

The Institute of Applied Dynamics (LTD) at the Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) in Germany invites applications for a **PhD position** in Mechanical Engineering:

Adaptive Dynamic Fracture Simulation P09

Background

The 2nd cohort of the Research Training Group GRK 2423 FRASCAL (“Fracture across Scales”), funded by the German Science Foundation, will start on January 1st, 2022. FRASCAL aims to improve understanding of fracture in brittle heterogeneous materials by developing simulation methods to capture the multi-scale nature of failure. The GRK 2423 offers 11 doctoral positions in projects P1 through P11. Project descriptions can be found at frascal.research.fau.eu/home/research.

Requirements

We are looking for a motivated and creative doctoral candidate capable of working in an interdisciplinary team with an above-average master or comparable university qualification in mechanical engineering, mathematics, computational engineering or similar fields. Experience in computational modelling is highly appreciated. You must have a strong knowledge of solid mechanics and dynamics, finite element method, and C++ and Python programming skills. Proficiency in the English language is required, and knowledge of the German language is welcome.

Work environment

We will offer you the possibility to perform research within an interdisciplinary team in a highly innovative and active research area comprising mechanics, material sciences, mathematics, chemistry, and physics. Two principal advisors (PAs) will guide you as mentors through your research project. In addition to the research programme, FRASCAL’s dedicated qualification programme will offer you mini-lectures, soft skills training and RTG seminars, as well as RTG retreats, alumni & visitor workshops and mini-symposia. For further details, see frascal.research.fau.eu/qualification-programme.

The LTD will investigate subproject P09 “Adaptive Dynamic Fracture Simulation”. The research focus at LTD is in the field of computational mechanics, in particular dynamics, with a focus on the development of efficient techniques for the modeling, simulation and optimization of dynamical and control systems with applications in modern engineering and biomechanics. The LTD is part of the Faculty of Engineering, which awards the academic degree Doctor of Engineering (Dr.-Ing.).

Position and application

Your work location is at Friedrich-Alexander-Universität Erlangen-Nürnberg. Remuneration is at E 13 TV-L (full-time, limited to three years) according to the German public service salary scale. Please submit your application that includes a motivation letter (max. 1 page), recommendation letter/s (max. 1 page), a summary of Master’s thesis (max. 1 page), CV, certificates and transcripts as soon as possible to: grk2423-applications@fau.de

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