

Technische Universität Dresden - Cluster of Excellence "Physics of Life" (PoL), Heisenberg-Chair of mechanics of active biomaterials



The Cluster of Excellence "Physics of Life" (PoL, <https://physics-of-life.tu-dresden.de/en>) is an interdisciplinary research center at TUD Dresden University of Technology dedicated to quantitative biology and biophysics. It is funded by the German Research Foundation (DFG) and offers a wide range of support structures, including state-of-the-art light microscopy and advanced bio-image data science facilities in the outstanding Dresden environment. 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.

Research Associate / PostDoc (m/f/x)

(subject to personal qualification, employees are remunerated according to salary group E 13 TV-L) 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) starting October 1, 2026. The position is initially limited until January 31, 2028 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.

City: Dresden; Starting date (earliest): At the earliest possible; Duration: zunächst bis zum 31.01.2028 mit der Option auf Verlängerung; Remuneration: bei Vorliegen der persönlichen Voraussetzungen E 13 TV-L; Reference number: 2026-postdoc-organelle-fluctuations; Closing date: 24/08/26

Tasks

scientific research within the framework of the Heisenberg Professorship for Mechanics of Active Biomaterials with the following research focus:

- experimental investigation of active fluctuations of cell organelles and their relationship with cell proliferation, cellular metabolism and mechanical force transmission between cell organelles and cytoskeleton
- the aim is to identify the biophysical and molecular mechanisms that generate and regulate movements of cell organelles in living cells, as well as to examine the extent to which such fluctuations can be used as predictive parameters for cellular states
- the methods include quantitative live cell fluorescence microscopy, cell culture, molecular force sensors, targeted pharmacological and optogenetic perturbations, as well as quantitative image analysis and data-driven evaluation of large image datasets
- evaluation of experimental data with tailor-made computer programs
- writing scientific manuscripts for publication in relevant journals
- conducting extensive 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 in applying for third-party funding

Requirements

- university degree and PhD degree in biology, biophysics, biotechnology or a related field
- interest in working in an interdisciplinary environment at the interface of cell biology and physics
- experience with cell culture, light microscopy and analytical methods of molecular biology
- experience with programming and quantitative image analysis
- excellent communication and presentation skills in English

What we offer

- the opportunity to design an exciting research project at the interface of cell biology, biophysics and medicine while advancing your academic or professional career
- they will be integrated into the highly interactive and interdisciplinary research environment of PoL and the entire Dresden campus, which also includes other top-class scientific institutions
- you will have numerous opportunities to work with our strong local and international partners
- through regular scientific seminars and occasional retreats, you will gain insight into world-class research on various topics
- you will have the opportunity to acquire project management, team leadership and teaching skills
- you will be supported in applying for scholarships and your professional development
- flexible arrangements for work hours to support a good work-life balance
- 30 days of vacation per year (based on a 5-day workweek)
- extensive opportunities for professional development and continuing education
- health care and sports programs offered by TUD
- a discounted job ticket (also available as a Deutschlandticket)
- participation in the supplementary pension scheme for employees in the public sector via VBL (Federal and State Government Employees Retirement Fund)

Application

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The university is a 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.

Application: Please submit your detailed application with a letter of motivation, CV, list of publications and contact details of three reference persons and the subject "2026-postdoc-organelle-fluctuations" by August 24, 2026 (stamped arrival date 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 carolin.weichelt@tu-dresden.de or to:

TU Dresden, Cluster of Excellence "Physics of Life", Carolin Weichelt, Arnoldstr. 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.

TUD is a founding partner of the research alliance DRESDEN-concept e.V.

Note on data protection: What rights you have and for what purpose your data is processed as well as further information on data protection have been provided for you on the following website:

<https://tu-dresden.de/karriere/datenschutzhinweis>.

More information at <https://stellenticket.de/205743/UP/>

Offer visible until 24/08/26

