University of Stuttgart
Germany

PhD Positions Available in Microrobotic Biomedical Systems with Prof. Amirreza Aghakhani

Research Summary

We engineer intelligent microrobots for biomedical applications in targeted drug delivery, microsurgery, detoxification, and diagnostics by advancing micro- and nanofabrication as well as ultrasound technologies. To realize their full potential, medical microrobots have to master locomotion in complex biofluidic environments, wireless actuation and control, precise imaging and localization, and effective drug/cargo delivery. We overcome these challenges by incorporating biologically inspired adaptive capabilities into microrobotic agents and utilize lab-on-a-chip and microfluidic systems to validate biological and therapeutic functions. We thus bridge the gap between biomedical research and clinical applications to propel medical microrobots to the forefront of modern healthcare.

Applicant Profile

We are searching for exceptional Ph.D. candidates who possess:

- A strong research background in one of the following fields: Biomedical Engineering, Mechanical Engineering, Biophysics, Biology, and Materials Sciences.
- Enthusiasm for both simulation and experimental studies to drive innovation in Biomedical Systems.
- A fundamental knowledge of engineering principles to tackle real-world problems.
- Proficiency in coding, with experience in MATLAB or Python to develop computational models.
- Hands-on experimental skills and a desire to bring your ideas to life in the laboratory.

What we offer

PhD candidates will receive a highly competitive salary and benefits, in alignment with the TV-L E13 scale. We provide access to cutting-edge research facilities and offer exceptional support for both your career and family needs. You will also have privileged access to an extensive network of research collaborators within the thriving CyberValley and Max Planck Society ecosystem.

How to Apply

The starting date is flexible, but applications received by October 2023 will receive priority consideration. Interested applicant can send their package to amirreza.aghakhani@bio.uni-stuttgart.de including:

- Brief motivation statement (1 page)
- CV (including the name of 2-3 references)
- Academic transcripts

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.