

## Postdoctoral

Ecole/Institution/Société:

**HELMHOLTZ-ZENTRUM HEREON, Germany / Teltow**

Discipline:

**Computing**

Type d'emploi::

**Full-time**

Date de publication:

**2022-03-12**

Personne à contacter:

**If you wish to apply for this position, please specify that you saw it on AKATECH.tech**

### **Postdoctoral Position in Computational Mechanics**

#### **Helmholtz-Zentrum Hereon**

The Helmholtz-Zentrum Hereon conducts cutting-edge international research for a changing world: Around 1,100 employees contribute to the tackling of climate change, the sustainable use of the world's coastal systems and the resource-compatible enhancement of the quality of life. From fundamental research to practical applications, the interdisciplinary research spectrum covers a unique range.

#### **Institute of Material Systems Modeling**

The Institute of Material Systems Modeling works on methods for virtual material and process development. Computational methods and artificial intelligence are used to optimize materials and their application from the atomic level to the system level.

**Reference code:** 50077622\_2 - 2022/MS 2

**Work location:** Geesthacht (near Hamburg)

The Helmholtz-Zentrum Hereon in Geesthacht, near Hamburg, and in Teltow, near Berlin, conducts materials and coastal research. You can find more information at <http://www.hereon.de>.

The Institute of Material Systems Modeling at the Helmholtz-Zentrum Hereon is offering a 2-year postdoctoral position in the area of computational mechanics. A primary objective of the position will be the development of a novel open-source multi-physics simulation framework on the basis of the widely used finite element library deal.II and the application of this framework to specific problems.

Preferred application areas include materials science, additive manufacturing and biomedical engineering. The focus of this position lies on computational modelling. However, we offer an environment where new computational methods can be developed and tested in close collaboration with in-house experimentalists.

Equality of opportunity is an important part of our personnel policy. We would therefore strongly encourage qualified women to apply for the position. The position can be filled part-time in principle.

#### **Your tasks**

- development of a computational multi-physics simulation framework in C++
- application of developed code to specific application examples in particular from materials science
- publication and presentation of your scientific results in international scientific journals and at international conferences and workshops

## **Your profile**

- master's and PhD degree in computational mechanics, mechanical engineering, applied mathematics, or similar area
- excellent knowledge of computational modelling, in particular of computational mechanics
- very good programming skills in C++ (ideally also experience with libraries like deal.II and Trilinos)
- proven experience in code development (coding skills will be checked during the job interview!)
- very good knowledge of the theoretical foundations of engineering (mechanics, thermodynamics, applied mathematics etc.)
- very good English

## **We offer you**

- multinational work environment with ca. 1,100 colleagues from more than 50 nations
- extensive options of vocational training (i. a. expert seminars, language courses or leadership seminars)
- flexible working hours and various models to ensure the compatibility of family and career
- excellent infrastructure, including a scientific in-house library as well as modern workspaces
- remuneration according to the standards of the collective wage agreement TV-AVH including further social benefits
- free employee advice - Employee Assistance Program (EAP)
- childcare offers
- Welcome Office, guest accommodation
- canteen at the Geesthacht location

## **Interested?**

Then we are looking forward to receiving your comprehensive application documents (cover letter, CV, transcripts, certificates etc.) indicating the reference 2022/MS 2 until March 31st 2022.

## **Job details**

**Title:** Postdoctoral Position in Computational Mechanics

**Employer:** Helmholtz-Zentrum Hereon

**Location:** Kantstraße 55 Teltow, Germany

**Job type:** Postdoc

**Field:** Applied Mathematics, Biomedical Engineering, Computational Engineering, Computational Physics, Manufacturing Engineering

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