Dresden University of Technology

The **Research Training Group GRK 2868 D^3 - 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. **D^3** offers a competence- and publication-oriented qualification concept with co-supervision and international mentoring following a stringent schedule. **D^3** will provide a creative, motivating, and collaborative research environment with equal opportunities. 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.

D^3 offers a position as

Research Associate / PostDoc (m/f/x)

(subject to personal qualification employees are remunerated according to salary group E 14 TV-L)

starting **June 1, 2026** with a fixed term contract until September 30, 2028. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG)

Tasks: The successful candidate performs scientific research and participates in the qualification program and scientific activities of **D^3**. The postdoctoral research project **DP** is designed to bridge the scales considered in **D^3** by advanced physics-based and data-driven models as well as to develop efficient inverse design techniques for mechanical metamaterials. The postdoctoral fellow is to promote a constant, intensive, and multilateral exchange within **D^3**, develop interdisciplinary approaches at the interface of computational mechanics and materials science. Two **D^3** PIs and international mentors will guide the postdoc. Support is provided regarding the concept of a habilitation theses and equivalent achievements, respectively. A personalized qualification program including higher education didactics is set-up to support scientific independence, autonomy and international visibility. More details on **D^3** including a brief description of the postdoc project are available via www.tud.de/ing/dcube

Requirements:

- an excellent university and PhD degree, ideally in computational mechanics or computational materials science
- a strong commitment to scientific research and a career in academia
- expertise in modeling of metamaterials, data-driven material models, microstructure reconstruction, crystal plasticity, phase-field modeling, multiscale analysis, or CALPHAD
- very good to excellent English is mandatory

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 31, 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, publication and citation record and your PhD 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.

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