Dresden University of Technology

The **Research Training Group GRK 2868 D³ - Data-driven Design of Resilient Metamaterials** funded by the German Research Foundation has started in October 2023. Our vision is to develop and apply a data-driven approach to cross-scale materials discovery and design, in particular, goal-oriented, inverse design procedures based on process-structure-property linkages are of interest. The exploration aims at the mechanical performance as well as at the sustainability of the new metamaterials. **D³** offers a competence- and publication-oriented qualification concept with co-supervision and international mentoring following a stringent schedule. **D³** will provide a creative, motivating, and collaborative research environment with equal opportunities. Academic and business careers are actively supported by career development measures including at least one international research stay. For TUD Dresden University of Technology (TUD) diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

D³ offers a position as

Research Associate / PhD student (m/f/x)

(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **April 1, 2026**. The position is limited until March 31, 2030. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification (usually PhD).

Tasks: The successful candidate performs scientific research on mechanical metamaterials with a particular focus on modeling and simulation of the deformation and failure behavior under influence of damage and extreme loading conditions. Both data- and physics-based modeling approaches are of interest in this context. The obtained results are to facilitate the inverse design of novel resilient metamaterials. The successful candidate participates actively in the qualification program and general scientific activities of **D³**. More information can be found at www.tud.de/ing/dcube

Requirements:

- excellent university degree in mechanical engineering with a particular focus on computational mechanics
- fluent in English, ideally documented in terms of a B2 English language certificate

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application by **March 18, 2026** (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file to **markus.kaestner@tu-dresden.de** or to:

TU Dresden, Chair of Computational and Experimental Solid Mechanics, Prof. Kästner, Helmholtzstr. 10, 01069 Dresden, Germany.

Documents should include a scientific curriculum vitae, a letter of motivation, a letter of recommendation, transcripts of records from the last two degrees with detailed grade summaries and your final thesis.

Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

TUD is a founding partner in the DRESDEN-concept alliance.

DRESDEN concept