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 Scientific Computing and the Institute of Numerical Mathematics offer within the framework of the DFG Research Unit “Vector- and Tensor-Valued Surface PDEs” a joint position as

Research Associate / PhD Student (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 comprises 75% of the full-time weekly hours and is limited to 3 years. 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 (usually PhD).

The topic of the research unit is modeling, analysis, and simulation of vector- and tensor-valued partial differential equations on surfaces. The subproject associated to this position specifically deals with finite element discretization schemes that incorporate symmetry, length, and tangential constraints. The focus is on the numerical analysis of the developed methods as well as simulation in the area of surface liquid crystal models. Dr. Hanne Hardering (Institute of Numerical Mathematics) and Dr. Simon Praetorius (Institute of Scientific Computing) are the PIs of this subproject. As a member of two mathematical institutes of TUD as well as the larger research unit the successful candidate has the chance to participate in a variety of joint seminars, workshops, and other activities. For examples and more details see https://tud.link/008g.

Tasks: The successful candidate will conduct numerical analysis and implement simulations based on finite element schemes for vector fields on surfaces that are subject to additional geometric constraints.

Requirements: university degree in mathematics; a sound knowledge of the theory and application of finite element methods; experience in programming (preferably C++ or python); language skills in English; interest in 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 5, 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](https://securemail.tu-dresden.de) by sending it as a single pdf file to [simon.praetorius@tu-dresden.de](mailto:simon.praetorius@tu-dresden.de) or to **TU Dresden, Fakultät Mathematik, Institut für Wissenschaftliches Rechnen, z. Hd. Herrn Dr. Simon Praetorius, 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).