



Innovation through Science

Open PhD Position

The Honda Research Institute Europe GmbH is looking for a

PhD student m/f/d

to work on the topic

Quantum computing and quantum optimization with multi-level qudits

in an attractive and international research environment. The PhD position is integrated into a highly collaborative Horizon Europe Project with six high-ranked universities and research institutions from Austria, Germany, Italy and Spain. The overall target of the project is to advance the theoretical, technical, and algorithmic state of the art regarding multi-level qudits for their use in quantum simulations and quantum computing.

Your task as PhD student is the development of quantum optimization algorithms for approaching real-world application problems on near term noisy intermediate-scale quantum (NISQ) hardware devices using multi-level qudits.

Your qualifications

- A master's degree or diploma in physics or mathematics with a solid background in quantum mechanics, quantum information science, quantum computing or similar fields
- A solid understanding of optimization techniques for solving various optimization problems, such as combinatorial integer, mixed-integer problems, and continuous optimization problems, is highly welcome. Practical experience in implementing (numerical) optimization techniques for problem solving is desirable
- Knowledge and experiences in programming with typical programming languages like Python or C/C++ and tools like git are welcome

What we offer

- Employment as an associate at the Honda Research Institute Europe GmbH in Offenbach, Germany
- Working in a friendly, open and highly interdisciplinary environment with an exciting combination of fundamental research and application projects
- Participation in international conferences and workshops

The position will be available from November 2022.

We are looking forward to hearing from you!

To make initial contact, please submit your application online to Horst Mangold, PME – Personal- und Managemententwicklung, at:

honda.pme-net.de