

RUO-YU GUAN

(+86) 18604511940
ruoyuguan.physics@gmail.com
ruoyuguan.github.io

EDUCATION

School of Physics, Huazhong University of Science and Technology	Wuhan, China
<i>Ph.D. in Physics (Theoretical Physics)</i>	Sep. 2025 – Jun. 2029 (<i>expected</i>)
<ul style="list-style-type: none">• Supervisor: Prof. Yan Wang• Research focus: gravitational-wave astrophysics• Affiliation: National Gravitation Laboratory (NGL), Huazhong University of Science and Technology (HUST)	
Department of Physics, The University of Hong Kong (HKU)	Hong Kong SAR, China
<i>M.Sc. in Physics</i>	Sep. 2023 – Jul. 2024 (degree conferred Nov. 2024)
<ul style="list-style-type: none">• Supervisor: Prof. Stephen Chi Yung Ng• Capstone Project: <i>Identifying Sources in Cygnus OB2 Using Multiwavelength Observations</i>	
Department of Materials Science, Jilin University	Changchun, China
<i>B.Sc. in Materials Physics</i>	Sep. 2018 – Jun. 2022
<ul style="list-style-type: none">• Graduation Thesis: <i>Study on the Prompt Emission of Gamma-ray Bursts and its Polarization</i>• Research Mentor: Prof. Mi-Xiang Lan (Center for Theoretical Physics and College of Physics, Jilin University)	

EXPERIENCE

Department of Astronomy, HUST	Wuhan, China
<i>Research Assistant (contract)</i>	Nov. 2024 – Jun. 2025
<ul style="list-style-type: none">• Supervisor: Prof. Yuan-Chuan Zou• Gamma-ray bursts: light-curve time-series analysis and correlation studies in Python; led to a first-author peer-reviewed publication (see Publications)	

PUBLICATIONS

1. **Ruo-Yu Guan** and Mi-Xiang Lan. Interpreting time-integrated polarization data of gamma-ray burst prompt emission. *Astronomy & Astrophysics*, **670**, A160 (2023). doi: 10.1051/0004-6361/202243805.
2. **Ruo-Yu Guan**, Fei-Fei Wang, and Yuan-Chuan Zou. Hurst index of gamma-ray burst light curves and its statistical study. *Journal of High Energy Astrophysics*, **51**, 100559 (2026). doi:10.1016/j.jheap.2026.100559.

RESEARCH PROJECTS

Galactic Structure Inference with Double White Dwarfs as Multi-Messenger Probes	
<i>Ph.D. research, HUST (NGL) (Supervisor: Prof. Yan Wang)</i>	Jul. 2025 – Present
Time-Series and Correlation Analysis of Gamma-Ray Burst Light Curves	

Research project, HUST (Supervisor: Prof. Yuan-Chuan Zou); supported by National SKA Program of China (Grant No. 2022SKA0130100) Oct. 2024 – Jan. 2026

Gamma-Ray Burst Prompt Emission and Polarization

B.Sc. research, Jilin University (Mentor: Prof. Mi-Xiang Lan); supported by National Natural Science Foundation of China (Grants No. 11903014 and 12147217) 2022 – Feb. 2023

SKILLS

Languages: Chinese (Mandarin: native; Cantonese: conversational); English (IELTS 6.5, 2023; completed an English-taught M.Sc. at HKU).

Programming: Python (primary); MATLAB, Mathematica, R, IDL, C++ (familiar).

Tools & systems: NumPy, SciPy, Pandas, Matplotlib; Jupyter; LATEX; Git; Windows; macOS; Linux (Ubuntu); HPC (remote Linux servers; batch jobs).