

The University of Passau owes its strong visibility and good reputation to excellent research, innovative teaching and its tight-knit international academic networks. Some 12,000 students from 100 countries and more than 1,300 staff study and work on our University campus, which is located a stone's throw from the historical Old Town of Passau and combines state-of-the-art technical infrastructure with award-winning architecture. Internationally successful high-tech companies and a vibrant start-up scene, coupled with a rich culture and Lower Bavarian traditions, give Passau and the surrounding area a special appeal that makes it a great place to live and work.

The **Chair of Computer Engineering** (Professor Stefan Katzenbeisser) at the University of Passau is seeking a

Graduate Research Assistant

to start on 1 July 2022. The position is to be filled as soon as possible for 3 years with the possibility of extension. Remuneration will be at pay grade E13 TV-L of the German public-sector collective agreement; the salary step depends on the candidate's qualifications and experience.

The **University of Passau** has established a strategic research collaboration agreement with **Honda Research Institute Europe GmbH (HRI-EU)** for the purpose of a collaborative research project entitled "Scalable privacy-preserving secure multi-party computation". HRI-EU is a part of Honda that researches future technologies advancing cooperative intelligence. Intelligent systems will shape our future in many ways, ranging from autonomous and accident-free driving to personal robots, and from smart design and manufacturing to the privacy-preserving use of data. Honda sets great store by protecting its customers' privacy, as the company aims to be a reliable and trustworthy partner to its customers. HRI-EU works together with academic and innovative partners in Europe and beyond, with the involved PhD and Master's students being part of the vibrant HRI European Graduate Network.

The agreement will support the funding of a doctoral candidate in cryptography, who will work for the research project under the supervision of **Professor Stefan Katzenbeisser**, Chair of Computer Engineering. The Computer Engineering Lab focuses on the design and analysis of security infrastructures, covering the entire spectrum from the development of security anchors for embedded systems to the design of security concepts for critical infrastructures.

In this doctoral project, privacy-preserving mechanisms for multiparty computation (MPC) are developed and evaluated for the relevant use-case of computation over huge telematics data sets in a privacy-preserving manner. You will conduct research and publish/present the results at top venues for research in cryptography and IT security.

Topics of particular interest include (but are not limited to):

- Conduct research on state-of-the-art multiparty computation (MPC) protocols
- Holistic MPC system optimisation and support for time-series data
- Privacy-preserving data cleansing and data poisoning prevention
- Efficiency-enhancing data pre-processing
- Design and implementation of building blocks for utilising privacy-preserving cryptographic techniques in cloud computing and automotive applications

Your profile

- Master's degree (or equivalent) or doctorate/PhD in computer science, information security, mathematics or a related subject; we welcome applications from students who have not yet completed their degree studies or doctoral research, but are close to doing so
- Knowledge and understanding of privacy-oriented cryptography (theoretical and/or applied)
- Fluency in written and spoken English
- German language skills would be desirable but are not a requirement

The University of Passau wishes to increase the proportion of women in science and, therefore, expressly encourages women to apply for the position. Job-sharing arrangements may be possible, depending on the number of suitable candidates willing to work part-time.

This position is suitable for people with disabilities: registered disabled persons are given preference over non-disabled applicants who do not otherwise have statutory preferential status if their overall personal aptitudes, skills and qualifications are equal.

The application deadline for this vacancy is **31 May 2022**. We would still like to hear from you even if you have not yet completed your degree studies or doctoral research by that date.

To apply, please send your full application, including all appropriate supporting documents, to Ektor.Arzoglou@uni-passau.de. We only accept applications by e-mail. Your entire application should be in the form of **a single PDF attachment**. Although it is sent by e-mail, please remember that your application should be of the same standard in terms of form and style as a paper-based job application.

Once the application process has been completed, we will retain your application on file for six months before deleting it from our computer systems.

Please visit www.uni-passau.de/en/university/current-vacancies for our data privacy statement.

Further information about the Chair: <https://www.fim.uni-passau.de/en/computer-engineering>