

ANDRÉS N. SALCEDO

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ACADEMIC APPOINTMENTS

Arizona Cosmology Lab Postdoctoral Fellow *February 2022 - Present*
Department of Astronomy and Steward Observatory, University of Arizona

Postdoctoral Fellow *August 2021 - February 2022*
Department of Astronomy, The Ohio State University

EDUCATION

The Ohio State University, Columbus Ohio *August 2015 - June 2021*
Ph.D. in Astronomy
Advisor: David Weinberg

Lehigh University, Bethlehem Pennsylvania *August 2011 - May 2015*
B.S. in Physics, B.S. in Mathematics

FELLOWSHIPS AND HONORS

Ohio State University Graduate Enrichment Fellowship *2015-2021*
Department of Energy Computational Science Graduate Fellow *2016 - 2020*
C.C. Hsiung Award, Lehigh University Mathematics Department *2015*
Lehigh University Eckardt Scholar *2012-2015*
Academic Merit Award, Lehigh University *2011-2015*

FIRST-AUTHOR PUBLICATIONS

1. **Salcedo, A. N.** et al.; *What Galaxy Clusters Have to Say About Dynamical Dark Energy and H_0* . arXiv:2512.06701.
2. **Salcedo, A. N.** et al.; *Cosmological Constraints from Dark Energy Survey Year 1 Cluster Lensing and Abundances with Simulation-based Forward-Modeling*. arXiv:2510.25706.
3. **Salcedo, A. N.** et al.; *Multi-probe cosmology forecasts from HOD-based forward modeling of galaxy and void statistics*. arXiv:2504.08221.
4. **Salcedo, A. N.** et al.; *One Galaxy Sample to Rule Them All: Halo Occupation Distribution Modeling of DES Year 3 Source Galaxies*. ApJ 983, 2 (2025).
5. **Salcedo, A. N.** et al.; *Consistency of dark energy survey year 1 galaxy clusters with Planck*. PRL 133, 22 (2024).
6. **Salcedo, A. N.** et al.; *Elucidating Galaxy Assembly bias in SDSS*. SCPMA 65, 10 (2022).
7. **Salcedo, A. N.** et al.; *Exploiting non-linear scales in galaxy-galaxy lensing and galaxy clustering: A forecast for the Dark Energy Survey*. MNRAS 510, 4 (2022).
8. **Salcedo, A. N.** et al.; *Cosmology with Stacked Cluster Weak Lensing and Cluster-Galaxy Cross-Correlations*. MNRAS 491, 3 (2021).
9. **Salcedo, A. N.** et al.; *Spatial clustering of dark matter haloes: Secondary bias, neighbour bias, and the influence of massive neighbours on halo properties*. MNRAS 475, 4 (2018).

SUPPORTING-AUTHOR PUBLICATIONS

10. Shao, Z., Zu, Y., **Salcedo, A. N.** et al.; *Direct Measurement of Galaxy Assembly Bias using DESI DR1 Data*. arXiv:2510.20896.

11. Krause, E., Kobayashi Y., **Salcedo, A. N.**, Beyond-2pt Collaboration et al.; *A Parameter-Masked Mock Data Challenge for Beyond-Two-Point Galaxy Clustering Statistics*. ApJ 990, 2 (2025).
12. DES Collaboration, Cao, S., Wu, H.-Y. et al.; *Association between optically identified galaxy clusters and the underlying dark matter halos*. PRD 112, 4 (2025).
13. DESI Collaboration, Fernández-García, E., Prada, F. et al.; *DESI DR2 reference mocks: clustering results from Uchuu-BGS and LRG*. arXiv:2507.01593.
14. Lee, A. Wu, H.-Y., **Salcedo, A. N.** et al.; *Optical galaxy cluster mock catalogs with realistic projection effects: validations with the SDSS redMaPPer clusters*. PRD, 111, 6 (2025).
15. Zhou, C., Wu, H.-Y., **Salcedo, A. N.** et al.; *Forecasting the constraints on optical selection bias and projection effects of galaxy cluster lensing with multiwavelength data*. PRD 110, 10 (2024).
16. Zeng, C., **Salcedo, A. N.**, Wu, H.-Y., Hirata, C. M.; *Self-calibrating optical galaxy cluster selection bias using cluster, galaxy, and shear cross-correlations*. MNRAS 523, 3 (2023).
17. To, C.-H., Rozo, E., Krause, E., Wu, H.-Y., Wechsler, R. H., **Salcedo, A. N.**; *Linna: Likelihood inference neural network accelerator*. JCAP 1, 016 (2023).
18. Wu, H.-Y., Costanzi, M., To, C.-H., **Salcedo, A. N.**, et al.; *Optical selection bias and projection effects in stacked galaxy cluster weak lensing*. MNRAS 515, 3 (2022).
19. Shin, T., Jain B., Adikhari, S., Baxter, E.J., Chang, C., Pandey, S., **Salcedo, A. N.** et al.; *The mass and galaxy distribution around SZ-selected clusters*. MNRAS 507, 4 (2021).
20. Wu, H., Weinberg, D. H., **Salcedo, A. N.**, & Wibking, B. D.; *Cosmology with Galaxy Cluster Weak Lensing: Statistical Limits and Experimental Design*. ApJ 910, 1 (2021).
21. Wibking, B. D., Weinberg, D. H., **Salcedo, A. N.** et al.; *Cosmology with galaxy-galaxy lensing on non-perturbative scales: Emulation method and application to BOSS LOWZ*. MNRAS 492, 2 (2020).
22. Wu, H.-Y., Weinberg, D. H., **Salcedo, A. N.** et al.; *Covariance matrices for galaxy cluster weak lensing: from virial regime to uncorrelated large-scale structure*. MNRAS 490, 2 (2019).
23. Wibking, B. D., **Salcedo, A. N.** et al.; *Emulating galaxy clustering and galaxy-galaxy lensing into the deeply non-linear regime: Methodology, information, and forecasts*. MNRAS 484, 1 (2019).

PRESENTATIONS

Southern Methodist University Physics Seminar, Southern Methodist University	December 2025
Kavli Institute for Cosmological Physics Seminar, Kavli Institute for Cosmological Physics	October 2025
CL2025: Entering a Golden Age of Galaxy Cluster Studies, Academia Sinica Institute of Astronomy and Astrophysics	September 2025
Beyond-two-point Statistics Meet Survey Systematics, Kavli Institute for the Mathematics and Physics of the Universe	September 2025
Cosmic Cartography with Roman, Space Telescope Science Institute	July 2025
Voids@CPPM 2025 Workshop, Centre de Physique des Particules de Marseille	February 2025
ELG Modeling and Mock Challenge workshop, Donostia International Physics Center	February 2025
Shanghai Astronomical Observatory Colloquium, Shanghai Astronomical Observatory	December 2024
Shanghai Jiao Tong University Astronomy Seminar, Shanghai Jiao Tong University	December 2024

Cosmology Seminar at Stony Brook , SUNY Stony Brook	<i>October 2024</i>
Mock Barcelona 2024 , Universitat Autònoma de Barcelona	<i>October 2024</i>
Dark, Hot, Warm, and Fuzzy matter in Space and Time , University of Utah Salt Lake City	<i>July 2024</i>
Argonne Lunch Seminar , Argonne National Laboratory	<i>June 2024</i>
SCIPP Seminar , University of California Santa Cruz	<i>April 2024</i>
University of Michigan Cosmology Seminar , University of Michigan	<i>April 2024</i>
Arizona Lensing Day , Arizona State University	<i>December 2023</i>
University of Arizona Physics Colloquium , University of Arizona	<i>September 2023</i>
Dissecting cluster cosmology: toward a roadmap for forthcoming cluster surveys , Institute for Fundamental Physics of the Universe, Trieste	<i>July 2023</i>
UoA-BSU-OSU Cluster Cosmology Workshop , University of Arizona	<i>June 2023</i>
Cosmology with the Large Scale Structure of the Universe , Donostia International Physics Center	<i>May 2023</i>
Arizona Lensing Day , University of Arizona	<i>April 2023</i>
The 22nd Guo Shoujing Meeting of the Chinese Astronomical Society , Sun Yat-sen University, Zhuhai	<i>November 2020</i>
DESI Group Meeting , Lawrence Berkeley Laboratory	<i>September 2020</i>
Tuesday Astrophysics and COsmology Seminar , University of Arizona	<i>September 2020</i>
Cosmology X Data Science Group Meeting , Center for Computational Astrophysics, Flatiron Institute	<i>August 2020</i>
Department of Energy Computational Science Graduate Fellowship Annual Program Review , Washington D.C.	<i>July 2017,2018,2019,2020</i>
Halo and Galaxy Assembly Bias - from Theory to Observation , Shanghai Jiao Tong University	<i>June 2019</i>
SUGAR-RUSH Conference , Shanghai Jiao Tong University	<i>June 2018</i>
OSU-CCAPP Seminar , Ohio State University	<i>June 2018</i>

SERVICE EXPERIENCE

Graduate Research Mentor Conghao Zhou	<i>Fall 2022 - Present</i>
Undergraduate Research Mentor Pranav Chiploonkar	<i>May 2024 - Present</i>
Undergraduate Research Mentor Xilai Li	<i>July 2024 - Present</i>
<i>Cosmology Talks, The Parameter Masked Mock Data Challenge for Beyond 2-Pt Statistics - Results, Lessons & Reflections</i>	<i>June 2024</i>
Graduate Research Mentor Andy Lee	<i>Fall 2021 - Fall 2024</i>
Organizer of UoA-BSU-OSU Cluster Cosmology Workshop	<i>Summer 2023, 2024</i>
TIMESTEP Mentor	<i>Fall 2022 - Present</i>
Arizona Cosmology Lab Coffee Discussion Organizer	<i>Fall 2022 - Present</i>
ATOMM Tutor	<i>Fall 2022 - Fall 2023</i>
First Friday Astronomy Public Lecture, Boise State University, <i>Weighing and Measuring the Universe</i>	<i>June 2022</i>
Boise State Public Radio, Idaho Matter Interview, <i>Answering the big questions of the universe</i>	<i>June 2022</i>
Undergraduate Research Co-Mentor (with E. Rozo) of Nikhil Garuda, Tristen Shields, John Hugon and Vadim Bernshteyn	<i>Spring 2022 - Fall 2023</i>
Graduate Research Co-Mentor (with H. Y. Wu) of Chenxiao Zeng	<i>Spring 2020 - Fall 2022</i>
Coordinator of Graduate Klondike Colloquium Series	<i>Summer 2019-2020</i>
Graduate Member of OSU Admissions Committee Interviews	<i>February-March 2019</i>
Founder and Coordinator of Graduate Order of Magnitude Club	<i>Fall 2017-Spring 2018</i>
Referee for MNRAS and ApJ	