

The team of professor Prof. Dr. Marie-Christine Jakobs is part of the chair for Software and Computational Systems Lab at the institute of computer science of the LMU Munich. Our research focuses on formal methods to automatically verify software with respect to safety properties. Current research topics are reverification of modified programs, cooperative verification, automatic test-case generation, functional equivalence checking, runtime verification and validation of verification results.

We are looking for a

Research assistant (w/m/d) for reverification of modified programs

Salary TVL-13 (100%) initially for up to 3 years for PhD students and up to 2 years for postdocs.

The position is funded by the DFG project ReVeriX. As a researcher in this project, you will work on innovative research questions with respect to efficient and flexible reverification of modified programs. The developed reverification approaches should safeguard modified programs against property violations. To achieve the desired efficiency and flexibility the approaches should exchange verification results between verifiers as well as restrict reverification to relevant modified paths.

Your tasks

- Development (including soundness proofs) of reverification approaches that exchange results between verifiers or restrict reverification to relevant, modified paths
- Implementing and practically evaluating the developed approaches
- Presentation and publication of relevant research outcomes (including software artifacts) at international conferences and journals
- Co-supervision of student topics in the area of the project

Your qualification

- Very good master or PhD degree in computer science
- Interest in working on complex, scientific research question in the area of automatically reverifying modified programs
- Fundamental knowledge about and practical experience (application, implementation) with analysis techniques for (automatic) software verification (e.g., software model checkin, BMC, k-induction, CEGAR) or program analysis (e.g., dataflow analysis, abstract interpretation, program dependency graphs)
- Good programming skills in Java
- Fluent in spoken and written English
- Independent, organized, reliable, and goal-oriented working
- Team orientation and ability to successfully collaborate with other team members

Also possible in a part-time capacity.

People with disabilities who are equally as qualified as other applicants will receive preferential treatment.

Contact

Wir looking forward to your application. Please send your application (including cover letter, CV, certificates and transcripts of records of all degrees) via e-mail to [professor Jakobs](mailto:professor.jakobs).

If you have any questions, do not hesitate to contact [professor Jakobs](mailto:professor.jakobs).