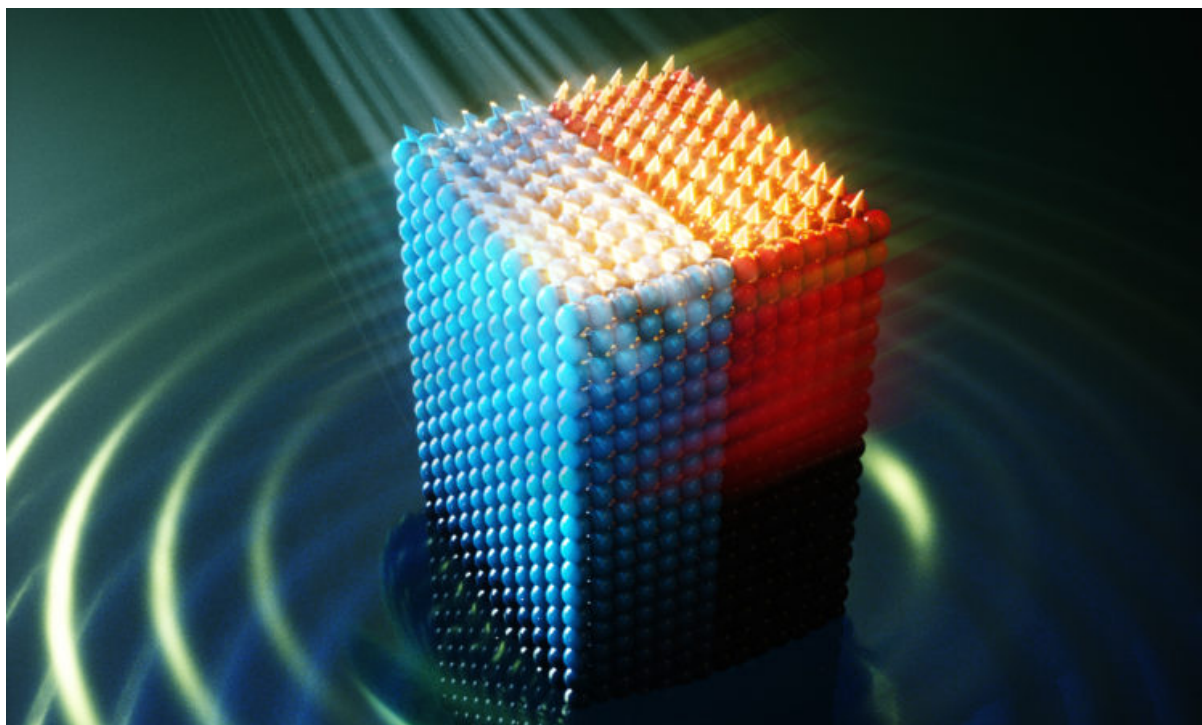


PhD position in Experimental Quantum Matter Physics

Laboratory for Designer Quantum Materials
Department of Quantum Matter Physics
University of Geneva



The Laboratory for Designer Quantum Materials invites applicants for a PhD position in Experimental Quantum Matter Physics

Start date: September 1st 2022

The project

Light is an indispensable tool for probing materials with novel electronic properties. Furthermore, light can also unlock new properties of materials, as demonstrated in recent years by a number of experimental observations of light-induced quantum phases of matter. In this project, we will take the next step in this exciting research field by investigating cavity electrodynamics of quantum materials. This approach will enable strong light-matter interactions and the synthesis of hybrid quantum states of light and matter where photons can become part of the ground state of materials.

The candidate

We are looking for candidates with a strong background in condensed matter physics, interested in the physics of correlated materials in and out of equilibrium. Experience in optics and ultrafast science is desirable. Excellent communication and analytical skills are required. The candidate should aspire to perform research at the highest international level.

Our group

The PhD project will be carried out in the Laboratory for Designer Quantum Materials at the Department of Quantum Matter Physics of the University of Geneva. Our laboratory combines synthesis of heterostructure of quantum materials, with nanofabrication and advanced optical techniques for material control. The department is a major centre of Swiss research in the field of quantum matter physics, with strong collaborations between experimental and theory groups.

The principal investigator

The PhD project will be supervised by Prof. Andrea Caviglia, andrea.caviglia@unige.ch, +41223796495.

The PhD programme

To be admitted to the doctoral program of the Physics Section, the candidate must have a Master degree in physics from a university adhering to the European studies system (Bologna system), or hold a university degree deemed equivalent. Applications are examined by the Section's equivalence commission.

The doctoral studies are composed of three parts:

- 1) Theoretical courses organised by the DQMP and by the CUSO doctoral program in physics;
- 2) Active participation to colloquia, seminars, forums, specialised schools;
- 3) Personal research work in the group of the PhD thesis advisor.

The candidate will also be required to participate in teaching and knowledge dissemination activities. Scientific writing of research papers and of a PhD thesis is part of the responsibilities of the PhD candidate.

We offer excellent employment conditions and a stimulating scientific environment located in one of the most liveable cities in the world, surrounded by natural beauty.

The application process

The application should be written in English and submitted to andrea.caviglia@unige.ch.

The application needs to include:

- 1) A motivation letter that discusses why you are applying to this specific project and why you would like to join our group.
- 2) A curriculum vitae.
- 3) A publication list if available.
- 4) A list of three scientists that can provide references.

The application process will remain open until the position is filled.