

# PhD thesis

## TU Munich x QuantumDiamonds

### **Making the invisible visible through best-in-class quantum sensors**

is the mission of the Bucher Lab at TU Munich and the deep tech startup QuantumDiamonds GmbH.

About the Bucher Lab at TU Munich

In recent years, color centers in diamond have been shown to be an outstanding atomic-scale sensor for magnetic fields. With these defects in diamond – more precisely nitrogen-vacancy (NV) centers – nuclear magnetic resonance (NMR) signals from a few cubic nanometer sample volumes or even single molecules have been detected.

### **Tasks**

We are looking for you to strengthen and join our efforts within the Munich Quantum Valley project where we have an open doctoral position for a Quantum Sensing Researcher.

What you will be working on:

- You will work in an international growing team focusing on quantum sensing with nitrogen-vacancy centers
- You will work at the intersection of basic science and technology development and closely interact with the project partner QuantumDiamonds GmbH
- You will actively participate in outreach events and present your results at conferences, workshops and research publications.

## Requirements

- You hold a degree in physics, engineering or material science
- You have excellent skills in instrumentation and measurement and/or expertise in micro and nano-fabrication
- Ideally, you have gathered experience in working with quantum sensors and bring in expertise in fabricating them
- You are an independent worker and bring creative ideas into a larger team.
- You like to work in an academic setting with a technology-oriented innovative mindset.
- You have strong communication and writing skills.

## Benefits

- Close collaboration with one of the leading quantum sensing startups and the opportunity to apply your research in an industrial setting
- A position at the Garching Research Campus, one of the most advanced research and education facilities in Europe, with internationally visible research programs in quantum science and technology.
- Close connection to the activities of the Munich Quantum Valley with its main goal to build a quantum computer based on different platforms, to develop suitable algorithms and application, and to establish an ecosystem for innovative quantum technologies.
- A remuneration according to qualifications and professional suitability in accordance with the collective bargaining agreement of the German federal states (depending on qualification between TVL-E13 and E15).

Apply directly to

<https://join.com/companies/quantumdiamonds/9894607-phd-thesis-tu-munich-x-quantumdiamonds-gmbh>

Contact: [tammo.sievers@quantumdiamonds.de](mailto:tammo.sievers@quantumdiamonds.de)

Bucher lab: <https://www.bucherlab.org/people/dominik-bucher/>

QuantumDiamonds: <https://www.quantumdiamonds.de/>