





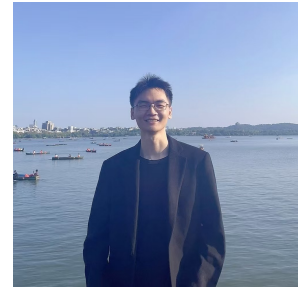





# Hui Peng

 Born in August 1999  
 pengh.me@gmail.com  
 penghui-hub.github.io


 800 Dongchuan Road, Shanghai, China  
 0000-0003-3929-3229  
 PengHui-hub




## Research interests

Cosmology     Galaxy clustering, Weak lensing, Large-scale structure of Universe.  
Observations     Calibration of photometric redshifts, slitless spectroscopic redshift interloper contamination, magnification bias and fast radio burst host/IGM DM.  
Astrostatistics     Redshift calibration, Non-negative matrix factorization, Bayesian inference, Hierarchical modeling, MCMC sampling.









## Education

2020 – present     **Shanghai Jiao Tong University**  
Ph.D. Candidate in 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 the *Astrophysics Data System (ADS)*.

-  **H. Peng** and Y. Yu, “Reconstructing redshift distributions with photometric galaxy clustering,” *Journal of Cosmology and Astroparticle Physics*, vol. 2024, no. 10, 025, p. 025, Oct. 2024.  DOI: 10.1088/1475-7516/2024/10/025. arXiv: 2406.04407 [astro-ph.CO].
-  **H. Peng** and Y. Yu, “Precise self-calibration of interloper bias in spectroscopic surveys,” *Monthly Notices of the Royal Astronomical Society*, vol. 526, no. 1, pp. 820–829, Nov. 2023.  DOI: 10.1093/mnras/stad2808. arXiv: 2305.10487 [astro-ph.CO].
-  **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,” *Monthly Notices of the Royal Astronomical Society*, vol. 516, no. 4, pp. 6210–6224, Nov. 2022.  DOI: 10.1093/mnras/stac2713. arXiv: 2203.14609 [astro-ph.CO].
-  H. Xu, P. Zhang, **H. Peng**, *et al.*, “Using angular two-point correlations to self-calibrate the photometric redshift distributions of DECaLS DR9,” *Monthly Notices of the Royal Astronomical Society*, 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, pipeline development, ...
Misc.	Academic research, teaching, training, consultation.




## Selected Awards

2024	<b>Yangyang Astronomy Award</b> , 40000 CNY.
2023	<b>Youruipu Award</b> , 5000 CNY.
2022	<b>First-class scholarship</b> , 12000 CNY per annum.

## Seminar Talks and Presentations

2024	<b>DESI Summer Collaboration Meeting</b> Title: "Self-calibrating photometric redshift in DESI" (Online talk)
	<b>Annual Conference of the Chinese Astronomical Society</b> Title: "Reconstructing redshift distributions with photometric galaxy clustering" (Poster)
	<b>China Space Station Telescope Science Annual Conference</b> Title: "Self-calibration of interloper bias in slitless spectroscopic surveys" (Talk)
2023	<b>Gravitational Lensing Working Conference</b> Title: "Calibrating redshift scatter in photometric surveys and interloper bias in spectroscopic surveys" (Talk)
	<b>The 25th Guo Shoujing Symposium of the Chinese Astronomical Society and 2023 Seminar on the Frontiers of Galactic Cosmology</b> Title: "Self-calibrating redshift bias in surveys" (Poster)
	<b>Gravitational Lensing Spring Conference</b> Title: "Implementation of self-calibration method in surveys" (Talk)
2022	<b>Cosmology with Weak Lensing: Beyond the Two-point Statistics</b> Title: "Self-calibration of photometric redshift scatter from DECaLS DR8 power spectrum and validation with simulated catalogues" (Online talk)

## References

 Name	 Institution	 Contact
<b>Prof. Yu Yu</b>	Shanghai Jiao Tong University	yuyu22@sjtu.edu.cn
<b>Prof. Pengjie Zhang</b>	Shanghai Jiao Tong University	zhangpj@sjtu.edu.cn
<b>Prof. Huanyuan Shan</b>	Shanghai Astronomical Observatory	hyshan@shao.ac.cn