

At the TU Bergakademie Freiberg, Faculty of Mathematics and Computer Science, Institute of Numerical Analysis and Optimization, is an open position of a

**PhD candidate / Doctoral researcher (m/f/d) – reference number 8-E/2024**

to be filled from April 1, 2024.

**Pay grade:** according to German pay grade E13 TV-L  
**Hours:** 0,75 FTE (30 hours/week; part-time possible)  
**Contract type:** 3 years

This joint project between TU Freiberg and TU Dresden is concerned with the development of mathematical models and numerical simulations of biological cells to answer fundamental questions on the organization of life.

**Job description:**

- motivation to learn new numerical methods, supported by the team of Prof. Aland
- development of new mathematical models describing biological cells as active viscoelastic surfaces
- development of numerical discretization for the interaction of these surfaces with fluid flow
- implementation in present finite element code
- scientific exchange with biophysicists to analyze numerical simulations results
- participation in scientific publications and conference presentations

**What you can expect from us:**

- opportunity to obtain a PhD, integrated in the national DFG Research Unit „Vector- and Tensor-Valued Surface PDEs“
- Working at a family-friendly university with flexible working hours
- Remuneration according to the provisions of the collective bargaining agreement for the public service of the German federal states (Länder) in accordance with personal requirements
- Attractive fringe benefits
- Training by long-term employees as well as participation in further training opportunities
- an international and highly dynamic workgroup with excellent regional and international collaboration partners and openness to new approaches and ideas
- training and assistance by experienced colleagues of the AlandLab ([www.alandlab.de](http://www.alandlab.de))
- participation and support for research visits in attractive places world-wide

**What we expect from you:**

- diploma or master's degree in Mathematics, Computational Engineering Science, Physics, or a related field with a competitive grade
- sound knowledge in numerical methods for differential equations, advanced programming skills
- ability to work in a team, communication skills, personal commitment
- high motivation and interest in using numerical simulations for real-world applications
- Very good knowledge of English, written and spoken

**For further information please contact Prof. Dr. Sebastian Aland (supervisor)  
phone: +49 3731 392322, E-Mail: [sebastian.aland@math.tu-freiberg.de](mailto:sebastian.aland@math.tu-freiberg.de).**

The applicant (m/f/d) must meet the hiring requirements for fixed-term employment contracts according to the WissZeitVG. Applicants with disabilities will receive preferential consideration, provided they possess equal qualifications. For consideration, we ask you to submit proof of your disabled status together with your application documents. TU Bergakademie is committed to increasing the number of women in teaching and research positions, hence qualified female candidates are especially encouraged to apply.

Written applications, including a CV, motivation letter and copies of all relevant qualifications documents (certificates, diplomas) as well as and a summary of the thesis, should be submitted by **February 11, 2024** stating **reference number (8-E/2024)** to the following address:

**TU Bergakademie Freiberg, Dezernat für Personalangelegenheiten, 09596 Freiberg or e-mail:  
[bewerbungen@tu-freiberg.de](mailto:bewerbungen@tu-freiberg.de)**

Your application documents will not be returned, please only submit copies. TU Bergakademie Freiberg is always looking for scientific personnel from various disciplines. Further information can be found at <http://tu-freiberg.de>.

