents will be destroyed after the selection process has been completed in compliance with the legal provisions. Please note our information on data protection in the application process under https://www.tu-clausthal.de/universitaet/karriere-ausbildung/stellenangebote/hinweise-zum-datenschutz-im-bewerbungsverfahren.