

## EDUCATION

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### 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

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- Laser-plasma interaction
- Experimental search for new physics

## EXPERIENCE

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### 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

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

## PUBLICATIONS

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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  $l\bar{l}\nu\nu$  Monte Carlo with  $M_H=125$  GeV and Introduction of the Physical Background.  
Fanli Zeng, Yiwei Liu, **Ze Ouyang** et al, [J. Phys.: Conf. Ser.](#), 2287 012030 (2022)

## TEACHING

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

## LANGUAGES

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

## EXTRACURRICULAR ACTIVITIES

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- 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*