

HiWi / Master Thesis



Implementation of the Pace3D simulation tool in a webbased platform

Background:

Pace3D (Parallel Algorithms for Crystal Evolution in 3D) is a modular software for large-scale package parallel simulations of phase transformation processes and microstructure formation in multicomponent, multiphase and polycrystalline material systems. The simulation tool is useful for various applications such as heat and material diffusion, flow, thermo/chemo-mechanics, electrochemistry and magnetism.





Your Task:

The aim is to develop a user-friendly web interface for the pace3D tool using the IAM microstructure modelling and simulation infrastructure at KIT. This approach will ensure that non-expert users can seamlessly benefit from the tool without having to deal with tasks such as installation, maintenance and other IT-related tasks via a web-based platform.

Requirements:

Basic knowledge of programming with Python is an advantage for working on the topic. A genuine interest in data science is necessary.

We are offering:

- intensive support
- Modern workstations and high-performance computers as a working environment
- Productive and dynamic atmosphere in a team
- Co-operation with international research groups
- Career prospects as a junior researcher

Are you Interested?

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