Job posting

**Type of position**
- ☒ scientific
- ☐ administrative

**Target group**
- ☐ graduates
- ☒ post docs
- ☐ other

**Title**
Experimental Postdoc position on quantum simulation with dipolar quantum gases of Erbium atoms

**Institution**
University of Innsbruck

**About Us**
Our group, led by Prof. Francesca Ferlaino, is jointly located at the University of Innsbruck (UIBK) and at the Institute for Quantum Optics and Quantum Information (IQOQI) of the Austrian Academy of Science.
We work with the exotic and highly magnetic Erbium and Dysprosium atoms, either in the ground- or in highly excited Rydberg states. The group comprises four research teams, three experimental and one theoretical. Our three Labs works on Erbium and Dysprosium dipolar quantum gases, Er-Dy mixtures, and Er Rydberg Tweezers.
Learn more about our research take a look at our website www.erbium.at

**Joining Us**
It is now an exciting time to work with ultracold highly-magnetic quantum gases, thrived by the rapid developments of quantum science based on lanthanide species.
Working with us will provide a unique opportunity to perform exciting experiments at the frontier of quantum physics in an exceptional international environment, as well as to collaborate with a large network of researchers worldwide, and to develop valuable high-tech skills in electronics, photonics, programming, and data analysis, among others. Join us if you want to contribute in unveiling the unique opportunities of ultracold lanthanide atoms for quantum physics!

**Responsibilities**
In this project you will create dipolar Fermi and Bose gases of Erbium atoms and to use them to study strongly-correlated lattice spin systems and spinor system. Moreover, the newly discover ultra-narrow inner-shell optical transition in Erbium (similar to a clock transition in alkali-earth atoms) will be used to access new regime of control and manipulation for quantum simulation and quantum optics physics. You will work in a team of two PhD students, one Master student, co-PI Manfred Mark,
and PI Francesca Ferlaino. Moreover, you will collaborate with the ultracold-quantum-gas theory group in Innsbruck and a network of external collaborators. The Lab, located at the University of Innsbruck, is fully operative.

**Requirements**
A PhD in Experimental AMO Physics (and ideal on ultracold atoms) is required, as well as knowledge on laser, vacuum and electronics technology.

**Application procedure (deadline etc.)**
We are looking forward to your application! If you are interested, send an email to francesca-ferlaino-group@uibk.ac.at, including a C.V., a letter of motivation, transcript of exams (Bachelor and Master), and names of at least one reference person. The application will be considered upon reception and until filling of the available positions.

Our group is strongly committed to ameliorate the gender balance in Physics at all level of the scientific career, we therefore particularly encourage applications from women.
We offer a gross salary for these positions following the salaries schemes of the Austrian Founding Agency (FWF).

**Contact**
francesca-ferlaino-group@uibk.ac.at