

## Scientific Staff

Position number 67-E/2026

Faculty of Mathematics and Computer Science  
Institute of Numerical Analysis and Optimization

Working hours: 1.0 FTE (part-time possible)

Salary: E13 TV-L

Time limit: December 31<sup>st</sup>, 2028, extension possible

Start: flexible start from the August 1<sup>st</sup> 2026

The group of numerical mathematics (Prof. Dr. Sebastian Aland) is looking for talented PhD students or PostDocs. In our research, we develop mathematical models for the complex interplay of fluid and elastic materials. We combine methods from mathematics, physics and high-performance computing to numerically simulate the behavior of such systems with a focus on understanding fundamental principles of life.

This joint project between TU Freiberg and HTW Dresden is concerned with the development of mathematical models and numerical simulations of elastic surfaces in fluid flows, aiming to better understand their role in biological processes.

### Main Tasks:

- development of new mathematical models to couple elastic sheets to fluid flows and possibly liquid-liquid phase separation
- discretization and implementation in finite element code
- numerical simulation studies performed in collaboration with experimental partners to systematically explore fundamental biological questions

### What we expect from you:

- diploma or master's degree in Mathematics, Computational Engineering Science, Physics, or a related field with a highly competitive grade
- sound knowledge of numerical discretization 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

### What you can expect from us:

- opportunity to obtain a PhD, integrated in the Dresden International Graduate School for Interdisciplinary Life Sciences (<https://www.digs-ils.phd/>)
- an international and dynamic research group with excellent regional and international collaboration partners and openness to new approaches and ideas
- training and assistance by experienced colleagues (see [www.alandlab.de](http://www.alandlab.de))
- highly competitive salary including social and health care benefits, flexible working hours
- participation and support for travels to conferences and workshops

Applicants (m/f/d) must meet the employment requirements for fixed-term employment contracts in accordance with the WissZeitVG (German Academic Fixed-Term Contract Act).

### Your application:

Please send your application with the usual documents (CV, certificates, track record including grades), quoting the reference number (67-E/2026)

**by May 4, 2026,**  
**preferably by email to:**

[bewerbungen@tu-freiberg.de](mailto:bewerbungen@tu-freiberg.de)

or by post:

**TU Bergakademie Freiberg**  
**Dezernat**  
**Personalangelegenheiten**  
**09596 Freiberg**



**For further information, please contact:**

**Prof. Dr. Sebastian Aland**  
**(supervisor)**

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Severely disabled persons or persons of equal status (m/f/d) will be given preferential consideration if they have the same qualifications, performance, and abilities. Please include proof of this. The TU Bergakademie Freiberg specifically promotes the proportion of women and expressly invites qualified.