PhD positions

PhD positions in theoretical physics of many-body open quantum systems at the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland

We invite applications for PhD positions in the Laboratory of Theoretical Physics of Nanosystems of the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland. The positions are available starting from March 1st, 2020. The starting date is slightly flexible.

A suitable candidate should have a M.Sc., or a related degree in physics, with an excellent undergraduate record in quantum mechanics and a good knowledge of open quantum systems, many-body and statistical physics. Knowledge and practice of numerical methods and of computational tools (preferably Matlab) is also required.

The research projects focus on the study of many-body physics, environment-induced decoherence and quantum critical phenomena in driven-dissipative open quantum systems. This theoretical framework applies to an increasingly large number of experimentally viable quantum systems, including ultracold atoms, trapped ions, solid-state photonic structures, optomechanical systems, and superconducting circuits. The planned research will be carried out using both analytical and advanced numerical approaches (Quantum Monte Carlo, tensor networks, neural networks, exact diagonalization).

We offer a very stimulating environment in one of the world’s highest rank universities, outstanding research facilities, and a very attractive salary.

Interested candidates are advised to apply as soon as possible and should send a CV, giving detail of their qualifications and experience, and the names and contact details of two referees.

For additional information, please contact:

Prof. Vincenzo Savona
EPFL – SB – LTPN
BSP Cubotron
Route de la Sorge
CH-1015 Lausanne
Switzerland

E-mail: vincenzo.savona@epfl.ch
Ph: +41 21 693 3418
Fax: +41 21 693 5419
http://ltpn.epfl.ch
http://www.researcherid.com/rid/A-8847-2010