

PhD Position: Modelling Fragmentation in Large-Scale DEM Simulations

Department Chemie- und Bioingenieurwesen (CBI), Erlangen, TV-L E 13, Vollzeit, Befristete Anstellung, Bewerbungsschluss: 12.10.2025

Description

The aim of the research project is to develop a physically accurate and efficient numerical method for describing particle breakage in DEM simulations. The method should enable large-scale DEM simulations of comminution, wear, and grinding processes. [Click here for a detailed description of the project.](#)

The position is embedded in the graduate programme ["Fracture across Scales" \(FRASCAL\)](#), and the workplace is the [Institute for Multiscale Simulation \(MSS\)](#). This position offers an exceptional multidisciplinary environment with close collaboration between simulation and experiment, access to high-performance computing resources, and interactions with researchers at MSS, FRASCAL, and across the Friedrich Alexander University.

Qualifications

Necessary qualifications:

The ideal candidate has the following qualifications:

- Master's degree in physics, mechanical engineering, materials science, computational engineering, computer science (with a strong interest in physics), or related subjects
- Excellent programming skills, preferably in C++ and Python

[Click here for information about further beneficial qualifications.](#)

Supplementary description

Befristetes Forschungsvorhaben

We are always looking for new employees. Feel free to apply outside of the specified period.

Please only use our application form to apply:

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