Technische Universität Dresden - Center for Interdisciplinary Digital Sciences (CIDS), Department Information Services and High Performance Computing (ZIH)

Since 2021, HPC at universities has been restructured by the NHR network. The network consists of nine centers, which operate the systems and offer a coordinated consulting service on the methodological competence of scientific HPC. The aim is to provide scientists at German universities with computing capacity for their research and to strengthen their skills in the efficient use of this resource. The NHR Center at TUD Dresden University of Technology operates state-of-the-art High Performance Computing (HPC) systems, providing researchers at German universities with critical computing resources for their scientific work. 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.

Research Associate / HPC System Software Engineer (m/f/x)

At the Center for Interdisciplinary Digital Sciences (CIDS), the Department Information Services and High Performance Computing (ZIH) offers three positions as Research Associate / HPC System Software Engineer (m/f/x) (subject to personal qualification employees are remunerated according to salary group E 13 TV-L) starting as soon as possible. The positions are limited until May 31, 2026 with the option of extension until May 31, 2029 subject to grant approval. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). In an ongoing effort to enhance the energy efficiency and performance of our High Performance Computing systems, we are developing and using cutting-edge operational data analytics software. As partner in the European research project SEANERGYS, we aim to contribute this expertise to create an integrated software solution designed to optimize resource utilization and energy consumption for real-world workloads on Exascale HPC systems.

City: Dresden; Starting date (earliest): At the earliest possible; Duration: limited until May 31, 2026 with the option of extension until May 31, 2029 subject to grant approval; Remuneration: subject to personal qualification employees are remunerated according to salary group E 13 TV-L; Reference number: job identification "Seanergys"; Closing date: 16/07/25

Working field

• scientific research and Development of tools for efficient HPC system operation and monitoring
• research and Development of data-driven and AI-based optimizations for HPC operation
• collect and evaluate requirements for operation software
• design and establish a modern software development platform (CI/CD, integration testing, validation)
• cooperate with German, European and international partners
• presentation of results at conferences and in scientific publications

Requirements

• university degree in computer science, electrical engineering, applied mathematics, or a related field with a focus on software development or HPC
• high degree of independence, commitment, and team spirit
• strong knowledge of distributed systems architecture and Linux systems, ideally with experience in HPC or cloud environments
• proficiency in C++ or Python at minimum, further languages such as C, Go, and Rust are a plus
• practical experience with collaborative software development (git, code reviews)
• experiences in data analytics and machine learning as well as monitoring solutions (e. g. Prometheus, Grafana, InfluxDB) are beneficial
• excellent communication skills in English are required; fluency in German is a plus

What we offer

• becoming part of an enthusiastic team that is well-connected with the national and international community
• working with cutting-edge supercomputers and both their users and operators
• an environment to develop high-quality software according to challenging performance requirements
• flexible working hours, options for remote work (partial), a family friendly working environment, and 30 days of vacation per year based on a 5-day working week and according to TV-L
• full funding (TV-L / minimum monthly gross salary of about 4.600 Euro full-time)

Application

What to submit:
• university degree certificate and transcript of records (if not in German or English: original and official translation)
• curriculum vitae
• proof of English and German language test (e. g. TOEFL, IELTS, CAE) is beneficial for non-native speakers
• recommendation letters are beneficial

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. 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 detailed application with the above-mentioned documents quoting the job identification "Seanergys" by July 16, 2025 (stamped arrival date of the university central mail service or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file 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.

More information at https://stellenticket.de/195492/TUB/
Offer visible until 16/07/25

Stellenticket