Technische Universität Dresden

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 Electrical and Computer Engineering, Institute of Communication Technology,** the **Deutsche Telekom Chair of Communication Networks** offers a position as

Research Associate (m/f/x)

(subject to personal qualification, employees are remunerated according to salary group E 13 TV-L)

starting **as soon as possible.** The position is limited until June 30, 2027. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG).

Tasks: The position involves research on energy-efficient agentic AI for computer and communication networks. The candidate will contribute to the design, implementation, and evaluation of real testbeds and emulators to validate the developed concepts. The research will address novel methods for defining agent skills, applying Retrieval-Augmented Generation (RAG), and integrating agentic AI with communication and computing network infrastructures. A central objective is to reduce the energy footprint through efficient model design, inference optimization, and resource-aware deployment strategies. The work will further investigate novel computing platforms, including spiking neural networks, neuromorphic architectures, and analog computing, as potential substrates for energy-efficient AI inference and resource-aware components of low-power agentic AI systems. The philosophy of our team is "Research that matters." Therefore, you are expected not only to work on theory but also to program and deploy your own research in our testbeds using state-of-the-art software libraries and the results of cooperative research with other team members. Your work will be beneficial not only to our academic partners but also to many industry members involved in projects with our team. The position also includes supervising student work related to the research topics. The work results will be published at international conferences and in recognized journals.

Requirements:

- university degree (Diploma/Master) in Electrical Engineering, Telecommunications, Information Systems, Computer Science, or similar.
- programming skills in C++, Python, or Golang
- Knowledge in agentic AI concepts, agent skill definition, Retrieval-Augmented Generation (RAG), communication networks, and computational network concepts is a plus.

We offer:

- the opportunity for engaging and independent work within a flat hierarchy, in an open-minded team and supportive atmosphere
- flexible working hours
- 30 days of vacation per year (based on a 5-day workweek)
- extensive opportunities for professional development and continuing education
- health care and sports programs offered by TUD
- a discounted job ticket (also available as a Deutschlandticket)
- participation in the supplementary pension scheme for employees in the public sector via VBL (Federal and State Government Employees Retirement Fund)

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The university is a family-friendly university. 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.

Application: Please submit your detailed application with the usual documents by **June 19, 2026** (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 to **juan.cabrera@tu-dresden.de** or to:

TU Dresden, Deutsche Telekom Professur für Kommunikationsnetze, Dr. Juan Cabrera, 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.

TUD is a founding partner in the DRESDEN-concept alliance.

DRESDEN concept

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.