

Zhou Fang

Institute for Quantum Science and Engineering, Southern University of Science and Technology, Shenzhen, China
Tel.: +86-13858796425 E-mail: 12333069@mail.sustech.edu.cn

EDUCATION

Master's Degree in Quantum Science and Engineering 2023-present

Institute for Quantum Science and Engineering, Southern University of Science and Technology

- Research: Topology of swallowtail
- Supervisor: Yifei Zhu
- Average Score: GPA: 3.44/4
- Core Modules: Algebraic Topology (A-), Algebraic Geometry (A-), Algebraic curves (A+)

Bachelor's Degree in Physics 2019-2023

College of Physics, Southern University of Science and Technology

- Research: Higher categories and quantum liquids
- Supervisor: Liang Kong and Fei Ye
- Average Score: GPA: 3.65/4
- Core Modules: Differential Geometry (B+), Abstract Algebra (B+), Advanced Algebra I (A), Advanced Algebra (A-)

RESEARCH EXPERIENCES

Topology of the configuration of eigenvectors and eigenvalues of parametrized Hamiltonians 2024-pres.

- Compute the intersection homology of the swallowtail space
- Applied bundle theory, homotopy groups in the band theory

Higher category theory and quantum liquids 2022-2023

- Investigated categories and higher categories and their applications in quantum liquids

ACADEMIC CONFERENCES

Attended the workshop “Stable homotopy groups of spheres: Theories and computations, where to now”, Tsinghua Sanya International Mathematics Forum 2025

Attended the Workshop on computer-assisted research in geometry and topology, Kunming Tianyuan Mathematics Research Centre (*Oral presentation*) 2024

-Discussed Higgs bundles emerged in energy bands in physics

Attended IWoAT Summer School 2024: Motivic Stable Homotopy Theory, Fudan University 2024

Attended the Topology summer school in 2024, Yau Mathematical Sciences Centre 2024

-Learn many topics about topology and geometry e.g., Higgs bundles, Geometric Group Theory, etc.

AWARDS AND SCHOLARSHIPS

Outstanding Graduate 2024

Special Prize for Graduate Academic Scholarship 2024

First Place in Graduate Rowing Team Competition 2024

Second-Class Scholarship for Undergraduate Student in Shuli college 2022

Second place in the U25 Women's Team Category in Guangdong Province Bridge Championship 2021

Third Prize in the National Mathematical Modelling Competition in Guangdong Province 2021

Outstanding volunteer in the battle against the epidemic 2019-2020

EXTRACURRICULAR EXPERIENCES

Teaching Assistant

2023-2024

- Teaching assistant in Advanced mathematics and Linear Algebra, giving a lecture once a week
- Gained experience in teaching theoretical knowledge and communicating skills.

Poster in the 6th CLE conference on teaching and learning

2023

- Shared and talked (in English) my thoughts for learning and teaching.
- Enhance my ability in critical thinking and public speaking.

Cycling the East Coast of Hainan Island

2024

- Total distance: 450 km
- Improved planning and time-management skills, and indomitable perseverance

University Science Popularization Society (Head of the Secretariat)

2020-2021

- Enhanced self-confidence and teamwork skills

SKILLS

- Software: Mathematica, Latex, Java, Python
- Soft skills: time management, leadership, cooperation, problem solving, independent thinking, communication, etc.
- Languages: English (IELTS 7.0), Mandarin (native).
- Hobbies: Chinese Martial Arts, Tennis, Outdoor Pursuits, movies.