Hui Peng

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Research interests

- Galaxy Clustering, Weak Lensing, Large-scale Structure of Universe
- Redshift calibration, Data analysis, Systematic error mitigation
- Photometric galaxies, Slitless spectroscopic galaxies, Fast Radio Bursts, Line-Intensity Mapping

Education

2020 – present	**Shanghai Jiao Tong University** **Ph.D. Candidate**, Astronomy **Advisor**: Prof. Yu Yu
2016 – 2020	**Nanjing University of Aeronautics and Astronautics** **B.E.** Space Science and Technology

Publications

I have three first-author publications and one additional contribution. Please see more details on *Astrophysics Data System (ADS)*

1. **H. Peng** and Y. Yu, "Reconstructing redshift distributions with photometric galaxy clustering," *JCAP*, vol. 2024, no. 10, 025, p. 025, Oct. 2024. 🔗 DOI: 10.1088/1475-7516/2024/10/025. arXiv: 2406.04407 [astro-ph.CO].

2. **H. Peng** and Y. Yu, "Precise self-calibration of interloper bias in spectroscopic surveys," *MNRAS*, vol. 526, no. 1, pp. 820–829, Nov. 2023. 🔗 DOI: 10.1093/mnras/stad2808. arXiv: 2305.10487 [astro-ph.CO].

3. **H. Peng**, H. Xu, L. Zhang, Z. Chen, and Y. Yu, "Self-calibration of photometric redshift scatter from DECaLS DR8 power spectrum and validation with simulated catalogues," *MNRAS*, vol. 516, no. 4, pp. 6210–6224, Nov. 2022. 🔗 DOI: 10.1093/mnras/stac2713. arXiv: 2203.14609 [astro-ph.CO].

4. H. Xu, P. Zhang, **H. Peng**, *et al.*, "Using angular two-point correlations to self-calibrate the photometric redshift distributions of DECaLS DR9," *MNRAS*, vol. 520, no. 1, pp. 161–179, Mar. 2023. 🔗 DOI: 10.1093/mnras/stad136. arXiv: 2209.03967 [astro-ph.CO].

Skills

Languages	English, Chinese
Coding	Python, Fortran, LaTeX, …
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting and publishing.

Selected Awards

2024	**Yangyang Astronomy Award**, 40000 CNY.
2023	**Youruipu Award**, 5000 CNY.
2022	**First-class scholarship**, 12000 CNY per annum.

Seminar Talks and Presentations

2024 **DESI Summer Collaboration Meeting.**
Title: "Self-calibrating photometric redshift in DESI" (Online talk)

Annual Conference of the Chinese Astronomical Society
Title: "Reconstructing redshift distributions with photometric galaxy clustering" (Poster)

China Space Station Telescope Science Annual Conference
Title: "Self-calibration of interloper bias in slitless spectroscopic surveys" (Talk)

2023 **Gravitational Lensing Working Conference**
Title: "Calibrating redshift scatter in photometric surveys and interloper bias in spectroscopic surveys" (Talk)

The 25th Guo Shoujing Symposium of the Chinese Astronomical Society and 2023 Seminar on the Frontiers of Galactic Cosmology
Title: "Self-calibrating redshift bias in surveys" (Poster)

Gravitational Lensing Spring Conference
Title: "Implementation of self-calibration method in surveys" (Talk)

2022 **Cosmology with Weak Lensing: Beyond the Two-point Statistics**
Title: "Self-calibration of photometric redshift scatter from DECaLS DR8 power spectrum and validation with simulated catalogues" (Online talk)

References

🧑 Name	🏛 Institution	✉ Contact
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Prof. Z	Shanghai Jiao Tong University	pengh.me@gmail.com