

TUD Dresden University of Technology, as a University of Excellence, is one of the leading and most dynamic research institutions in the country.

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/>. The research at the Vodafone Chair runs within the scope of **DFG, EU and BMBF projects** as well as within the framework of an **ERC Synergy Grant**.

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 two positions 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 positions are limited to 18 months with the option of extension. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The positions offer the chance to obtain further academic qualification.

**Tasks:** You will conduct research in the field of wireless communications and radio sensing technologies on **one** of the following topics:

- physical layer design for ultra energy-efficient wireless spike-based sensor node communication
- digital baseband design for energy-efficient terabit/sec wireless communications using receivers with oversampled 1-bit quantization
- joint communication and sensing, with a focus on the physical layer, including waveform design, signal processing, and applications such as localization and environmental awareness
- flexible radio design, covering massive/extreme MIMO and energy-efficient transceiver reconfiguration
- HW architectures for wireless signal processing, including processor and SoC design
- Algorithm-HW-Codesign for wireless signal processing
- investigate novel hybrid imaging and coded excitation approaches for medical ultrasound
- reliable and resilient communications for critical applications in, e.g., industry and medicine
- adaptive and predictive Radio Resource Management, including ML approaches and spectrum monitoring

All tasks are carried out in cooperation with partners from industry and science. The field of activity also includes the project-related supervision of student work related to the research topics. The results of the work are to be published at international conferences and in distinguished journals.

**Requirements:** an above-average university degree in the field of computer science, electrical engineering, communications engineering or information systems engineering; 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.

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 **August 1, 2025** (stamped arrival date of the university central mail service of TUD applies) stating the **Job-ID: w25-170** to [jobs@ifn.et.tu-dresden.de](mailto:jobs@ifn.et.tu-dresden.de) (Please note: We are currently not able to receive electronically signed and encrypted data) or to: **TU Dresden, 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.

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**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>.