

EDUCATION

The University of Texas at Austin

Ph.D. student in Physics, Advisor: [Mike Downer](#)

Austin, U.S.

Fall 2022–Current

Huazhong University of Science and Technology

B.Sc. in Physics, Advisor: [Pengshun Luo](#)

Wuhan, China

Fall 2018–Summer 2022

- Thesis: “Experimental search for exotic spin-spin interactions at the micrometer range”

RESEARCH INTEREST

- Laser-plasma interaction
- Experimental search for new physics

EXPERIENCE

Huazhong University of Science and Technology

Research Assistant in [ENP Group](#) (Experimental condensed matter physics)

Wuhan, China

Spring 2019–Summer 2022

- Simulation of condensed matter phenomenon by finite element analysis
- Proposal of an experiment to search for exotic spin-spin interactions
- Theoretical motivation of the axion

The Chinese University of Hong Kong

Honorary Research Assistant in [The Jianfang Wang Group](#) (Nanophotonics)

Hong Kong SAR, China

Summer 2021

- Synthesis of nanoparticles including nanospheres, nanoplates, nanorods, and et al
- Optical characterization of the nanoparticles

Princeton University

Undergraduate Researcher, Advisor: [Joshua Winn](#) (Astrophysics)

Online

Spring 2021

- Search for the orbital decay of exoplanets based on TESS data

Columbia University

Undergraduate Researcher, Advisor: [John Parsons](#) (High-energy physics)

Online

Summer 2020

- Standard Model, techniques in colliders, and discovery of the Higgs boson

SKILLS

- **Programming:** C++, Python, Fortran
- **Simulating:** COMSOL
- **Data processing:** MATLAB, Mathematica, Origin
- **Other:** \LaTeX , Github

PUBLICATIONS

1. Reconstruction, Analysis of the Process ggH Decay to $ll\nu\nu$ Monte Carlo with $MH=125$ GeV and Introduction of the Physical Background.
Fanli Zeng✉, Yiwei Liu, **Ze Ouyang** et al, [J. Phys.: Conf. Ser.](#), 2287 012030 (2022)

TEACHING

- **Teaching Assistant (Grader)** at The University of Texas at Austin Fall 2022
Modern Physics and Introduction to Thermodynamics (PHY 355, Unique number:57430)

LANGUAGES

- **Mandarin Chinese:** Native or bilingual proficiency
- **English:** Native or bilingual proficiency

EXTRACURRICULAR ACTIVITIES

- Member at Badminton Club Fall 2022–Current
The University of Texas at Austin
- Member at Badminton Team Fall 2018–Summer 2022
School of Physics, Huazhong University of Science and Technology