

Xiaodong Hu

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Education

University of Washington
2024-present

Postdoc Scholar

Boston College
2018-2024

Ph.D in Condensed Matter Theory
Advisor: Ying Ran

University of Science and Technology of China
2014-2018

B.S. in Theoretical Physics

Publications/Preprints

- [X-D. Hu](#), D. Xiao, and Y. Ran, *Hyperdeterminants and Composite Fermion States in Fractional Chern Insulators*, Phys. Rev. B **109**, 245125 (2024, Editor's Suggestion)
- [X-D. Hu](#), J-H. Han, and Y. Ran, *Supercurrent-induced anomalous thermal Hall effect as a new probe to superconducting gap anisotropy*, Phys. Rev. B **108**, L041106 (2023)
- [X-D. Hu](#), and Y. Ran, *Engineering chiral topological superconductivity in twisted Ising superconductors*, Phys. Rev. B **106**, 125136 (2022)
- F. Bahrami, [X-D. Hu](#), Y. Du, O. I. Lebedev, C. Wang, H. Luetkens, G. Fabbri, M. J. Graf, D. Haskel, Y. Ran, and F. Tafti, *First demonstration of tuning between the Kitaev and Ising limits in a honeycomb lattice*, Sci. Adv. **8**, eabl5671 (2022)

Presentations

- *Projective Construction of Fractional Chern Insulators*, Talk, APS March Meeting, 2024
- *Projective Construction of Fractional Chern Insulators: Hyperdeterminants*, UW CMT Journal Club Talk, 2024
- *Engineering Chiral Topological Superconductivity in Twisted Ising Superconductors*, Talk, APS March Meeting, 2023
- *Supercurrent-induced anomalous thermal Hall effect as a new probe to superconducting gap anisotropy*, Talk, online APS March Meeting, 2023

Techniques

Programming Languages Julia, Python, Mathematica, Rust, C++.
DFT Tools Quantum Espresso, ELK

Teaching Experiences

During my PhD time at Boston College, I have served as a Teaching Assistant for several graduate courses, including Classical Mechanics, Electrodynamics, Quantum Mechanics I/II, Statistical Mechanics I/II, Solid State Physics I, and Particle Physics. In the summer term of 2023, I also served as an instructor for an undergraduate course, Introduction to Physics I/II.

Last updated: July 14, 2024