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 Junior Research Group Data-Driven Modeling of Living Matter (Dr. Xingbo Yang) offers a project 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 until December 31, 2025, with the option of extension in follow-up projects. The period of employment is governed by § 2 (2) the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The Cluster of Excellence PoL ([https://physics-of-life.tu-dresden.de/en](https://physics-of-life.tu-dresden.de/en)) is an interdisciplinary research center at TUD 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.

**Tasks:** Dr. Xingbo Yangs Junior Research Group ([https://physics-of-life.tu-dresden.de/research/core-groups/yang](https://physics-of-life.tu-dresden.de/research/core-groups/yang)) seeks an independent, passionate, and motivated Postdoc to take on a novel and highly interdisciplinary project on the bioenergetics of spindle self-organization. This project is built upon a new metabolic imaging technique developed in the Dr. Xingbo Yangs Junior Research Group to measure mitochondrial metabolic fluxes in living cells with single and even subcellular resolution. The candidate will apply this technique to measure spatiotemporal metabolic fluxes in mouse oocytes and to explore the quantitative relation between metabolic variations and spindle self-organization. The goal of the project is to test 1) how perturbations in mitochondrial metabolic fluxes and ATP/ADP levels impact microtubule and motor dynamics in meiotic spindle and 2) how do metabolically induced defects in spindle dynamics result in chromosome segregation errors in meiosis. Methods include live cell metabolic and spindle imaging, genetic/biochemical perturbations, quantitative image analysis, and biophysical modeling.

**Requirements:**
- university degree and a PhD degree in biology, biochemistry, physics or related fields
- experience with mouse oocyte is an advantage
- strong interest in working in an interdisciplinary environment
- excellent communication and presentation skills in English.
- Experience with metabolism or spindle research is desirable.

**What we offer:** We offer the opportunity to shape a novel and exciting research project at the interface of biology, biochemistry and physics, 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 presented with many opportunities for collaboration with our strong local and international collaborators. 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, team leading skills, and teaching skills. You will be supported for fellowship application and career development. 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 detailed application (letter of motivation, CV with publication list, and contact details for 3 referees) with the usual documents by December 20, 2023 (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 our administrative assistant Susann Gebauer with the subject “2023-postdoc-spindle-metabolism” to susann.gebauer@tu-dresden.de or to: TU Dresden, Exzellenzcluster "Physik des Lebens", z. Hd. Susann Gebauer, Arnoldstr. 18, 01307 Dresden, Germany. Evaluation of the application will start immediately and the position will remain open until filled. 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.