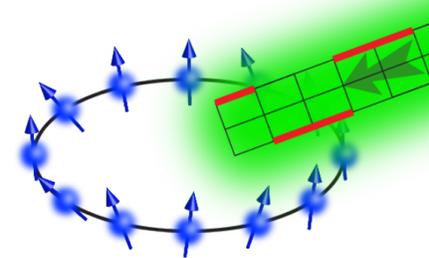


# Postdoc Fellowship



## Quantum many-body dynamics & Machine Learning

*click here to*

**APPLY NOW**



### Description

We are currently looking for a highly **motivated and skilled postdoc** to join the new Quantum Many-Body Dynamics research group at Sofia University **as a VIHREN fellow**. We are interested in a broad range of research topics at the interface of quantum many-body systems & machine learning:

- *out-of-equilibrium quantum dynamics*
- *condensed matter theory (many-body physics, phase transitions, critical phenomena)*
- *AMO physics (e.g., ultracold atoms, trapped ions, superconducting qubits, etc.)*
- *statistical physics (glassy energy landscapes, relation to machine learning)*
- *machine learning (reinforcement learning, unsupervised learning, etc.)*

The group is funded by a VIHREN research frontier grant from the Bulgarian National Science Foundation, and a Marie Skłodowska-Curie actions grant from the European Commission's Research Executive Agency.

**Job type:** postdoc fellowship, full-time

**Start date:** October 1, 2020

**Duration:** 2 years, with an option to extend for a 3rd year

**Location:** Faculty of Physics, Sofia University, Sofia, Bulgaria (EU)

**Supervisor:** Marin Bukov; website: <https://mgbukov.github.io/>

Applicants are expected to **(i)** have research experience in one or more of the above-listed fields, **(ii)** have solid knowledge of a programming language, and **(iii)** be prepared to expand their knowledge through active, full-time research. The postdoctoral fellow will be encouraged to become an independent researcher through interactions with the group, following an individual career development plan. We maintain an active **network of international collaborations** with leading groups in the field [Berkeley, Boston, Brussels, Harvard, Munich, etc.]. The working language in the group is English.

### Fellowship Benefits

- very competitive salary
- laptop
- travel budget for participation in international conferences, workshops, and schools
- opportunities for international collaborations with leading scientists in the field

We strongly encourage both physics PhDs with interest in machine learning, and computer science PhDs with knowledge of quantum mechanics to apply for the VIHREN postdoc fellowship!

**Sofia University** is the oldest research university in Bulgaria and one of the largest in south-east Europe, with about 20,000 students. Situated within walking distance from downtown Sofia in Sofia University's Lozenets campus, the Faculty of Physics hosts research groups in various areas of modern physics, and is one of the most productive research environments in Bulgaria [340 publications/yr. (Web of Science, 2018)]; the Quantum Optics and Quantum Information theory group hosts the annual AMO workshop CAMEL. The Faculty of Physics shares campus with the Faculty of Mathematics & Informatics, and the Faculty of Chemistry & Pharmacy, providing opportunities for interdisciplinary collaborations. The Bulgarian capital Sofia also hosts the institutes for Solid State Physics and Informatics, and Information & Communication Technologies at the Bulgarian Academy of Sciences, with groups interested in condensed matter, quantum optics, and ML / big data.