

## Specialist Neutronics (m/f)

For gas-cooled High-Temperature Reactors (HTGR) in the past decades extensive model development with respect to e. g. fluid-dynamics of Helium in a pebble bed, the motion behaviour of graphite spheres, and the thermodynamic behaviour of HTGR have been performed. Most of these models were developed as stand-alone codes and often numerous variants existed. For this reason, some years ago, based on experience with LWR, efforts have been started to establish the code-system "HTR Code Package" (HCP) at RWTH Aachen/Research Centre JÜLICH, which permits to model comprehensively HTGR-phenomena and may be extended readily if required.

In order to consolidate this code-system a project has been initiated aiming at documenting the state achieved and to develop HCP to a validated tool for the simulation of safety related phenomena and events in the primary circuit of a HTGR.

We are looking for a neutronics specialist to enable the modeling of control rod movements.

### **Your tasks**

You work in a team of scientists and doctoral candidates for the a.m. project. Your main task is the integration of previously developed codes and methods within the HCP framework. Performance of validation and verification campaigns making use of Monte Carlo codes and nuclear reactor physics benchmarks. Writing technical documentation.

### **Your profile**

- Profound knowledge in nuclear reactor physics
- Specialization in neutronics
- Good programming skills (C++, FORTRAN preferred)
- Experience with tools such as CMake and Version Management
- Good nuclear reactor modeling capabilities
- Serpent and/or MCNP knowledge welcome
- Developing and implementing mathematical models
- Enthusiasm and ability for working in an international, multidisciplinary team
- Language: English fluently, (German welcome)

### **Contact**

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