



Job Description: Postdoc position

Development of quantum algorithms for materials physics

Physics, mathematics, computer science, biology, chemistry or related field (m/f/d)

Start date:

December 1, 2023 or later

Duration:

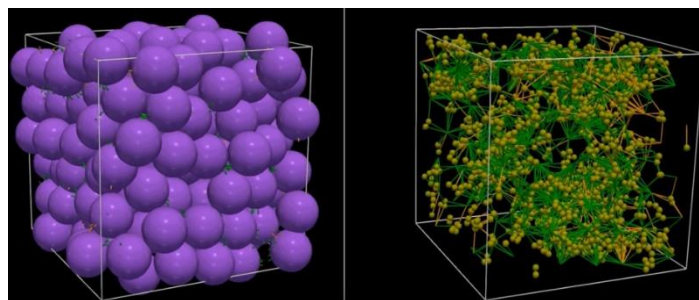
3 years

Compensation:

Up to pay grade 13 TVöD

Employment:

full time (part-time possible)



Your mission:

The Institute of Materials Physics in Space is one of the leading institutes worldwide in the exploration of fundamental physical properties and the solidification of metallic liquids, soft matter, and granular systems. In addition to experimental work in the laboratory and in microgravity, the institute works on computer simulations and theory to understand the physical phenomena that occur.

The Quantum Computer Initiative is a major project of the German Aerospace Center in the development and use of quantum computers. In the field of materials physics, the initiative aims to lay the foundations for the future effective use of quantum hardware and corresponding algorithms.

As part of the project you will be responsible for the following tasks:

- Development of application-oriented algorithms for current and future available quantum computer hardware for solutions in the areas of optimization, machine learning, or ab-initio calculations

- Development of quantum computer algorithms and adjustment to current and future available hardware solutions
- Elaboration of theoretical foundations for quantum computing
- development of scripts and software for the utilization of available hardware
- Publication of results in scientific journals and presentations at international scientific conferences

Your qualifications:

- Degree in physics, chemistry, computer science, mathematics, or biology
- Doctorate in one of the subject areas mentioned above
- good programming skills, preferably in C++ and Python
- Good English language skills
- Preferably research experience in condensed matter theory or in the field of quantum computing in one of the areas of optimization, machine learning, or ab initio

Your start:

Look forward to an employer who values your commitment and promotes your development through diverse qualification and further training opportunities. Our unique working environment offers you creative freedom and an unparalleled infrastructure in which you can achieve your mission. Work-life balance, family and career compatibility, as well as equal opportunities for people of all genders (m/f/d), are important components of our personnel policy. We give preference to applications from qualified disabled individuals.

Contact Person:

Prof. Dr. Matthias Sperl, matthias.sperl@dlr.de

Reference number: 87354

Online Application Form:

https://www.dlr.de/dlr/jobs/en/desktopdefault.aspx/tabid-10596/1003_read-52035