Dresden University of Technology

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 under the project **Next Generation AI Computing** 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:

- scientific research on novel AI hardware and corresponding software concepts to evaluate the tradeoffs in the energy consumption, predictability and reliability of AI-based applications, and also to fulfil the legal implementation of AI technologies
- research on of fundamental theoretical understanding of the limitations of current hardware platforms for problem classes of AI-based future technologies in communication
- Analysis and development of mathematical models of innovative hardware for AI applications, in particular, analog computing and spiking neural networks
- research into the optimal interaction of digital and neuromorphic hardware
- Development of demonstrators
- involvement of industry for test runs and application of the novel AI computing developed to specialized problems

Requirements:

- university degree (diploma/master) in electrical engineering, telecommunications, information systems, computer science or similar
- knowledge of information theory, communication networks, machine learning and AI
- ability and willingness to work independently, conceptually and scientifically in a team
- proficiency in the English language, both spoken and written

We offer:

- an international and interdisciplinary team
- an open and innovative working atmosphere
- the opportunity to actively shape your work environment and contribute your own ideas
- flexible working hours and support in balancing work and family life
- comprehensive training and professional development opportunities
- a job ticket (public transportation pass)

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. 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 by **December 2, 2025** (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 **isabel.delkus@tu-dresden.de** or to:

TU Dresden, Deutsche Telekom Professur für Kommunikationsnetze, Frau Isabel Delkus, 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.