

## **Post-Doctoral position in Quantum Matter Theory at the Center for Theoretical Physics, Ecole Polytechnique**

The Center for Theoretical Physics at Ecole Polytechnique, Palaiseau (Paris), France, offers a Post-Doctoral position on the **theory of Ultracold Atoms and Quantum Simulators**. We are looking for a high-qualified, motivated, and dynamic young scientist in Theoretical Quantum Physics. The successful applicant will be working in the **Ultracold Quantum Matter group** headed by Prof. Laurent Sanchez-Palencia.

The group conducts theoretical research on the dynamics of correlated quantum systems and static or dynamic quantum phase transitions. Recent work of the group includes Anderson localization in correlated systems, criticality in low dimensional systems, and out-of-equilibrium dynamics of particle and spin systems with short and long range interactions (for details see our research pages at [www.uquantmat.fr](http://www.uquantmat.fr)). The Post-Doctoral project aims at developing numerical and/or analytical approaches within one of these fields. The successful applicant is expected to develop original lines of research in collaboration with the group leader and interact actively with PhD students.

### **Eligibility**

There is no restriction of citizenship. Candidates must hold an internationally-recognized PhD degree (or schedule their PhD defense within a couple of months), in Condensed-Matter physics, Atomic physics or Quantum Optics. We preferentially look for candidates with up to three-year experience after PhD. Strong education in Theoretical Physics and experience in the physics correlated quantum systems is expected. Expertise in advanced numerical techniques, such as quantum Monte Carlo or tensor networks for instance, would be much appreciated but is not mandatory. Ability to work in team and/or taste for collaborations with experimentalists will be appreciated, but applications of new-comers on these aspects will also be considered.

### **Conditions**

The Post-Doctoral position is offered for a first 1-year period, renewable for a 2nd year, after positive evaluation by the group leader.

### **Application procedure**

Candidates should submit their application by e-mail to Prof. Laurent Sanchez-Palencia ([lsp@cpht.polytechnique.fr](mailto:lsp@cpht.polytechnique.fr)), including

- a Curriculum Vitae (with date of birth, full address, e-mail address, and publication list)
- a research statement and motivation letter (no more than one or two pages)
- a scanned copy of their academic degrees (Master and, if applicable, PhD)
- a list of two or three potential referees (with complete e-mail addresses).

### **Dates**

**Deadline for applications :** Nov. 30, 2018

**Result of application :** January, 2019

**Start date of contract :** expected March 2019 (negociable)