

ZHIWEI SHAO

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EDUCATION

Shanghai Jiao Tong University

Ph.D. Candidate in Astronomy, GPA: 3.9/4.0

Shanghai, China

Sept 2021 – Now

Nanjing University

B.S. in Astronomy, Overall GPA: 4.44/5.00, Major GPA: 4.50/5.00

Nanjing, China

Sept 2016 – June 2020

- Thesis: “Galaxy Distribution around redMaPPer Clusters in SDSS”
- Advisor: Ying Zu, Shanghai Jiao Tong University

PUBLICATIONS (8 TOTAL; 2 FIRST-AUTHOR)

- [1] **Z. Shao**, Y. Zu, A. N. Salcedo, J. Wang, X. Yang, D. H. Weinberg, X. Xu, Z. Zhai, Z. Zhang, J. Aguilar, and et al., “Direct Measurement of Galaxy Assembly Bias using DESI DR1 Data”, *arXiv e-prints*, arXiv:2510.20896, arXiv:2510.20896, Oct. 2025. arXiv: [2510.20896 \[astro-ph.GA\]](https://arxiv.org/abs/2510.20896).
- [2] **Z. Shao**, Y. Zu, and H. Shan, “Is the Large-scale Structure Traced by the BOSS LOWZ Galaxies Consistent with Planck?”, *ApJL*, vol. 950, no. 2, L15, p. L15, Jun. 2023. arXiv: [2302.08515 \[astro-ph.CO\]](https://arxiv.org/abs/2302.08515).
- [3] A. Padawer-Blatt, **Z. Shao**, R. T. Hough, D. Rennehan, R. Barré, V. Saeedzadeh, A. Babul, R. Davé, C. Kobayashi, W. Cui, and et al., “Core to Cosmic Edge: SIMBA-C’s New Take on Abundance Profiles in the Intragroup Medium at $z = 0$ ”, *Universe*, vol. 11, no. 2, 47, p. 47, Feb. 2025. arXiv: [2502.04657 \[astro-ph.GA\]](https://arxiv.org/abs/2502.04657).
- [4] R. T. Hough, **Z. Shao**, W. Cui, S. I. Loubser, A. Babul, R. Davé, D. Rennehan, and C. Kobayashi, “Simba-C: the evolution of the thermal and chemical properties in the intragroup medium”, *MNRAS*, vol. 532, no. 1, pp. 476–495, Jul. 2024. arXiv: [2406.04761 \[astro-ph.GA\]](https://arxiv.org/abs/2406.04761).
- [5] V. Saeedzadeh, S. L. Jung, D. Rennehan, A. Babul, M. Tremmel, T. R. Quinn, **Z. Shao**, P. Sharma, L. Mayer, E. O’Sullivan, and S. I. Loubser, “Cool and gusty, with a chance of rain: Dynamics of multiphase CGM around massive galaxies in the ROMULUS simulations”, *MNRAS*, Sep. 2023. arXiv: [2304.03798 \[astro-ph.GA\]](https://arxiv.org/abs/2304.03798).
- [6] X. Chen, Y. Zu, **Z. Shao**, and H. Shan, “The sphere of influence of the bright central galaxies in the diffuse light of SDSS clusters”, *MNRAS*, vol. 514, no. 2, pp. 2692–2706, Aug. 2022. arXiv: [2112.03934 \[astro-ph.GA\]](https://arxiv.org/abs/2112.03934).
- [7] Y. Zu, Y. Song, **Z. Shao**, X. Chen, Y. Zheng, H. Gao, Y. Yu, H. Shan, and Y. Jing, “Strong conformity and assembly bias: towards a physical understanding of the galaxy-halo connection in SDSS clusters”, *MNRAS*, vol. 511, no. 2, pp. 1789–1807, Apr. 2022. arXiv: [2108.06790 \[astro-ph.CO\]](https://arxiv.org/abs/2108.06790).
- [8] Y. Zu, H. Shan, J. Zhang, S. Singh, **Z. Shao**, X. Chen, J. Yao, J. B. Golden-Marx, W. Cui, E. Jullo, J.-P. Kneib, P. Zhang, and X. Yang, “Does concentration drive the scatter in the stellar-to-halo mass relation of galaxy clusters?”, *MNRAS*, vol. 505, no. 4, pp. 5117–5128, Aug. 2021. arXiv: [2012.08629 \[astro-ph.CO\]](https://arxiv.org/abs/2012.08629).

TALKS

- Gravitational Lensing Workshop, Shanxi, China Sept 2024
- “Small Galaxies, Cosmic Questions - II”, Durham, UK July 2024
- The 32nd Texas Symposium on Relativistic Astrophysics, Shanghai, China Dec 2023
- The 2nd Shanghai Assembly on Cosmology and Structure Formation, Shanghai, China Nov 2023

- DESI July 2023 Hybrid Collaboration Meeting, Durham, UK (spotlight talk) July 2023
- 10th Workshop on Gravitational Lensing, Qingdao, China June 2023
- The 1st KIAA Forum on Gas in Galaxies for Early Career Scientists, KIAA, Peking University, China (online) Nov 2021

HONORS AND AWARDS

- T.D. Lee Scholarship 2024
- Minghong Scholarship (First Class) 2023
- Yangyang Scholarship 2023
- Outstanding Graduate of Nanjing University 2020
- Member of NJU Elite Project 2016 – 2020
- Elite Project Scholarship 2017, 2019
- People's Scholarship 2017 – 2019
- Annual Scholarship of NAOC, CAS 2018
- Excellent Student 2017

OUTREACH

- **Volunteering** at Guangqi Observatory, Shanghai Jiao Tong University 2021-2024
Helping to set up telescopes, guiding visitors, and sharing basic astronomy knowledge every month.
- **Teaching** at Qinhuai 2nd Experimental Primary School Spring 2017
Teaching pupils elementary astronomy knowledge.