

Hier
entsteht
Zukunft!



UNIVERSITÄT
DES
SAARLANDES

Foto: Oliver Dietze

Saarland University is a campus university that is internationally recognized for its strong research programmes. Fostering young academic talent and creating ideal conditions for teaching and research are a core part of the university's mission. As part of the University of the Greater Region, Saarland University enables students and staff to share and exchange knowledge and ideas between disciplines, between universities and across borders. With over 17,000 national and international students, studying more than a hundred different academic disciplines, Saarland University is a diverse and dynamic learning environment. [Saarland University is officially recognized as one of Germany's family-friendly higher-education institutions and with a combined workforce of more than 4,000 it is one of the largest employers in the region.]

The working group "Stochastic Processes in Living Systems" at the Department of Physics is inviting applications for the following position commencing at the earliest opportunity. is inviting applications for the following position commencing at the earliest opportunity.

Doctoral Research Position (m/f/x)

Reference number W2679, salary in accordance with the German TV-L salary scale¹, pay grade: E13 TV- L, duration of employment: 3 years, volume of employment: 50 % of standard working time.

Workplace/Department:

Department of Theoretical Physics

The working group "Stochastic Processes in Living Systems" at the Department of Physics develops stochastic analytical approaches and simulations to enhance the understanding of living active matter and granular systems and to build new frameworks for investigating the statistical physics of out-of-equilibrium systems. In this project, we will investigate the structure and dynamics of cytoskeletal filaments by developing image processing techniques to analyze the experimental results obtained in collaboration with our experimental colleagues at Saarland University. This will be combined by numerical simulations and structural analysis to understand the deformation and mechanical response of cytoskeletal filaments in the presence of molecular motor proteins as active cross-linkers, and to estimate how far the filaments resist against active stresses exerted by molecular motors.

¹ TV-L = collective agreement on remuneration of public sector employees in the German *Länder*

The pay grade assigned to an employee depends on their professional qualifications and the number of years of service. Each pay grade is further subdivided into levels. Entry-level employees with no previous experience will initially be assigned a level 1 rating. After one year at level 1 of the E10 pay grade, an employee will move up to level 2. After a further two years, the employee will move to level 3, etc.

Job requirements and responsibilities:

- Developing image processing tools to identify cytoskeletal filaments in experimental images and reconstruct them.
- Developing a stochastic approach to simulate the form and dynamics of bio-filaments as a result of random binding, unbinding, and motion of motor proteins along filaments.
- Structural analysis of the biopolymer deformation, damage, and breakage in response to external active stresses.
- Active participation in the research activities of the group and collaboration with external partners.
- Publish scientific papers and present results at international conferences.

Your academic qualifications:

- Completed university studies in Physics or Biophysics,
- Language skills (according to GER): fluent english

The successful candidate will also be expected to:

- Previous experience with biotechnology and design of bio-inspired materials is advantageous.
- Previous experience with MATLAB and/or image processing techniques is advantageous.
- Previous experience and strong motivation for interdisciplinary research and collaboration.
- Numerical skills: experience with C++ programming.

What we can offer you:

- A flexible work schedule allowing you to balance work and family, among other things the possibility of teleworking
- Secure and future-oriented employment with attractive conditions
- A broad range of further education and professional development programmes (for example language courses)
- An occupational health management model with numerous attractive options, such as our university sports programme
- Supplementary pension scheme (RZVK)
- Discounted tickets on local public transport services ('Job-Ticket' of the saarVV)

We look forward to receiving your **meaningful online application** (in a PDF file) by **25.06.2025** to **shaebani@lusi.uni-sb.de**. Please include the reference number **W2679** in the subject line of the e-mail.

If you have any **questions**, please contact us for assistance. Your contact:

Frau Bettina Lau
b.lau@mx.uni-saarland.de
Tel.: +49 (0)681 3022748

Pay grade classification is based on the particular details of the position held and the extent to which the applicant meets the requirements of the pay grade within the TV-L salary scale. Part-time employment is generally possible.

If you have obtained a foreign university degree, a proof of the equivalence of this degree with a German degree by the Zentralstelle für ausländisches Bildungswesen (ZAB) is needed before hiring. If necessary, please apply for this in time. You can find more information at <https://www.kmk.org/zeugnisbewertung>.

Unfortunately, neither costs for attending an interview at Saarland University nor costs for any certificate evaluation by the ZAB can be reimbursed in principle.

We welcome applications regardless of gender, nationality, ethnic and social origin, religion/belief, disability, age, and sexual orientation and identity. In accordance with its policy of increasing the proportion of women, the University actively encourages applications from women. Applications from severely disabled persons will be given preferential consideration in the event of equal suitability.

When you submit a job application to Saarland University you will be transmitting personal data. [Please refer to our privacy notice for information on how we collect and process personal data in accordance with Art. 13 of the Datenschutz-Grundverordnung](#). By submitting your application you confirm that you have taken note of the information in the Saarland University privacy notice.