The German Climate Computing Centre (DKRZ) is the central simulation and data processing facility for the German climate and Earth System modelling community and is one of the leading facilities in this area. DKRZ not only operates supercomputers in the highest performance class and one of the largest data and archive systems worldwide, we also participate in many national and international projects aiming to improve the software and infrastructure for climate modelling. Within the ESiWACE3 Centre of Excellence funded by the European High Performance Computing Joint Undertaking (EuroHPC JU), DKRZ supports in international collaborations the preparation of Europe's Weather and Climate Models for exascale systems. Here we are offering a position as

Research Software Engineer (all genders) **for HPC Applications**

Your tasks

As part of an international team of HPC experts from a supercomputer vendor and research engineers specialising in software for science, you will work to improve the efficiency of selected weather and climate codes and prepare the software to run on existing and near-future hardware architectures. The work will be structured in collaborative projects of six to twelve months duration, in which the ESiWACE3 team of experts will provide engineering effort, but also advice and knowledge transfer to the code owners. The aim of these efforts may be to enable simulation experiments at unprecedented grid resolutions or ensemble sizes, or to include computationally expensive physical processes that were previously not feasible. It could also be to reduce the time-to-solution or energy-to-solution of current state-of-the-art simulations.

Qualifications / Experiences

- Academic degree with a background in computer science, Earth-System science or mathematics.
- Experience in parallel programming for HPC systems
- Experience in high-level programming languages, at least one of C, C++ or Fortran
- Experience in GPU programming is an advantage
- Very good communication skills and knowledge of English
- And of course you should enjoy programming and working with state-of-the-art supercomputers

Employment conditions

We offer work in interdisciplinary teams and excellent connections to national and international research networks. In addition to specific implementation and support requests from our project partners, your tasks are also characterised by freedom to creatively work at the interface of theoretical computer science and the development of scientific applications.

We are based in Hamburg, but we want to create a suitable working environment by offering flexible working hours and location (up to 100% work at home within Germany). The advertised position can be filled on a full-time or part-time basis. Remuneration will be based on the applicant's qualifications in accordance with TVöD-Bund up to pay group E13. You are welcome to start at 1st of July 2023 but the exact start date can be agreed individually. The position is funded through the ESiWACE3 project, and is initially limited until 31 December 2026.

If you are interested, please send your application, quoting reference number **DKRZ-08_2023**, with a letter of motivation and a detailed curriculum vita (all in one pdf file) to

bewerbungen@dkrz.de

Questions? Dr. Hendryk Bockelmann (bockelmann@dkrz.de) will be happy to answer them in advance.