



Karlsruhe Institute of Technology

Karlsruher Institute of Technology
Personalservice (PSE)

Kaiserstraße 12
76131 Karlsruhe

<http://www.pma.kit.edu>

Research Associate (Akademische/r Mitarbeiter/in)

- Job description:** **Computational and theoretical work on a Continuum Dislocation Dynamics (CDD) theory for modelling metal plasticity**
The open position is concerned with the development and application of a novel theory for simulating mechanical behaviour of metals. This requires conceptual/theoretical work as well as work on the numerical implementation. Analysis of reference data from discrete simulations will give guidance towards identifying terms for short-range and long-range dislocation interaction. CDD shall later be coupled to a crystal plasticity finite element framework, allowing for the simulation of components and micro devices.
- Qualification:** Candidates should hold a qualifying degree in physics, material science, numerical mathematics or a engineering degree with a solid theoretical background. Software skills (C++, Linux, modern data analysis software) and experience with numerical simulations would be assets. It is expected that candidates will present and discuss their results at international conferences and workshops as well as significantly contribute in publishing the results.
- Salary:** The salary grade is E13.
- Institute** Institute for Applied Materials – Reliability of Components and Systems (IAM-ZBS)
- Starting date:** As soon as possible
- Application up to:** January, 31, 2012
- Contact person in line-management:** For further inquiries on the position, please contact Dr. S. Sandfeld via e-mail to stefan.sandfeld@kit.edu
- Application:** Please submit your application, including a curriculum vitae, a letter of motivation, and arrange for at least two letters of reference. Applications and reference letters should preferably be sent by **via e-mail to stefan.sandfeld@kit.edu**. Alternatively, please use:

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KIT is pursuing a gender equality policy. Women are therefore particularly encouraged to apply. If qualified, handicapped applicants will be preferred.

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