Technische Universität Dresden (TUD), as a University of Excellence, is one of the leading and most dynamic research institutions in the country. Founded in 1828, today it is a globally oriented, regionally anchored top university as it focuses on the grand challenges of the 21st century. It develops innovative solutions for the world's most pressing issues. In research and academic programs, the university unites the natural and engineering sciences with the humanities, social sciences and medicine. This wide range of disciplines is a special feature, facilitating interdisciplinarity and transfer of science to society. As a modern employer, it offers attractive working conditions to all employees in teaching, research, technology and administration. The goal is to promote and develop their individual abilities while empowering everyone to reach their full potential. TUD embodies a university culture that is characterized by cosmopolitanism, mutual appreciation, thriving innovation and active participation. For TUD diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

The Center for Information Services and High Performance Computing (ZIH) offers a position within the research project “IFCES2 – Optimization of Simulation Algorithms for Exascale Systems for the Computation of the Earth System Model ICON” as

Research Associate for Software Development in High Performance Computing (m/f/x)
(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting as soon as possible. The position is limited until September 30, 2025. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). The position offers the chance to obtain further academic qualification (e.g. PhD / habilitation thesis).

The ZIH is one of nine national centers for high performance computing (NHR). We offer highly interesting and creative tasks to current scientific topics, a modern data center infrastructure, flexible working hours, a family-friendly working environment, and living in a city of science and culture surrounded by a unique landscape.

The Earth system model ICON is used to compute weather and climate forecasts on high performance computers. The goal of the IFCES2 project is to leverage the enormous computing power of Exascale supercomputers for ICON in order to model Earth system processes in greater detail. This is to contribute towards reducing the uncertainties of climate predictions.

Tasks:
- Research and development work on load balancing of ICON model components
- Design of interfaces together with the project partners
- Research and development of innovative load balancing methods
- Performance optimization of relevant use cases for supercomputers
- Documentation of results, presentation at conferences and in scientific publications.

Requirements:
- university degree in computer science, applied mathematics, or a comparable engineering or natural science with relation to scientific computing
- very good knowledge and experience in programming with C/C++ and/or Fortran as well as in working under Linux
- experience in the use of high performance computers and knowledge of parallel programming with MPI and experience in modern software engineering and version control with Git
- high degree of independence, commitment, communication skills, and team spirit
confident command of the English language, both written and spoken.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university and offers a Dual Career Service. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your comprehensive application including the usual documents under the job ID “IFCES2” by December 14, 2022 (stamped arrival date of the university central mail service applies) preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single PDF document to zih@tu-dresden.de or to: TU Dresden, ZIH, Herrn Prof. Dr. Wolfgang E. Nagel, Helmholtzstr. 10, 01069 Dresden, Germany. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.