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 **Chair of Information Theory and Machine Learning,** invites applications for a position as

<div align="center">

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

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starting **as soon as possible**. The position is limited to three years with the option of extension. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). The position offers the chance to obtain further academic qualification (e.g. PhD / habilitation thesis).

Tasks: As part of the DFG Priority Program "Resilient Worlds", the research activities are in the area of resilience and trustworthiness of future communication systems with a particular focus on information and communication theory, automated verification of resilience and trustworthiness, resilience-by-design, and security and privacy of information systems. Your tasks include:

- Development of information and coding theory for wireless communication systems under jamming and adversarial attacks
- Analysis of automated verification of resilience and trustworthiness based on Turing machines as well as neuromorphic or analog hardware concepts
- Development of novel concepts that realize resilience and trustworthiness in future communication systems directly at the physical layer; so-called resilience-by-design

All tasks are carried out in cooperation with partners from the DFG Priority Program "Resilient Worlds", in particular with the Chair of Theoretical Information Technology, Technische Universität München. The field of activity also includes the supervision of student work related to the research topics. The results of the work are to be published at international conferences and in recognized journals.

Requirements: above-average university and, if applicable, PhD degree in the field of electrical engineering, communications engineering or information systems engineering, computer science, mathematics, physics or similar; profound knowledge of wireless communications, communications engineering, information theory; independent, goal- and solution-oriented approach; confident command of written and spoken English. Knowledge of programming languages such as Matlab, Python, C++, or TensorFlow is a plus.

More details about the DFG Priority Program "Resilient Worlds" are given under https://www.resilient-worlds.org/.

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 by **April 3, 2023** (stamped arrival date of the university central mail service applies), preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to **rafael.schaefer@tu-dresden.de** to: **TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Nachrichtentechnik, Professur für Informationstheorie und maschinelles Lernen, Herrn Prof. Dr. Rafael Schaefer, 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.