Technische Universität Dresden (TUD), 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 **Vodafone Chair of Mobile Communications Systems** 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 at the **earliest possible date**. The position is limited until August 14, 2025. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG). Balancing family and career is an important issue. The position is generally suitable for candidates seeking part-time employment. Please indicate your request in your application. The position offers the chance to obtain further academic qualification.

The Vodafone Chair of Mobile Communications Systems offers the opportunity to help shape the development of future mobile communication systems in a prosperous and dynamic environment, to gain valuable project experience and to establish and deepen contacts with innovative companies. Further information on the Vodafone Chair can be found at https://mns.ifn.et.tu-dresden.de/.

Tasks: You will conduct research in the field of digital system design for wireless communications technology **on one** of the following topics:

1. Hardware accelerator design for extremely high data rate wireless modems
2. Processor design for software defined radio implementation, e.g. jointly within a strategic EU initiative for trustworthy 6G hardware platforms (jointly with all “big names” of EU’s industry), RISC-V/Cadence/Synopsys based and beyond – including new trusted core design.
3. Hardware accelerator design for AI engines, e.g. for automated driving in cooperation with German car manufacturers
4. Processor design for customized AI acceleration, RISC-V/Cadence/Synopsys based and beyond
5. Network-on-chip for multi-processor-system-on-chip (MPSoC) platforms for modem and AI implementation.

Requirements: above-average university degree in the field of computer science, electrical engineering, communications engineering or information systems engineering, physics, mathematics or similar; profound knowledge of wireless communications, communications engineering, and digital signal processing; independent, goal- and solution-oriented approach; integrative and cooperative behavior with very good communication and social skills; confident command of written and spoken English. Mathematical skills, high interest in the areas of modelling and simulation of computing systems for wireless and/or digital signal processing; programming experience with Verilog, VHDL, Matlab, Python or C++, or knowledge of hardware implementation are advantageous.

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 comprehensive application including the usual documents under the **job ID "w23-023"** by **March 10, 2023** (stamped arrival date of the university central mail service applies), preferably by sending it as a single pdf-document to **jobs@ifn.et.tu-dresden.de (**Please note: We are currently not able to receive electronically signed and encrypted data) or to: **TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Nachrichtentechnik, Vodafone Stiftungsprofessur für Mobile Nachrichtensysteme, Herrn Prof. Gerhard Fettweis, 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.

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.