University of Stuttgart

Multiple PhD positions available in Prof. Philipp Rothemund's research group

Intelligent soft systems are a new class of robotic devices that—in contrast to traditional robotic devices, which consist of hard metallic parts and are driven electromagnetic motors—derive their function from the properties of functional soft materials. These materials are inherently soft and can react to external stimuli such as temperature, electric fields, pH, or light by deforming or by changing their mechanical properties. They can thus serve many roles in robotic devices such as actuators, sensors, controllers, and even energy sources. The research focus of Prof. Rothemund's research group lies at the intersection of mechanics, Materials Science, and Robotics. The research group studies the fundamental behavior of functional soft materials to design new types of autonomous robotic systems that can safely interact with their surrounding and navigate in unstructured environments, and to develop new structures that passively adapt their shape in response to changes in environmental conditions such as temperature, humidity, and sunlight.

Your profile:

The ideal candidates have: a degree in a relevant field, such as mechanical engineering, materials science, electrical engineering, cybernetics; a strong background in mechanics, materials science, or electrical engineering; an interest in both experimental and modeling work; curiosity to explore fundamental behavior of functional soft materials and to develop entirely new types of robotic systems.

How to apply:

Interested candidates can apply by sending an email to philipp.rothemund@f07.uni-stuttgart.de with:

- Motivation letter describing background and research interests (1 page)
- Full transcripts of academic degrees
- CV (including names of 2-3 references)

For questions, do not hesitate to get in touch at the same email address.

Starting date (flexible): September 2023

The positions will be filled as soon as we find suitable candidates. PhD students are paid a competitive salary (according to TV-L E13 level).

At the University of Stuttgart, we actively promote diversity among our employees. We have set ourselves the goal of recruiting more women scientists and employing more people with an international background, as well as people with disabilities. Regardless, we welcome any good application. Women who apply will be given preferential consideration in areas in which they are underrepresented, provided they have equal qualifications. Applicants with severe disabilities will be given priority, provided they have equal qualifications.

As a certified family-friendly university, we support the compatibility of work and family, and of professional and private life in general, through various flexible modules. We have an employee health management system that has won several awards and offers our employees a wide range of continuing education programs. We are consistently improving our accessibility. Our Welcome Center helps international scientists get started in Stuttgart.

Information in accordance with Article 13 DS-GVO on the processing of applicant data can be found at https://careers.uni-stuttgart.de/content/privacy-policy/?locale=en_US.