

Student Assistant (HiWi) Position – Simulation of Shape Memory Alloy Composites

We are seeking a motivated **student assistant (HiWi)** to join our research team working on the **simulation of shape memory alloy (SMA) composites using COMSOL Multiphysics**. The position is part of an exciting **self-folding origami project** aimed at developing next-generation **brain aneurysm implants**.

Your Tasks:

- Perform numerical simulations of SMA composite structures using COMSOL Multiphysics.
- Analyze the thermo-mechanical behavior of self-folding origami components.
- Support model development and validation through parametric studies and data analysis.

Your Profile:

- Currently studying in **Microsystems Engineering, Sustainable Systems Engineering, Embedded Systems Engineering, Applied Physics**, or a related master's program at the University of Freiburg.
- Prior experience with **COMSOL Multiphysics** or **finite element analysis (FEA)** is a strong plus.
- Interest in interdisciplinary research combining materials science, mechanics, and biomedical applications.
- Independent, organized, and eager to learn.

What We Offer:

- Opportunity to contribute to a **cutting-edge interdisciplinary project** at the intersection of smart materials and biomedical engineering.
- Hands-on experience in advanced simulation and modeling techniques.
- A **HiWi contract (20 hours/month)** in a dynamic and collaborative research environment.

Application:

Please submit your **CV** and a **motivation letter** (explaining your qualifications and relevant experiences) to:

 prasanth.velvaluri@imtek.uni-freiburg.de

Contact:

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