![GWDG - Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen]

Job vacancy
No. 20220530

The GWDG is seeking two

Consultants (m/f/d) for High-Performance Computing

to join an interdisciplinary team of HPC experts in the working group "Computing" (AG C) with a regular working week of 39 hours (100%). Remuneration is in accordance with the collective agreement for the German public service (federal government); depending on qualifications, the position will be graded up to pay grade TVöD E 13. The position is suitable for part-time work and initially limited to two years. The GWDG strives for long-term cooperation. If interested, there is the possibility of a doctorate.

Overview GWDG and subject area

The Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen (GWDG) is the university computing center for the Georg-August-Universität Göttingen and a computing and IT competence center for the Max Planck Society. The provision of high-performance HPC systems has been one of its tasks for over 40 years. In 2020, the University of Göttingen / GWDG was accepted as one of eight computing centers in the National High-Performance Computing (NHR) network. The GWDG operates the HLRN-IV system "Emmy", one of the most powerful computers in the world.

As a national supercomputing center, the GWDG offers technical support to researchers and students from various science domains using sophisticated computer codes, including earth system science, life science, and engineering. We also participate in both national and international research projects. At the same time, we aim to improve our close collaboration with the German Aerospace Center (DLR), and specialized computing centers including the German Climate Computing Center (DKRZ) and the Institute for Advanced Simulation Jülich (IAS-JSC).

To strengthen our HPC group, we are looking for highly motivated candidates with expertise in High-Performance Computing, Data Analytics, and Machine Learning applications for scientific research. The successful candidates should be willing to embrace new ideas, e.g., application of AI and Machine Learning for weather prediction and climate simulations. The successful candidates should also be enthusiasts of using novel computing technologies, e.g., usage of GPUs in improving the performance of scientific application codes.

Key to this position, the successful candidates should have a demonstrated interest in offering technical support for research groups and projects using HPC in their research. Participation in code development will be desirable. Additionally, the GWDG together with the Faculty of Mathematics and Computer Science and the Campus Institute Data Science (CIDAS) of the University of Göttingen provides a stimulating research environment in Scientific Computing, with an opportunity to conduct research in

the intersection of applied High-Performance Computing, AI, and Machine Learning. The successful candidates thus have the opportunity to develop their career or write a thesis for an advanced qualification in any of these subjects.

Responsibilites

We have a wide range of potential responsibilities that we would like to discuss with you. Your responsibilities in our team could include, for example:

- Providing technical support for research projects and users of the HPC systems, e.g., porting and optimizing application codes
- Researching and developing novel services, e.g., the application of AI and Machine Learning in simulations
- Developing new methods and techniques, for example, for storing and managing large simulation data sets
- Improving the system efficiency, e.g., by developing efficient HPC workflows for data-intensive simulations
- Support administration of complex HPC systems, e.g., in core services such as a workload manager
- Contributing to training and teaching activities including at the University of Göttingen

Requirements

- Advance degree in Computer Science, Mathematics, or Natural Sciences
- Experience in Parallel Programming
- Experience in working with large complex HPC systems
- Good knowledge of the Linux Operating System
- Experience in scripting languages, e.g., Python or shell
- Excellent analytical skills
- Excellent communication skills
- Fluent in written and spoken English

Desirable

- Experience in an HPC application domain, e.g., earth system science, life sciences, or CFD
- Experience in developing or using complex parallel scientific codes
- Experience with data management or large scale data
- Experience with numerical libraries, e.g., LINPACK and BLAS
- Experience with a workload manager such as SLURM
- Basic knowledge of German

Our offer

- Flexible working hours and opportunity for mobile working
- A modern, diverse, and exceptional work environment with close proximity to academia and research at the intersection of several innovative technology sectors
- An interesting, versatile job in a large, internationally operating IT competence center
- Collaboration in a competent and committed team
- Qualification and further development of your skills
- Social benefits of the public sector

The GWDG strives for gender equity and diversity and therefore welcomes applications from any background. The GWDG strives to employ more severely disabled people. Applications from severely disabled persons are expressly encouraged.

Have we sparked your interest? Then please send us your application by **02.07.2022** via our online form under https://s-lotus.gwdg.de/gwdgdb/agc/20220530.nsf/bewerbung.

If you have any questions about the advertised positions, please contact Prof. Dr. Julian Kunkel (e-mail: julian.kunkel@gwdg.de) or Dr. Christian Boehme (e-mail: christian.boehme@gwdg.de).