

Nuclear/Mechanical Engineer (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 nuclear/mechanical engineer to assess and further develop HCP.

Your Tasks

You work in a team of scientists and doctoral candidates for the a.m. project, gaining experience in multi-physics software development. Your main task is the verification and validation of HCP code package, benchmarking and uncertainty analyses. On basis of discovered gaps, proposals on further development needs should be identified. Writing technical documentation.

Your profile

- Profound knowledge in power plant simulation.
- Nuclear reactor modeling using simulation tools in the fields of fluid dynamics, fission products, neutronics etc.
- Capability of developing and implementing mathematical models
- Good programming skills (C++, FORTRAN preferred)
- Experience with tools such as CMake and Version Management
- Enthusiasm and ability for working in an international, multidisciplinary team
- Language: English fluently, (German welcome)

Contact

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