



Postdoctoral Position in Computational Condensed Matter Physics

The research group of **Prof. Ziyan Zhu** in the Department of Physics at Boston College invites applications for a **postdoctoral position** in **computational condensed matter physics**.

We seek candidates in the area of quantum materials. Our current research focuses on the structure, electronic properties, and electron-phonon coupling in multi-layered moiré materials, the many-body ground states of effective lattice models, and the discovery of quantum materials using machine learning. However, we also welcome applicants with expertise in other related areas. Further information can be found at www.ziyanzhu.com.

We believe that innovation comes from a mix of perspectives. We encourage candidates from diverse academic and personal backgrounds to apply.

IDEAL CANDIDATES SHOULD HAVE:

- Ph.D. in Physics or closely related fields by the appointment start day.
- Strong background in numerical techniques such as density functional theory, molecular dynamics, exact diagonalization, quantum Monte Carlo, density matrix renormalization group, and/or physics-informed machine learning.

POSITION DETAILS:

- **Duration:** 1-year initial appointment, extension possible up to 2 additional years, depending on performance and mutual agreement.
- **Start Date:** Flexible, after September 2025.

HOW TO APPLY:

- Email your **CV and a cover letter** briefly stating why you are a good fit for the position, your research experience and interests to ziyan.zhu@bc.edu.
- Arrange for at least **two reference letters** to be sent to ziyan.zhu@bc.edu.

WHY JOIN US?

- **Experimental Collaboration:** We work closely with many experimental groups. Your results will directly shape and help interpret experiments.
- **Interdisciplinary Focus:** Our work spans theoretical physics, applied mathematics, materials science, and fluid dynamics, providing flexible research directions and fostering diverse skillsets.
- **Meaningful Impact:** As part of a small and dynamic group, you will play a key role in shaping our research direction and mentoring students.
- **Collaborative Department:** The Department of Physics at Boston College has a strong focus on condensed matter physics (with ~ 20 faculty members). We have a close-knit community and supportive environment.
- **Ideal Location:** Located in Boston, we are surrounded by world-class universities, making it easy to start new collaborations. The city also offers a vibrant cultural scene, rich history, and an excellent quality of life.