

**Are you looking for a new professional challenge?
Then this is the place to be!
Become part of our international team!**



16. December 2021

The Zuse Institute Berlin (ZIB) is an interdisciplinary research institute for applied mathematics and data-intensive high-performance computing. It research focuses on modeling, simulation and optimization with scientific cooperation partners from academia and industry.

The NHR Center of the Zuse Institute Berlin is offering a two-year fixed-term position at the earliest time possible as

Scientific Employee / Postdoc (f/m/d)

Reference Code: IWA 57/21

Pay Grade: E13 or E14 TV-L Berlin, depending on qualification (100%).

Since January 2021, ZIB is member of the nationwide HPC initiative “Nationales Hochleistungsrechnen” (NHR) and offers scientific HPC consulting services. We operate compute and storage resources at the top level. Our current HPC system “Lise” comprises 120,000 compute cores, 500 TB distributed memory, and 8 PB persistent online storage to realize demanding computational tasks and data analysis workflows to solve complex scientific questions.

The applicant will contribute to research and development projects funded by NHR. Main areas of our R&D work are (i) the migration and performance optimization of workloads on heterogeneous systems (GPU, Vector, FPGA), (ii) application of and contribution to the extension of tools supporting the migration process of codes to GPUs and other accelerators, and (iii) the evaluation of object stores (e.g., Intel DAOS) for HPC workloads. The applicant will work in one or more of these areas depending on its expertise and interests. The position requires to interact with partners at other NHR sites, with code developers and their users. The overall objective is the efficient support and optimal performance of selected NHR workloads on current and next-generation technology platforms with heterogenous computing and storage resources.

We are seeking a candidate with a strong background in state-of-the-art parallel architectures, experiences in the code development for modern CPUs and ideally accelerators (GPUs, Vector or FPGAs), and who is highly motivated to work in the interdisciplinary field of high-performance computing / data-analysis technologies and scientific application domains, for example but not exclusively in life science or chemistry / material science.

Your Responsibilities

- contribute to the adaption and optimization of domain-specific software packages, work jointly with other HPC experts and domain scientists to migrate code to next-generation supercomputer architectures including heterogeneous platforms (e.g. GPUs, FPGAs, Vector) and advanced storage technologies (NVRAM) and systems (DAOS)
- provide best-practice solutions

- contribute to the NHR networking activities including training and workshops
- contribute to the project goals of the nationwide NHR projects
- publish your scientific results in international conferences and journals (travel will be supported by ZIB)

Your Profile

- a university degree (master, diploma, dissertation/PhD) in computer science or related fields
- experiences in parallel programming (e.g. vectorization, multi-threading, message passing) with one of the languages C/C++, Fortran, or Python in the Linux ecosystem
- a good technical knowledge of modern processor architectures including accelerators
- a basic knowledge of parallel computer architectures
- ideally, a basic knowledge of methods and codes in life science, chemistry or material science
- a strong focus on self-responsibility, pro-activity, the ability to work in a team, and creativity

We are offering a friendly working atmosphere with flexible work and meeting times, excellent equipment, and a challenging professional environment

as well as

- comprehensive training in a competent and cooperative team,
- an additional pension scheme (VBL),
- 30 days annual leave, flexible working hours (flexitime),
- a salary in accordance with TV-L (Collective Agreement for the Public Service of the Federal States), taking into account the relevant professional experience,
- an end-of-year bonus,
- discounted BVG (public transport) ticket as part of the capital city allowance,
- and the use of canteens and sports programs of the Freie Universität Berlin (FUB) at reduced rates.

Although this position advertised is full-time, a part-time agreement is also possible.

Female applicants are highly encouraged to apply. Since women are underrepresented in the field of scientific computing, the ZIB is trying to increase the proportion of women in this area.

Applicants with disabilities will be given preference if equally qualified.

Please send your full application, quoting the reference code **IWA 57/21**, including a cover letter, a CV and the standard supporting documents in pdf-format by **31. December 2021** (date of receipt) to: jobs@zib.de.

Our privacy statement regarding application data is available at www.zib.de/impressum.

For further information about this vacancy, please refer to our website www.zib.de and www.hlrn.de or contact Dr. Thomas Steinke (steinke@zib.de).

For further job offers please visit our website at www.zib.de.