HONGFEI YU

https://github.com/Phiyu ◇ https://phiyu.github.io ◇ yuhonfgei@mail.ustc.edu.cn

Research Interests: Large-scale Structure, Dark Matter, Dark Energy

EDUCATION

University of Science and Technology of China, China Sep. 2023 - Jun. 2027 (Expected)
Wang Shouguan Talent Program in Astronomy, Department of Astronomy, School of Physical Science

- **Overall GPA:** 3.45/4.30 (84.6/100) **Ranking:** 9/26
- **Selected Courses**: Classical Mechanics (A), Electrodynamics (A), Quantum Mechanics (A-);
  Graduate-level: General Relativity, Quantum Field Theory, Modern Cosmology, Large Scale Structure
- **GRE Physics:** *score to be released in Nov.3, 2025*

PUBLICATION

In preparation.

RESEARCH EXPERIENCE

Research on Frontier Topics in Modern Cosmology Aug. 2024 - Jul. 2025
National Astronomical Observatories, Chinese Academy of Sciences | Advisor: Prof. Hongming Zhu *Remote*

- Reproduced N-body simulation and power spectrum estimator in Python; verified results using Quijote simulations (NGP/CIC).
- Developed GitHub repository for reproducible code and analysis.

Research on Galaxy-Cosmic-Web Method Aug. 2025 - present
University of Science and Technology of China | Advisor: Prof. Huiyuan Wang *Heifei, China*

- Reproducing the Method: Reproducing the method in the paper *Unexpected clustering pattern in dwarf galaxies challenges formation models* (Zhang et al., 2025) and researching the relation between the abnormal dwarf clustering and halo ages.

TA EXPERIENCE

Theoretical Mechanics A Sep. 2025 - Jan. 2026
University of Science and Technology of China | Instructor: Prof. Jiejie Zhu *Chinese Class*

- **Responsibilities:** Assisted in tutorials and office hours; graded assignments and exams.

AWARDS AND HONORS

- Excellent Freshman Scholarship – Gold (2023); Excellent Student Scholarship – Bronze (2024, 2025)

SKILLS

Programming: Python, C
Tools: NumPy, SciPy, Matplotlib, Git, LaTeX, Shell