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 Cluster of Excellence ”Physics of Life“ (PoL), the Heisenberg Chair of mechanics of active biomaterials (Prof. Dr. Elisabeth Fischer-Friedrich) offers a position as

**Research Associate / Postdoc (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 initially limited to 24 months, with the option of extension and the chance to obtain further academic qualification. 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.

**Tasks:** scientific research activities within the Heisenberg Chair of mechanics of active biomaterials of Prof. Elisabeth Fischer-Friedrich with the following research topics: mainly experimental examination of the pattern formation and viscoelastic dynamics of the cell cortex. The underlying goal is to investigate the mechanisms behind emergent patterns in the cortical biopolymer shell of animal cells with the goal to better understand cellular shape regulation in tissues. Methods include atomic force microscopy, confocal fluorescence microscopy, cell culture and hydrodynamics of active materials. Furthermore: analysis of experimental data with custom-made computer programs, writing of scientific manuscripts for publication in the relevant periodicals; conducting detailed literature searches; writing regular interim reports; participation in professional conferences and presentation of the research work of the laboratory and its projects; support of the institute for applications for third-party funding.

**Requirements:**

- university and - if applicable - PhD degree in physics, applied mathematics or related fields,
- strong interest in working in an interdisciplinary environment at the interface of physics, and cell biology,
- excellent communication and presentation skills in English,
- experience with atomic force microscopy, partial differential equations, hydrodynamics, elasticity theory, programming and image analysis.
- Experience with cell culture, light microscopy and atomic force microscopy is desirable.

The Chair ([https://physics-of-life.tu-dresden.de/research/core-groups/fischer-friedrich](https://physics-of-life.tu-dresden.de/research/core-groups/fischer-friedrich)) seeks an independent, passionate, and motivated postdoc.

**What we offer:** We offer the opportunity to shape an exciting research project at the interface of cell biology, biophysics and medicine, while developing your academic or professional career. You will be imbedded within the highly interactive, and interdisciplinary research environment of PoL and the
wider Dresden Campus, which includes other high-quality scientific institutions. You will be exposed to world-class research on diverse topics through regular scientific seminars and occasional retreats. You will have the possibility to acquire project management skills and team leading skills. Employment conditions include a comprehensive package with full social benefits. Dresden offers a high-quality of life with a relatively low cost-of-living.

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 complete applications (letter of motivation, CV, and contact details for 3 references) by October 06, 2023 (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies) by sending it as a single pdf-file via the SecureMail Portal https://securemail.tu-dresden.de to diana.stoehr@tu-dresden.de with the subject “Postdoc in Viscoelastic dynamics of the Cortex” or to: TU Dresden, Exzellenzcluster "Physik des Lebens", z. Hdn. Frau Prof. Elisabeth Fischer-Friedrich, Arnoldstrasse 18, 01307 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.