

Yuze GUO

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Research Interests: Gravitational Wave Astronomy, Compact Stars, and Cosmology

Education

Wuhan University, Wuhan, China

Sep. 2022 – Present

B.S. in Physics

- **Overall GPA:** 3.95/4.0, **Ranking:** 2/236.
- **Core Courses:** General Physics I-IV (95/97/99/90), Methods of Mathematical Physics (94), Theoretical Mechanics (93), Electrodynamics (94), Quantum Mechanics (93), Statistical Mechanics (92), Computational Physics (92), General Astronomy (98) and Astrophysics (95).

Research Experience

Research Training

Apr. 2024 – Present

School of Physics and Technology, Wuhan University Supervisor: Wei Wang

Research title: Continuous Gravitational Radiation from Magnetically Deformed Neutron Star

- Estimated neutron star deformations induced by magnetic fields and computed gravitational wave signals.
- Modeled the neutron star as a triaxial ellipsoid using Python to solve virial tensor equations.
- Contributed to discovering a rotation–magnetic field coupling effect that may enhance gravitational wave detectability (publication in preparation).

Oxford Academic English Skills for Research

Jul. 2023 – Aug. 2023

University of Oxford Language Centre Tutor: Daniel Worthing

Research title: Multi-messenger Astronomy and its Role in Modern Cosmological Research

- Analyzed thesis structures in natural sciences to improve clarity and academic rigor.
- Developed advanced skills in literature review, citation, presentation, and editing.
- Achieved an A+ and received a letter of recommendation.

Publications

Under preparation.

Honors and Awards

National Scholarship (Top 3%)

2024

Ministry of Education of the People's Republic of China

First-Class Outstanding Student Scholarship (Top 5%)

2023 & 2024

Wuhan University

Third Semester Exchange Scholarship

2023

Wuhan University

University-Level Merit Student (Top 10%)

2023 & 2024

Wuhan University

Skills

- **Programming:** C, Python, Mathematica
- **Typesetting:** Microsoft Office, L^AT_EX, Markdown
- **Languages:** English (fluent, IELTS 8.0), Mandarin (native), Cantonese (conversational)

Competitions

Gold Medal <i>XIV International Olympiad on Astronomy and Astrophysics</i>	Nov. 2021
Second Prize <i>The 10th China Undergraduate Physics Experiment Competition</i>	Dec. 2024
First Prize <i>The 9th Hubei Provincial Competition of Innovative Design on Physics Experiments</i>	Jul. 2024
Grand Prize <i>2024 National English Competition for College Students</i>	May 2024

Leadership & Other Experience

Vice President and Head of the Academic Department <i>Wuhan University Astronomy Association</i>	May 2023 – Apr. 2024
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- Assisted the president in managing the association.
- Organized and led the academic department in drafting astronomical event forecasts, authoring science communication articles, and hosting scientific lecture series to promote public engagement with cutting-edge research.