

Looking for new challenges in supercomputing? Join our interdisciplinary team at ZIB!



01.10.2020

The Supercomputing Department of the Zuse Institute Berlin (ZIB) is offering two positions at the earliest time possible, and limited until 31st December 2024 with the later option for a permanent contract:

High-Performance Computing Specialist **Reference WA 61/20** **100% - TV-L Berlin, E14.**

The Zuse Institute Berlin (ZIB) is an interdisciplinary research institute for applied mathematics and data-intensive high-performance computing. Its research focuses on modeling, simulation and optimization with scientific cooperation partners from academia and industry. As part of its scientific services, ZIB operates supercomputers at the top performance level. The HLRN-IV system of the North German Supercomputing Alliance (www.hlrn.de) is a distributed supercomputer system jointly operated by ZIB/Berlin and University of Göttingen. It enables scientists to perform complex computational and data-intensive tasks. With more than 200.000 compute cores, 800 TB distributed memory and 16 PB online persistent storage the HLRN-IV is among the top supercomputers in Germany. The Berliner HLRN-IV complex named "Lise" at ZIB has a peak performance of 8 PFLOP/s and is ranked among the top 50 in the worldwide TOP500 list of supercomputers.

The two announced positions are intertwined with the operation of the HLRN-IV with an expected end-of-service date by end of 2024. There is an option for a permanent contract for both positions.

The applicants work closely with the technology-focused research team and the HPC consultants group within the supercomputing department. It is expected that the candidates initiate and contribute to HPC-related projects, guide the optimization and migration of simulation and data-driven workflows for next-generation HPC architectures, and interact closely with the HPC user community.

We are seeking for candidates who are highly motivated in working with innovative technologies (processors, memories/storage, interconnects) and their efficient use on current and next-generation HPC architectures.

Your Responsibilities:

- guide HPC users in the design of new and modernization of existing application codes and to support the transition to next-generation supercomputer architectures,
- conduct own research in the respective HPC-related field, including the acquisition of and contribution to third-party funded projects,
- support performance analysis tasks of complex workflows on all levels (CPU, vectorization, caches, memory hierarchy, parallelization, load imbalance, scalability, network, local and global distributed storage),
- cooperate with HPC code developers and domain consultants on the code design to enable the efficient use of next-generation, e.g. heterogeneous HPC architectures,
- identify opportunities for trans- and inter-disciplinary work on data-focused aspects in HLRN user's projects,
- contribute to training activities and material for HPC code developers and users,
- publish scientific results in international conferences and journals (travel and fees will be supported by ZIB).

Candidates need to provide:

- a university degree and PhD in computer science or a related field,
- a strong background on parallel computer architecture (many-core and vector processors, high-performance interconnects, memory hierarchies, and storage systems),
- demonstrated expertise in parallel programming models (also for heterogeneous platforms),
- experiences in runtime profiling and the use of performance analysis tools,
- excellent programming skills in C/C++ or Fortran, and Python,
- a basic understanding of parallel file systems and data-intensive frameworks,
- a strong focus on self-responsibility, pro-activity, the ability to work in a team, and creativity.

We offer

a dynamic and state-of-the-art working environment and a family-friendly working atmosphere,

plus

- a future-proof workplace with a diverse area of responsibility,
- training and courses to develop and improve personal skills,
- additional pension scheme (VBL),
- 30 days annual leave, flexible working hours (flexi time),
- payment in accordance with TV-L (Collective Agreement for the Public Service of the federal states), taking into account the relevant professional experience and annual special payment,
- discounted use of the cafeterias and the sports activities offered by the Freie Universität Berlin (FUB).

The candidature of women is encouraged. Since women are underrepresented in information technology, ZIB is trying to increase the proportion of women in this research area.

Persons with disabilities will be given preference when equally qualified.

Please send your complete application with a tabular CV and the usual documents electronically by **02nd November 2020** (date of receipt), quoting reference **WA 61/20** to: jobs@zib.de. Please send your documents as PDF only.

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

For more information about the area of responsibility, please consult the HLRN webpage www.hlrn.de or contact Dr. Thomas Steinke (steinke@zib.de).

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