JÜLICH
Forschungszentrum

Shaping change: this is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association with some 7,600 employees, we conduct interdisciplinary research into a digitalized society, a climate-friendly energy system, and a sustainable economy. We focus on the natural, life, and engineering sciences in the fields of information, energy, and bioeconomy. We combine this with expertise in high-performance computing and artificial intelligence using unique scientific infrastructures.

Supercomputers help us find solutions to major scientific challenges and are indispensable for modern research. The Jülich Supercomputing Centre (JSC) operates one of the most powerful supercomputing Infrastructures in Europe, in particular JUPITER, Europe's first Exascale supercomputer and the current #4 worldwide. JSC makes these resources available to researchers at the Forschungszentrum Jülich (FZJ), in Germany, and throughout Europe. Within the division "HPC for Quantum Systems", the Simulation and Data Laboratory (SDL) Numerical Quantum Field Theory aims to understand the properties of strongly interacting/correlated matter, with scientific objectives range from the study of nucleon properties to strongly correlated electronic systems, such as carbon nanostructures. To study these systems, the SDL develops algorithms and implementations for various high-performance computing (HPC) systems. To inform future algorithm and software development, the SDL studies novel computing hardware, often in the prototype stage, and engages in hardware-software co-design.

Join our team to the next possible date as

HPC-Researcher - Quantum Systems

Your Job:

- Investigate the potential of novel computing architectures for lattice field theory workloads
- Contribute to the design and implementation of an open-source lattice field theory framework, able to target HPC and the above novel architectures

Your Profile:

- Master's degree (preferably with subsequent PhD degree) in physics or a related field at the start date (ideally with a background in lattice field theory)
- Experience and strong interest in high-performance computing
- Practical experience in collaborative software development (e.g., Git-based workflows)
- Very good C++ skills

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our **Online-Recruitment-System!**

Questions about the vacancy?
Get in touch with us by using **our contact form.**
Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

- Interest in and experience with accelerated architectures (e.g., GPUs or other accelerators)
- Experience with performance analysis, profiling, and optimization.

Note that it is not necessary to fulfil all of these requirements in order to be considered for the position.

Our Offer:
We work on highly topical, socially relevant issues and offer you the opportunity to actively shape change! You can expect a wide range of opportunities:

- MEANINGFUL TASKS: The position offers an interdisciplinary collaboration on projects in an international, committed and collegial team
- STATE-OF-THE-ART INFRASTRUCTURE: Excellent technical equipment and the newest technology
- KNOWLEDGE & FURTHER TRAINING: Your professional development is important to us – we provide targeted, individual support
- WORK-LIFE BALANCE: Optimal conditions for balancing work and private life, as well as a family-friendly company policy. The option of flexible working (in terms of location) is generally available after consultation and in line with upcoming tasks and (on-site) appointments
- FLEXIBILITY: Flexible working time models, including options close to full-time (https://go.fzj.de/near-full-time), allow you to tailor your working hours to suit your individual needs
- FAIR REMUNERATION: Depending on your existing qualifications and the tasks assigned to you, you will be classified in pay grade 13 of the TVöD-Bund (Collective Agreement for the Public Service). All information on the TVöD-Bund collective agreement can be found on the BMI website: https://go.fzj.de/bmi.tvoed The monthly salaries in euros can be found here: https://go.fzj.de/bmi.tvoed.entgelt
- FIXED-TERM: The position is limited to 2 years
- VACATION: You will receive 30 days of vacation plus additional days off (e.g. between Christmas and New Year`s)

In addition to exciting tasks and a collegial working environment, we offer you much more: https://go.fzj.de/benefits

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

The following links provide further information on diversity and equal opportunities: https://go.fzj.de/equality and on specific support options: https://go.fzj.de/womens-job-journey

We offer you an exciting and varied role in an international and interdisciplinary working environment. The position is initially for a fixed term of 2 years. Salary and social benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund) depending on the applicant’s qualifications and the precise nature of the tasks assigned to them.