

The Division Microrobotics and Control Engineering (Prof. Dr.-Ing. habil. S. Fatikow), Department of Computing Science of the University of Oldenburg invites applications for a

### **Postdoctoral Research Associate (m/f/d)**

with the focus on “**AFM-characterization of adhesion/friction/mechanics at nanoscale**”

The position is full time (100%), pay rate E13 TV-L (funded by the German Research Foundation - DFG), for a period of 3 years, with the possibility of extension.

Our Divisions' research activities focus on robotic automation for manipulation and characterization of nanomaterials. The research work covers a broad range of related topics, including a.o. AFM-based characterization, automation at nanoscale, nanofabrication inside SEM, and robot-based nanomanipulation. Several AFMs and unique robotic setups for automated handling at nanoscale are in operation in the Division for different applications.

### **YOUR FOCUS:**

The purpose of the advertised position is 1) to validate the scientific potential of the AFM as an analytical tool for nanoplastics research. Here, the goal is a quantitative and automated AFM-based identification and characterization of various polymeric nanoparticles to provide in-depth insights into nanoscale adhesion/friction/mechanics of nanoplastics. These properties will be investigated under different aging conditions. This task must be implemented within the framework of the DFG project from which the position is funded; 2) to follow own research interests in any topic related to AFM-based manipulation and characterization at nanoscale using this postdoctoral position. We are looking for a candidate with strong motivation to implement own research ideas on the way to higher academic qualification.

### **YOUR PROFILE:**

- Above-average academic university degree and a PhD degree, preferably in the field of experimental surface physics, AFM-based characterization, or nanotechnologies
- Profound experience with AFM-based characterization of adhesion, friction, or mechanics
- Knowledge and experience in automation (specifically vision-guided automation)
- Very good command of English language, in speech and writing
- Experience with programming languages (C++, Python, MATLAB) (desirable)
- Good command of German language (desirable)

### **WHAT WE OFFER:**

- Unique laboratory infrastructure for research in automated robotic handling at nanoscale
- An experienced interdisciplinary team that works on adjacent topics and is highly visible in related international research communities
- Excellent opportunities for professional development towards cutting edge research
- Gathering hands-on experience with the world's most advanced nanorobotic systems
- Intellectual freedom to explore and implement new approaches
- Strong involvement in project cooperation with international and national partners, both from industry and research
- Regular participation in international research conferences is possible and desired.

The University of Oldenburg is an equal opportunities employer. According to § 21 para. 3 of the Legislation Governing Higher Education in Lower Saxony (NHG) preference shall be given to female candidates in cases of equal qualification. The same applies to persons with disabilities.

Please send your application (letter of motivation, CV, certified copies of degrees, references, list of publications) and a short summary of your research interests in the field of AFM-based manipulation and/or characterization (see P.2 of Your Focus) by email in a single pdf document with the keyword “**AFM-Nanocharacterization**” to Prof. Dr. habil. S. Fatikow [fatikow@uni-oldenburg.de](mailto:fatikow@uni-oldenburg.de), CC to [anja.hiller@uni-oldenburg.de](mailto:anja.hiller@uni-oldenburg.de). The closing date for applications is **04.12.2022**.