



TECHNISCHE
UNIVERSITÄT
WIEN



PhD position (f/m/d) in applied quantum/gravity/neutron physics (fixed-term)

Application deadline: 31.10.2020

Job description: The successful candidate will complete the implementation of the next development step in the *qBounce* experiment. The *qBOUNCE* experiment investigates the fundamental structure of spacetime & cosmology. It focuses on the control and understanding of a gravitationally interacting elementary quantum system using the techniques of resonance spectroscopy. It offers an innovative way of looking at gravitation based on quantum interference, which will involve the technical validations of new methods and two full measurement campaigns at the Institut Laue-Langevin (ILL) in Grenoble, the analysis of all data and presentation of the results. He/she will work in an international team with his supervisor and other experienced technicians and scientists in a professional environment. The technical challenges of the experiment offer the opportunity to acquire a broad range of skills, but will also allow to make a contribution to fundamental science with a high impact and to start a career in this field. Due to measurement campaigns in France, frequent traveling can be expected.

Qualifications Required: The candidate should have a Master degree in experimental physics and a solid background in particle physics as well as gravity. Expertise in, modern programming languages, electronics, lasers, and Mathematica are advantageous. The ability to work independently in an organized way, and to communicate and interact with people of diverse backgrounds are an asset.

Institution: The Technische Universität Wien is the largest institution for higher education and research focused on science and technology in Austria and has 4.800 employees and 29.000 students. The neutron group at the Atominstitut in Vienna operates the *qBounce* experiment at the ILL Grenoble, the strongest neutron source in the world where 1400 scientists from 40 countries run 640 experiments every year.

Position: For this position, a minimum gross salary of 30.700 €/year (30 hours/week) is offered, incl. full health and social insurance. Full compensation for travel costs is guaranteed. Additional please see [Fringe Benefits Catalogue TU Wien](#)

Application procedure: For further information: Prof. Hartmut Abele abele@ati.ac.at. The *qBOUNCE* experiment is an integral part of the Doktoratskolleg "Particles and Interactions (DKPI)", where this position is associated with. Applicants are invited to apply at www.dkpi.at with addendum "Abele" as well.

For this application preference will be given to female applicants at equal qualification.