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 Mathematics, the Institute of Numerical Mathematics offers within the DFG Research Project “Beyond uni-directional hierarchical wrinkle formation” 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 April 1, 2024. The position is limited until January 31, 2026. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz-WissZeitVG). Balancing family and career is an important issue. The position is generally suitable for candidates seeking part-time employment. Please indicate your request in your application.

The project develops numerical simulations of wrinkle formation on coated substrates. It is a joint project of Prof. Oliver Sander (Faculty of Mathematics) with Prof. Andreas Fery (Leibniz Institute for Polymer Research Dresden). The model combines finite strain elastoplasticity and Cosserat shell models (DOI:10.1016/j.cma.2023.116309), which leads to a fascinating combination of numerical mathematics, differential geometry, and variational analysis. The close cooperation between researchers in simulation technology and experimental physics gives an excellent chance for interdisciplinary research.

Tasks: The successful candidate will conduct numerical analysis for mixed-dimensional finite element models of surface wrinkling. They will implement the models as part of an existing finite element software. In addition, they will participate in the institute's teaching activities on Bachelor and Master's level (Lehrverpflichtung gem. Sächsischer Dienstaufgabenverordnung an Hochschulen – DAVOHS) with a reduced teaching load. They will also take on a small amount of administrative work at the institute.

Requirements: university degree and if applicable, PhD degree in mathematics or a related field; a sound knowledge of the theory and application of finite element methods; interest in computational solid mechanics; experience in programming (preferably C++ or Python); language skills in English or German; interest in the interaction with other researchers and in the pursuit of own ideas is highly welcome.

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 **January 11, 2024** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TU Dresden SecureMail Portal [https://securemail.tu-dresden.de](https://securemail.tu-dresden.de) by sending it as a single pdf file to [oliver.sander@tu-dresden.de](mailto:oliver.sander@tu-dresden.de) or to: **TU Dresden, Fakultät Mathematik, Institut für Numerische Mathematik, z. Hd. Herrn Prof. Dr. Oliver Sander, 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](https://tu-dresden.de/karriere/datenschutzhinweis).