PhD Student Position

Dynamics and Micromechanics of Mineralized Cartilages

Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Potsdam, Germany

Overview

We seek a full-time PhD student to uncover the role of the microarchitectural organization of the soft-hard interfaces on the dynamics and micromechanics of the mineralized cartilages of deep-sea fishes. Together, we leverage our expertise to develop characterization methodologies to understand how nature adapts functional strategies at the material level to form functions under extreme pressures. The position will be part of the Cartilage Program within the newly funded Max Planck Queensland Centre (MPQQC) for the Materials Science of Extracellular Matrices, a joint initiative of the Max Planck Society for the Advancement of Science, between the Max Planck Institute of Colloids and Interfaces (MPICI) and the Queensland University of Technology (QUT) (https://research.qut.edu.au/mpqc/).

What we offer

The successful applicant will join the Micromechanics of Biological Materials team, led by Dr. Shahrour Amini (https://www.mpikg.mpg.de/6288160/micromechanics-of-biological-materials), at the Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Potsdam, Germany. The team offers a highly cooperative working environment and cutting-edge experimental facilities. The successful candidate will have the opportunity to travel to national/international conferences and collaborate with an excellent research team at the Max Planck Queensland Centre.

Desired qualifications, knowledge, skills

- M.Sc. in Mechanical Engineering, Physics, Materials Science, or related disciplines
- Demonstrated aptitude for scientific creativity and elastic thinking.
- Hands-on experience with testing equipment and high-precision sample preparation techniques,
- Interest in biological materials, excellent verbal and written communication skills, self-motivated and able to plan and prioritise workloads to meet deadlines, excellent record keeping and data management and presentation skills, ability to take initiative and undertake complex problem-solving activities, able to work in a multidisciplinary team environment.

Starting date and duration

Preferred starting time: Fall 2023, 3 years, 65% TVöD E13. Your application will be reviewed as soon as it is received. The position will be filled ASAP.

Application

Interested applicants are invited to send in their full CV/resume, cover letter and list of two references (to include reference names and contact information) to Dr. Shahrour Amini (shahrour.amini@mpikg.mpg.de). The Max Planck Society strives to ensure a workplace that embraces diversity and provides equal opportunities irrespective of the applicants’ gender, nationality, or disabilities.