



Innovate through science

## Senior/Postdoctoral Researcher m/f/d

# Applications of Quantum Computing and Quantum Optimization

The Honda Research Institute Europe GmbH is looking for a Senior/Postdoctoral Researcher to work on the topic Applications of Quantum Computing and Quantum Optimization in an attractive, international and privileged research environment.

The position is part of a small research team working in a highly collaborative way, in close cooperation with a strong network of experts from universities and institutional partners across Europe and beyond. Our main target is understanding the benefits and shortcomings of quantum approaches for realistic use-cases.

Thanks to our unique positioning as a fundamental research Institute embedded in Honda's industrial R&D, we are able to transfer fundamental insights to real applications and create value that impacts at large scale.

### Your task

Your responsibilities will be the assessment of application cases regarding quantum-assisted solution approaches and the development of quantum optimization algorithms for approaching real-world problems on noisy intermediate-scale quantum (NISQ) devices. You are expected to further advance the technology in this field, and you will have the chance to contribute to shaping the way of how quantum technologies will be adopted in industry for use-cases of high practical relevance.

### Your qualifications

- PhD degree or similar qualification in physics, mathematics, computer science or related fields
- Solid understanding of state-of-the-art quantum computing and quantum machine learning methods
- Extensive experience in applying quantum computing and quantum information processing algorithms and thoroughly assessing the results
- Good understanding of optimization techniques for solving optimization problems, such as combinatorial (mixed-)integer problems and continuous optimization problems. Practical experience in implementing (numerical) optimization techniques for problem solving is desirable
- Experience in programming with typical programming languages like Python or C/C++ and tools like git
- Pro-active, curious and rigorous mind; you are a team player

### Our strengths – your benefits

- An exciting combination of fundamental and applied research
- An open atmosphere with a great multidisciplinary, international team and strong academic collaborations
- Participation in international conferences and workshops

### We look 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](http://honda.pme-net.de)