

Ze Ouyang

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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

The University of Texas at Austin

Research Assistant in [LWFA Group](#) (Experimental laser physics)

Austin, U.S.

Fall 2022–Current

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, China

Summer 2021

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

SKILLS

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

PUBLICATIONS

1. Proposal for the search for exotic spin-spin interactions at the micrometer scale using functionalized cantilever force sensors.

Qian Wang, **Ze Ouyang**, Pengshun Luo et al, [Phys. Rev. D](#), 107, 015005 (2023)

2. 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)
Instructor: [Prof. Onyisi](#)
- **Teaching Assistant** at The University of Texas at Austin Spring 2023
Quantum Mechanics I (PHY 373, Unique number: 57005)
Instructor: [Prof. Onyisi](#)
- **Teaching Assistant** at The University of Texas at Austin Spring 2023
Modern Physics and Thermodynamics (PHY 355, Unique number: 56965)
Instructor: [Prof. Raizen](#)
- **Lab Teaching Assistant** at The University of Texas at Austin Summer 2023
Lab for PHY 302K/303K/317K (PHY F105M, Unique number: 86935)
Instructor: [Prof. Loveridge](#)
- **Lab Teaching Assistant** at The University of Texas at Austin Fall 2023
Lab for PHY 302L/303L/317L (PHY 105N, Unique number: 57430)
Instructor: [Prof. Loveridge](#)
- **Lab Teaching Assistant** at The University of Texas at Austin Fall 2023
Lab for PHY 302L/303L/317L (PHY 105N, Unique number: 57460)
Instructor: [Prof. Loveridge](#)

LANGUAGES

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