

# ANNA C. WRIGHT

Center for Computational Astrophysics  
Flatiron Institute

Email: [awright@flatironinstitute.org](mailto:awright@flatironinstitute.org)  
Website: [anchwr.github.io](https://anchwr.github.io)

## RESEARCH INTERESTS

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dwarf galaxies, low surface brightness galaxies, stellar halos, galaxy mergers, cosmological simulations, synthetic data

## EDUCATION

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<b>Ph.D. in Physics &amp; Astronomy</b> <i>Rutgers, the State University of New Jersey</i>	Piscataway, NJ 2014–2020
<b>M.S. in Physics &amp; Astronomy</b> <i>Rutgers, the State University of New Jersey</i>	Piscataway, NJ 2014–2019
<b>B.S. in Astrophysics</b> <i>Rice University</i>	Houston, TX 2010–2014

## APPOINTMENTS

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<b>Flatiron Research Fellow</b> <i>Flatiron Institute</i>	New York, NY 2024–
<b>Assistant Research Scientist</b> <i>Johns Hopkins University</i>	Baltimore, MD 2020–2024
<b>Instructor for Exploring the Universe with Space Telescopes</b> <i>Johns Hopkins University Pre-College Program</i>	Baltimore, MD 2024
<b>Graduate Research Assistant</b> <i>Rutgers, the State University of New Jersey</i>	Piscataway, NJ 2014–2020
<b>Lab Instructor for Observational Radio Astronomy</b> <i>Rutgers, the State University of New Jersey</i>	Piscataway, NJ 2019, 2020
<b>Teaching Assistant for Extended Analytical Physics I/II</b> <i>Rutgers, the State University of New Jersey</i>	Piscataway, NJ 2015–2016

## GRANTS & AWARDS

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Co-I on <a href="#">Hubble Space Telescope Cycle 33 Program GO-18076</a>	2025–2026
Co-I on NASA Astrophysics Theory Program 23-ATP23-0138	2024–2027
PI on <a href="#">Hubble Space Telescope Cycle 31 Program AR-17549</a>	2024–2025
<a href="#">ACM SIGHPC Computational &amp; Data Science Fellowship</a>	2016–2020
<a href="#">Robert A. Schommer Prize</a>	2019
<a href="#">AAS International Travel Grant</a>	2018
<a href="#">Noemie Koller Endowed Scholarship</a>	2015
NSF Graduate Research Fellowships Program Honorable Mention	2015
Graduate Assistance in Areas of National Need Fellowship	2014–2015
<a href="#">Alexander J. &amp; Lorraine H. Dessler Award in Space Physics</a>	2014
Rice University Trustee Distinguished Scholarship	2010–2014
Rice University Department of Physics & Astronomy Summer Research Fellowship	2013
Rice Space Institute Prize	2013

## ADVISING & MENTORING

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Career mentor, <i>Lyniya Edwards (CUNY Masters Student)</i>	2025–
Advisor, <i>Minyong Jung (CCA Predoctoral Student)</i>	2026
Advisor, <i>Jeffrey Rhenius Jebakumar (Astro Scholars Student)</i>	2025
Advisor, <i>Emily Webber (Astro Scholars Student)</i>	2025
Near-peer mentor, <i>Nicole Crumpler (JHU Graduate Student)</i>	2023–2024
Near-peer mentor, <i>Maya Skarbinski (JHU Graduate Student)</i>	2023–2024
Co-advisor, <i>Hyeonmin Eugene Lee (STScI Space Astronomy Summer Program Student)</i>	2023
Advisor, <i>Nguyen Binh (STScI Space Astronomy Summer Program Student)</i>	2022
Near-peer mentor, <i>Lana Eid (Rutgers University Graduate Student)</i>	2019–2022
Co-mentor, <i>Nami Nishimura (STScI Space Astronomy Summer Program Student)</i>	2021

## SERVICE

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Journal Reviewer, <i>Nature Astronomy, MNRAS, AAS Journals</i>	
Organizer, <i>Women’s N-Body Shop Meetings</i>	2024–
SOC Member, <i>EAS Special Session on LSB Galaxies</i>	2026
SOC Chair, <i>Accretion at the Disk-Halo Interface Workshop</i>	2025
Session Moderator, <i>Galactic Frontiers II</i>	2025
Application Reviewer, <i>Astro Scholars</i>	2024
Committee Member, <i>JHU Near-Peer Mentorship Program</i>	2022–2024
Senate Member, <i>JHU Women in Physics</i>	2022–2024
Discussion Panel Member, <i>HST Cycle 32 Extragalactic TAC</i>	2024
Discussion Panel Member, <i>National Science Foundation</i>	2023
Poster Judge, <i>AAS Chambliss Student Achievement Award</i>	2023
Committee Member, <i>N-Body Shop Code of Conduct Committee</i>	2021–2023
Application Reviewer, <i>ACM SIGHPC Computational &amp; Data Science Fellowship</i>	2021–2023
Application Reviewer, <i>STScI Space Astronomy Summer Program</i>	2021–2023
Panelist, <i>What Life is Like in Graduate School (Rutgers Summer REU Program)</i>	2017
Time Allocation Committee, <i>SALT 2017-1 Rutgers TAC</i>	2017
Committee Member, <i>Rutgers Physics &amp; Astronomy Graduate Student Life Committee</i>	2016–2017
Panelist, <i>Succeeding in HPC: My Journey (Supercomputing 2016)</i>	2016
Student Organizer, <i>Rutgers Physics &amp; Astronomy Graduate Student Recruitment Committee</i>	2016
Treasurer, <i>Rutgers Physics &amp; Astronomy Graduate Student Organization</i>	2015–2016
Student Organizer, <i>APS CUWiP at Rutgers</i>	2015

## OUTREACH

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Assistant Organizer, <i>Astro Scholars (JHU/STScI)</i>	2022, 2024
Guest Lecturer, <i>The Evolving Universe (Yale)</i>	2022
Speaker, <i>Astro Scholars (JHU/STScI)</i>	2022, 2025
Speaker, <i>STScI Space Astronomy Summer Program</i>	2022
Coordinator, <i>Rutgers Traveling Science Show at Camden Street Elementary School</i>	2018–2019
Presenter, <i>Rutgers Traveling Science Show at Camden Street Elementary School</i>	2015–2019
Guest Speaker, <i>Rutgers Young Scholars Program in Discrete Mathematics</i>	2015, 2016, 2019
Guest Speaker, <i>Redshaw Elementary School</i>	2018
Speaker, <i>Friends of Rutgers Astronomy</i>	2017

## TALKS, SEMINARS, COLLOQUIA & TUTORIALS (†INVITED)

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†Seminar, <i>Institute for Theory and Computation at the CfA   Harvard &amp; Smithsonian</i>	<b>2026</b>
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†Colloquium, <i>Institute for Theory and Computation at the CfA   Harvard &amp; Smithsonian</i>	2026
Talk, <i>Accretion at the Disk-Halo Interface Workshop</i>	<b>2025</b>
†Seminar, <i>Yale University</i>	2025
†Seminar, <i>University of Notre Dame</i>	2025
Talk, <i>Galactic Frontiers II</i>	2025
†Seminar, <i>Columbia University</i>	<b>2024</b>
Seminar, <i>Flatiron Institute, CCA</i>	2024
†Seminar, <i>Rutgers University</i>	2024
†Seminar, <i>University of Connecticut</i>	<b>2023</b>
†Colloquium, <i>University of Massachusetts</i>	2023
Talk, <i>Galactic Frontiers: Dwarf Galaxies in the Local Volume and Beyond</i>	2023
†Talk, <i>Streams across Simulations/CCA</i>	2023
†Seminar, <i>European Space Agency</i>	2023
†Talk, <i>AAS 241: Nearby Galaxies under a New Light with Roman</i>	2023
†Seminar, <i>American Museum of Natural History</i>	<b>2022</b>
†Colloquium, <i>George Mason University</i>	2022
Seminar, <i>STScI/JHU HotSci Talk Series</i>	2022
Talk, <i>N-Body Shop Workshop/CCA</i>	2022
Tutorial (powderday), <i>N-Body Shop Workshop/Center for Computational Astrophysics</i>	2022
†Seminar, <i>University of California, Riverside</i>	2022
†Seminar, <i>The Center for Astrophysics   Harvard &amp; Smithsonian</i>	<b>2021</b>
Talk, <i>N-Body Shop Excellence Conference</i>	2021
Seminar, <i>Johns Hopkins University</i>	<b>2020</b>
Talk, <i>Galaxy Formation &amp; Evolution in the Era of the Nancy Grace Roman Space Telescope</i>	2020
†Seminar, <i>Princeton University</i>	2020
Talk, <i>235<sup>th</sup> Meeting of the American Astronomical Society</i>	2020
†Seminar, <i>Vanderbilt University</i>	<b>2019</b>
†Seminar, <i>STScI</i>	2019
†Seminar, <i>The Ohio State University CCAPP</i>	2019
†Seminar, <i>Yale University</i>	2019
Talk, <i>Small Galaxies, Cosmic Questions</i>	2019
†Seminar, <i>Max Planck Institute for Astrophysics</i>	<b>2018</b>
Talk, <i>15<sup>th</sup> Annual Potsdam Thinkshop</i>	2018
Talk, <i>New York Area Computational Astrophysics Meeting</i>	<b>2017</b>

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#### OPEN-SOURCE PROJECTS CONTRIBUTED TO

[tangos](#)  
[yt](#)  
[Enzo](#)  
[Powderday](#)  
[pynbody](#)

#### PUBLICATIONS

View my papers on [ADS](#)

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#### PRIMARY REFEREED PUBLICATIONS

##### 8. *Disk Formation and the Size-sSFR Relation of Dwarf Galaxies*

- Geda, R., Cruz, A., **Wright, A.C.**, Greene, J.E., Brooks, A., Quinn, T., Wadsley, J., & Keller, B., 2025, submitted to *ApJ*
7. *The Merger-Driven Formation of Classical Low Surface Brightness Galaxies in ROMULUS25*  
**Wright, A. C.**, Brooks, A. M., Tremmel, M., Young, J. E., Munshi, F., & Quinn, T., 2025, submitted to *ApJ*
  6. *Figuring Out Gas & Galaxies in Enzo (FOGGIE) VII: The (Dis)Assembly of Stellar Halos*  
**Wright, A. C.**, Tumlinson, J., Peebles, M. S., O’Shea, B. W., Lochhaas, C., Corlies, L., Smith, B. D., Binh, N., Augustin, R., & Simons, R. C., 2024, *ApJ*, 970(1):70
  5. *What’s in a Name? Quantifying the Interplay between Definition, Orientation and Shape of UDGs using the ROMULUS Simulations*  
Van Nest, J. D., Munshi, F., **Wright, A. C.**, Tremmel, M., Brooks, A. M., Nagai, D. & Quinn, T., 2022, *ApJ*, 926(1):92.
  4. *The Formation of Isolated Ultra-Diffuse Galaxies in ROMULUS25*  
**Wright, A. C.**, Tremmel, M., Brooks, A. M., Munshi, F., Nagai, D., Sharma, R. S., & Quinn, T. R., 2021, *MNRAS*, 502(4):5370.
  3. *The Formation of Ultra-Diffuse Galaxies in the ROMULUSC Galaxy Cluster Simulation*  
Tremmel, M., **Wright, A. C.**, Brooks, A. M., Munshi, F., Nagai, D., & Quinn, T. R., 2020, *MNRAS*, 497(3):2786.
  2. *Reignition of Star Formation in Dwarf Galaxies*  
**Wright, A. C.**, Brooks, A. M., Weisz, D. R., & Christensen, C. R., 2019, *MNRAS*, 482(1):1176.
  1. *A New Diagnostic of Magnetic Field Strengths in Radiatively Cooled Shocks*  
Hartigan, P. & **Wright, A.**, 2015, *ApJ*, 811(1):12.

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#### OTHER REFEREED PUBLICATIONS

14. *Figuring Out Gas & Galaxies In Enzo (FOGGIE) XIV: The Observability of Emission from Accretion and Feedback in the Circumgalactic Medium with Current and Future Instruments*  
Saeedzadeh, V., Tumlinson, J., Peebles, M.S., O’Shea, B.W., Lochhaas, C., Corlies, L., Trapp, C.W., Smith, B.D., Werk, J.K., Acharyya, A., Augustin, R., Fox, A.J., Lehner, N., & **Wright, A.C.**, 2025, submitted to *ApJ*
13. *Figuring Out Gas & Galaxies In Enzo (FOGGIE) XIII: On the Observability of Extended HI Disks and Warps*  
Trapp, C.W., Peebles, M.S., Tumlinson, J., O’Shea, B.W., **Wright, A.C.**, Acharyya, A., Smith, B.D., Saeedzadeh, V., & Augustin, R., 2025, submitted to *ApJ*
12. *Figuring Out Gas & Galaxies In Enzo (FOGGIE) XII: The Formation and Evolution of Extended HI Galactic Disks and Warps with a Dynamic CGM*  
Trapp, C.W., Peebles, M.S., Tumlinson, J., O’Shea, B.W., Lochhaas, C., **Wright, A.C.**, Smith, B.D., Saeedzadeh, V., Acharyya, A., Augustin, R., & Simons, R.C., 2025, submitted to *ApJ*
11. *Figuring Out Gas & Galaxies In Enzo (FOGGIE) XI: Circumgalactic O VI Emission Traces Clumpy Inflowing Recycled Gas*

- Lochhaas, C., Peeples, M.S., O’Shea, B.W., Tumlinson, J., Corlies, L., Saeedzadeh, V., Lehner, N., **Wright, A.C.**, Werk, J.K., Trapp, C.W., Augustin, R., Acharyya, A., & Smith, B.D., 2025, accepted to *ApJ*
10. *Survivors and Zombies: The Quenching and Disruption of Satellites around Milky Way Analogs*  
Pathak, D., Christensen, C.R., Brooks, A.M., Munshi, F., **Wright, A.C.**, & Carter, C., 2025, *ApJ*, 989(2):178
  9. *Are Gas-rich Ultra-diffuse Galaxies and Field Dwarfs Distinct?*  
Motiwala, K., Karunakaran, A., Spekkens, K., Arora, N., Di Cintio, A., **Wright, A.C.**, Zaritsky, D., & Macciò, A.V., 2025, *ApJ*, 989(1):86
  8. *Figuring Out Gas & Galaxies in Enzo (FOGGIE) X: Characterizing the Small-Scale Structure of the CGM and its Imprint on Observables*  
Augustin, R., Tumlinson, J., Peeples, M.S., O’Shea, B.W., Smith, B.D., Lochhaas, C., **Wright, A.C.**, Acharyya, A., Werk, J.K., Lehner, N., Howk, J.C., Corlies, L., Simons, R.C., & O’Meara, J.M., 2025, *ApJ*, 993(1):52
  7. *Figuring Out Gas & Galaxies in Enzo (FOGGIE) IX: The Angular Momentum Evolution of Milky Way-like Galaxies and their Circumgalactic Gas*  
Simons, R.C., Peeples, M.S., Tumlinson, J., O’Shea, B.W., Lochhaas, C., **Wright, A.C.**, Acharyya, A., Augustin, R., Hamilton-Campos, K.A., Smith, B.D., Lehner, N., Werk, J.K., & Zheng, Y., 2024, *ApJ*, 988(2):250
  6. *Figuring Out Gas & Galaxies in Enzo (FOGGIE) VIII: Complex and Stochastic Metallicity Gradients at  $z > 2$*   
Acharyya, A., Peeples, M. S., Tumlinson, J., O’Shea, B. W., Lochhaas, C., **Wright, A.C.**, Simons, R. C., Augustin, R., Smith, B. D., & Hyeonmin Lee, E., 2025, *ApJ*, 979(2):129
  5. *Figuring Out Gas & Galaxies in Enzo (FOGGIE) VI: CGM Supported in Emergent, Non-Hydrostatic Equilibrium*  
Lochhaas, C., Tumlinson, J., Peeples, M. S., O’Shea, B. W., Werk, J. K., Simons, R. C., Juno, J., Kopenhafer, C. E., Augustin, R., **Wright, A. C.**, Acharyya, A., & Smith, B. D., 2022, *ApJ*, 948(1):43.
  4. *Star Formation Histories from SEDs and CMDs Agree: Evidence for Synchronized Star Formation in Local Volume Dwarf Galaxies over the Past 3 Gyr*  
Olsen, C., Gawiser, E., Iyer, K., McQuinn, K. B. W., Johnson, B. D., Telford, G., **Wright, A. C.**, Broussard, A., & Kurczynski, P., 2021, *ApJ*, 913(1):45.
  3. *An Excess of Globular Clusters in UDGs Formed Through Tidal Heating*  
Carleton, T., Guo, Y., Munshi, F., Tremmel, M., & **Wright, A.**, 2021, *MNRAS*, 502(1):398.
  2. *Black Hole Growth and Feedback in Isolated ROMULUS25 Dwarf Galaxies*  
Sharma, R., Brooks, A., Somerville, R. S., Tremmel, M., Bellovary, J., **Wright, A.**, & Quinn, T. R., 2020, *ApJ*, 897(1):103.
  1. *Simulating Radiative Magnetohydrodynamical Flows with ASTROBEAR: Implementation and Applications of Non-Equilibrium Cooling*  
Hansen, E., Hartigan, P., Adams, A., **Wright, A.**, & Raymond, J. C., 2018, *MNRAS*, 481(3):3098.

3. *Evolution of Galaxy Size in the FOGGIE Simulations*  
Hyeonmin Lee, E., Acharyya, A., **Wright, A. C.**, Augustin, R., Lochhaas, C., Peeples, M. S., & Tumlinson, J., 2023, *RNAAS*, 7(9):202.
2. *Snowmass2021 Cosmic Frontier White Paper: Cosmological Simulations for Dark Matter Physics*  
Banerjee, A., Boddy, K. K., Cyr-Racine, F., Erickcek, A. L., Gilman, D., Gluscevic, V., Kim, S., Lehmann, B. V., Mao, Y., Mocz, P., Munshi, F., Nadler, E. O., Necib, L., Parikh, A., Peter, A. H. G., Sales, L., Vogelsberger, M., & **Wright, A. C.**, 2022, *Snowmass2021 Cosmic Frontier White Paper*
1. *Ultra-Diffuse Galaxies on the Run*  
**Wright, A. C.**, 2021, *Nature Astronomy News & Views*, 5:1208.