TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At the **Faculty of Computer Science, Institute of Computer Engineering**, the **Chair of Adaptive Dynamic Systems** offers for the Cluster of Excellence **Centre for Tactile Internet with Human-in-the-Loop (CeTI)** a project position as

Research Associate in Computer Engineering (m/f/x)
(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **August 1, 2024.** The position is limited until December 31, 2025 with the option of extension. The period of employment is governed by § 2 (2) Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG).

The Chair of Adaptive Dynamic Systems conducts research in the fields of reconfigurable computing, domain-specific multi- and manycore architectures, networks-on-chip (NoCs), methods and algorithms for application parallelization, simulators and virtual platforms for application- and architecture exploration, hardware/software co-design and operating/runtime systems for adaptive computing. Typical application domains are e.g. signal-/image processing, machine learning and control algorithms for robotics.

Tasks:
- research and development in designing, programming and adapting existing embedded operating systems to support reconfigurable computing architectures, such as reconfigurable processors and field programmable gate arrays (FPGAs); The operating system shall control the hardware adaptations of the reconfigurable computer architecture by means of enabling and disabling blocks, dynamic reconfiguration, and dynamic adjustment of the clock rate and voltage supply in order to achieve application requirements such as real-time, energy-efficiency, reliability and/or security.
- evaluation with application scenarios from robotics, e.g. control algorithms, machine learning
- contributing, administrating and reporting in (inter-)national research and development projects;
- presenting results at international conferences;
- close cooperation with academic and industrial cooperation partners.

Requirements:
- university degree (M.Sc., Diploma) in either computer engineering, computer science, electrical engineering or any related natural science;
- very good programming skills in C, C++;
- very good command of English (written and spoken) and German (optional);

- high self-motivation, commitment, and flexibility as well as the ability to work in and contribute to an international team.
- experience in one or more of the following areas is desired: operating systems, embedded systems, field programmable gate arrays (FPGAs), computer architecture (e.g. RISC-V), hardware description languages (e.g. VHDL or Verilog), robotics (e.g. Robot Operating System (ROS).

We offer you an excellent working environment in an international team with many career development possibilities.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application with the usual documents, including a CV, a brief proposal describing their research experience and interests and an official transcript of coursework and grades, by **June 3, 2024** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file using the **reference number** "**ADS_24-01"** to **ads@mailbox.tu-dresden.de** or to: **TU Dresden, Fakultät Informatik, Institut für Technische Informatik, Professur für Adaptive Dynamische Systeme, Frau Prof. Dr.-Ing. Diana Göhringer, Helmholtzstr. 10, 01069 Dresden, Germany**. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.