

FanZheng Meng

UNDERGRADUATE STUDENT

Hongshan, Wuhan, Hubei, China

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Education

Huazhong University of Science and Technology

Wu Han

BS UNDERGRADUATE DEGREE

Sep. 2022 - July. 2026

- Major in Physics (GPA: 3.93/4 || 89.5/100)
- Minor in CS
- research advisor: Professor Guan

Awards, Fellowships, & Grants

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|------|---|-------|
| 2023 | National Encouragement Scholarship, | ¥5000 |
| 2024 | Model Student of Academic Records, University apartment | ¥1200 |
| 2024 | National Encouragement Scholarship, | ¥5000 |

Research Experience

HUST-Magnetism and Spintronics Group(www.yutaolab.com)

Wuhan, China

ADVISOR: PROFESSOR. YU

Nov. 2024 - Mar. 2025

- project: "Symmetry analysis of the coupling of triplet superconductor and dipole interaction"
Goal:
 1. Use group theory method to analyse the symmetry of intriguing system such as triplet superconductor coupling with magnetic field.
 2. Write down the G-L free energy of the system and seek potential mechanism to control the system.Accomplishment:
 1. Use group theory method to write down the free energy of singlet (and triplet) superconductivity system with specific symmetry and graphene system with hexagonal symmetry.

Institute of Precision Measurement Science and Technology Innovation, China Academy of Sciences

Wuhan, China

ADVISOR: PROFESSOR. XIWEN GUAN

Mar. 2025 - Present

- project: "Correlation function of one-dimensional Heisenberg model and its thermodynamic"
Goal:
 1. Learn Bethe ansatz solutions of Heisenberg model
 2. Solve TBA equations and plot the emergent quantity of Heisenberg chain.Accomplishment:
 1. Analysis of scaling function in critical limitation.
 2. Numerically solve TBA equations and reproduce the literature(PNAS Nexus, 2024,3,page363) in Python

Presentations

RESEARCH REPORT

Jan. 2025. *Symmetry of the order parameter for high-temperature superconductivity*. Group Report

Feb. 2025 *Phenomenological theory of unconventional superconductivity*. Group Report