

Within the **Condensed Matter Theory Group at PSI** we are looking for a

PhD Student

in

Quantum magnetism out of equilibrium

Project

This PhD project explores quantum magnets out of equilibrium. On one hand you will explore quantum magnets such as doped rare earth materials, both as a platform for quantum information processing and quantum computing, as well as a rich playground to study fundamental physics such as many-body localization and spin entanglement. On the other hand you will be studying how dedicated driving of magnetic excitations may induce “hidden”, metastable magnetic order, thus realizing fast magnetic switches, and how the cooling of quantum magnets and other correlated quantum matter by electromagnetic driving can be optimized and understood in a unifying framework.

This theoretical Ph.D. thesis will be carried out in close collaboration with several experimental groups at PSI who work in the above fields. You will be part of the Quantum technology collaboration

Your profile

You hold a Master degree in theoretical physics and have particular interest in quantum physics, condensed matter theory and possibly quantum information. As an enthusiastic researcher you are dedicated and like working on technically and conceptually challenging problems.

You will be registered as a PhD Student at ETH Zürich, while your main working place will be at the Paul Scherrer Institute in Villigen. Your PhD thesis will be supervised by **Dr. Markus Müller** (CMT, PSI) and co-supervised by **Prof. Gabriel Aeppli** (Head of the Photon Science Division, PSI; Professor at ETHZ and EPFL).

We offer

The Paul Scherrer Institute is based on an interdisciplinary, innovative and dynamic collaboration. You will profit from a systematic training on the job, in addition to personal development possibilities and our pronounced vocational training culture. If you wish to optimally combine work and family life or other personal interests, we are able to support you with our modern employment conditions and the on-site infrastructure.

Applications will be considered until the position is filled. For expression of interest or further information please **contact Dr Markus Müller**, email: Markus.Mueller@psi.ch.