

Shi Feng |

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Education

The Ohio State University (OSU)

Ph.D in Physics

Columbus, OH, USA

2018–Present

- Theoretical Condensed Matter Physics
- Advisor: Nandini Trivedi (Dept. of Physics, OSU)
- Expected Completion: 2023

Xi'an Jiaotong University (XJTU)

B.S. in Physics

Xi'an, Shaanxi, China

2014–2018

- Honors Science Program (Physics), Qian Xuesen College
- Visiting Student in University of California, Riverside (UCR), 2016

Research Experience

OSU

Graduate Research Assistant

Columbus, OH, USA

2020–Present

Advisor: Nandini Trivedi (Dept. of Physics, OSU)

- Kitaev quantum spin liquid: response, entanglement and topological order.
- Magnetic phase transition in one dimensional quantum spin orbital liquid

XJTU

Undergraduate Research Assistant

Xi'an, Shaanxi, China

2017 - 2018

Advisor: Guanghao Lu (Frontier Institute of Science and Technology, XJTU)

- Absorption and charge transport in semiconductor/insulator polymers
- in-situ reconstruction of tomography of nanowires buried in conjugated polymers

UCLA

Undergraduate Research Assistant

Los Angeles, CA, USA

Summer 2017

Cross-disciplinary Scholars in Science and Technology

Advisor: Hongwen Jiang (Dept. of Physics and Astronomy, UCLA)

- Reduction of charge defects in MOS quantum dot qubit device
- Electron beam induced defects in SiO_2 using Monte Carlo simulation
- Fabrication of MOS quantum dots by nano-imprint lithography that mitigates E-beam induced defects

UCR

Undergraduate Research Assistant

Riverside, CA, USA

Fall 2016

Advisor: Marc Bockrath (Dept. of Physics, UCR)

- Nano fabrication and the analysis of electronic transport in twisted bilayer graphene.
- Graphical interface for data processing in graphene resistivity.

Publications

[1]: **Shi Feng**, Gonzalo Alvarez, Nandini Trivedi. Gapless to gapless phase transitions in quantum spin chains. *Phys. Rev. B* 105, 014435 (2022)

[2]: **Shi Feng**, Niravkumar D. Patel, Panjin Kim, Jung Hoon Han, Nandini Trivedi. "Magnetic phase transitions in quantum spin-orbital liquids". *Phys. Rev. B*, 101:155112 (2020)

[3]: Tong Xiao, Jiayu Wang, Shuting Yang, Yuanwei Zhu, Dongfan Li, Zihao Wang, **Shi Feng**, Laju Bu, Xiaowei Zhan, Guanghao Lu. Film-depth-dependent Crystallinity for Light Transmission and Charge Transport in Semitransparent Organic Solar Cells. *Journal of Materials Chemistry, A*, 2020, 8, 401 (2020)

[4]: Dongfan Li, Shengtao Li, Wanlong Lu, **Shi Feng**, Peng Wei, Yupeng Hu, Xudong Wang, Guanghao Lu.

Rapidly measuring charge carrier mobility of organic semiconductor films upon a point-contact four-probes Method. *JEDS*.2018.2872714 (2018)

[5]: Laju Bu, Shuang Gao, Weichen Wang, Ling Zhou, **Shi Feng**, Xin Chen, Demei Yu, Shengtao Li, Guanghao Lu. Film-depth-dependent light absorption and charge transport for polymer electronics. *Adv. Electron. Mater.*, 2:1600359 (2016)

Conferences and Workshops

Mar, 2022: APS March Meeting, American Physical Society

- Oral presentation: Spin response and magnetic absorption of Kitaev quantum liquids under an external field.

Mar, 2021: APS March Meeting, American Physical Society

- Oral presentation: Field-induced gapless-to-gapless phase transitions in integer spin chains.

Aug, 2020: Ultra Quantum Matter, Perimeter Institute for Theoretical Physics, Waterloo, Canada

Jun, 2020: Condensed Matter Physics in all Cities, University of Kent Canterbury, Kent, UK

- Oral presentation: Magnetic phase transition in quantum spin orbital liquid.

Honors and Awards

2018: Siyuan Scholarship, XJTU, Xi'an, Shaanxi, China

2017: CSST Scholarship, UCLA, Los Angeles, CA, USA

- Awarded in CSST program – Cross-disciplinary Scholars in Science and Technology

2016: Meritorious Winner of Interdisciplinary Contest in Modelling, Bedford, MA, USA

2016: 1st Place Award of China Mathematical Contest in Modelling, Xi'an, Shaanxi, China

2013: 2nd Place Award of Chinese Physics Olympiad, Xi'an, Shaanxi, China

Teaching Experience

OSU

Columbus, OH, USA

Graduate Teaching Assistant

- Statistical Mechanics (Fall 2021)
- Introductory Physics – Electromagnetism, Optics, Modern Physics (Spring 2020)
- Introductory Physics – – Mechanics, Thermal Physics, Waves (Fall 2019)
- Introductory Physics – Mechanics, Kinematics, Fluids, Waves (Spring 2019)
- Statistical Mechanics (Fall 2018)

Technical Skills

Programming:

- Languages: C++, Python, Julia, Perl, Haskell, Matlab, Mathematica, Bash
- Libraries: Eigen, Numpy, Scipy, Matplotlib, DMRG++, HDF5, OpenGL, Blas, Lapack

OS and Clusters:

- OS: Windows, Linux (Ubuntu), High Performance Computing (HPC) environments
- Clusters: Unity and Ohio Supercomputer Center (OSC)

Languages

Chinese: Native

English: Fluent