

Scientific Staff

Position number 137-E/2026

Faculty of Mathematics and Computer Science

Institute of Numerical Analysis and Optimization

Working hours: 0.75 FTE

Time limit: October 31st, 2028, extension possible

Salary: E13 TV-L

Start: November 1st 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.

There are multiple positions available in three newly build young researcher groups. All positions are concerned with the development of mathematical models and numerical simulations of fluid flows interacting with some kind of solid objects. Depending on the research group these objects can be either growing cancer tumors, biofilms, or swimming robots.

Main Tasks:

- development of new mathematical models to couple fluid flows, solid objects, and possibly growth (in case of cancer tumors or biofilms).
- 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:

- 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)
- 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 **(137-E/2026)**

by August 4, 2026,
preferably by email to:

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.