

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**, the **Junior Professorship in Social Affective Touch** (Institute of Acoustics and Speech Communication) and the **Junior Professorship in Quantum Communication** (Institute of Communication Technology) offer a joint project position as

**Research Associate (m/f/x)**

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

starting **June 1, 2024**. The position is limited until December 31, 2025. The period of employment is governed by § 2 (2) Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG).

**Tasks:** The successful applicant will work together with an interdisciplinary and international team investigating the topic of copresence in social interactions at a distance. In this context, the problem of precise and reliable network synchronization becomes pivotal to ensure a natural social interaction via the communication network. Technically this is realized via quantum network synchronization. Empirical work will include online questionnaires, lab-based interventions making use of a combination of virtual reality, psychophysics, subjective reports and neuroimaging (e.g. fNIRS). The project will make use of state of the art affective haptic technologies and hyperscanning to identify optimal criteria for remote social interactions, with multimodal measures of interpersonal synchrony and coupling. This results will also give guidelines on how to design the quantum synchronization protocols for enabling copresence in future 6G-quantum networks. Successful results will be published in the form of journal articles and conference proceedings. Significant findings will be reported in books and monographs.

**Requirements:**

- a university and PhD degree in psychology or cognitive neuroscience,
- previous experience in fNIRS or other neuroimaging technique, previous experience implementing hyperscanning
- experience of independently carrying out and publishing empirical research,
- good knowledge of experimental design, statistics and data analysis,
- a strong command of computer programming (R, Python, Matlab) is highly desirable.
- a strong sense of leadership and initiative, an interest in interdisciplinary projects.
- Knowledge of German language is not mandatory.

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 detailed application with the usual documents by **May 7, 2024** (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 [kseniia.lemesheva@tu-dresden.de](mailto:kseniia.lemesheva@tu-dresden.de) or to: **TU Dresden, Fakultät Elektrotechnik und Informationstechnik, Institut für Nachrichtentechnik, Juniorprofessur für Quanten-Kommunikationssysteme, Herrn Prof. Dr.-Ing. Riccardo Bassoli, 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>.