

NORA SHIPP

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NEAR-FIELD COSMOLOGY • GALACTIC DYNAMICS • STELLAR STREAMS • SURVEYS & SIMULATIONS

EDUCATION & EMPLOYMENT	Assistant Professor of Astronomy University of Washington, Seattle, WA	2024–present
	NSF Astronomy & Astrophysics Postdoctoral Fellow Carnegie Mellon University, Pittsburgh, PA	2023–2024
	Postdoctoral Associate MIT Kavli Institute for Astrophysics and Space Research, Cambridge, MA	2021–2023
	Ph.D., Astronomy & Astrophysics University of Chicago, Chicago, IL	2021
	Postbaccalaureate Researcher NASA Goddard Space Flight Center, Greenbelt, MD	2014–2015
	Sc.B., with honors in Astrophysics Brown University, Providence, RI	2014
HONORS & AWARDS	• Scialog Fellow, Early Science with LSST	2024
	• Kavli Fellow, National Academy of Sciences	2024
	• Princeton Rising Stars in Physics	2022
	• MIT Infinite Expansion Award	2021
	• Schramm Graduate Student Fellowship	2020
	• William Rainey Harper Dissertation Fellowship	2020
	• Yoichiro Nambu Fellowship	2019
	• University Research Association Visiting Scholars Program	2018, 2019
	• Department of Energy SCGSR Fellowship	2018
	• Illinois Space Grant Consortium Graduate Fellowship	2018
	• LSSTC Data Science Fellow	2016
	• McCormick Fellowship	2015
	• Brinson Fellowship	2015
• Associate Membership, Sigma Xi	2014	
• NASA Rhode Island Space Grant Scholarship	2012	
• Brown University Undergraduate Teaching and Research Award	2012	
RESEARCH GRANTS	• UW Royalty Research Fund, PI (\$40k) <i>Near-field Cosmology with Disrupting Satellite Galaxies</i>	2026
	• Moore Foundation, co-I (\$105,000) <i>Moore Foundation Postdoctoral Fellowships</i>	2025
	• Scialog Early Science with LSST, co-PI (\$60k) <i>Dwarf Debris and Dark Matter: Searching for evidence of hierarchical formation in the stellar halos of dwarf galaxies</i>	2024
	• NSF Astronomy & Astrophysics Postdoctoral Fellowship, PI (\$330k) <i>Near-field Cosmology with Stellar Streams</i>	2023

PRESENTATIONS

Invited Seminars

- University of Washington Physics Colloquium June 2026
- Johns Hopkins & STScI Colloquium May 2026
- Carnegie Observatories Colloquium April 2026
- Center for Computational Astrophysics Colloquium April 2026
- Indiana University Astronomy Colloquium March 2025
- Yale Astrophysics Colloquium October 2024
- University of British Columbia Astrophysics Colloquium October 2024
- UPenn Astrophysics & Cosmology Seminar April 2024
- Princeton Dark Cosmos Seminar April 2024
- Rutgers Astrophysics Seminar November 2023
- Dartmouth Astronomy Seminar May 2023
- Johns Hopkins Theory Seminar May 2023
- University of Washington Astronomy Colloquium March 2023
- Texas A&M Mitchell Institute Seminar September 2022
- Carnegie Mellon Astro Lunch September 2022
- CITA Seminar August 2022
- NASA Star Science Interest Group Seminar April 2022
- Cambridge Milky Way Group September 2021
- Michigan Galaxy Group February 2021
- Carnegie Lunch Talk January 2021
- CCAPP Seminar November 2020
- Yale Galaxy Lunch September 2020
- KIPAC Tea Talk September 2020
- STScI Galaxies Journal Club September 2020
- Fermilab Astrophysics Seminar February 2018

Invited Conference Talks

- AAS Division on Dynamical Astronomy June 2026
- Science with LSST: From Transients to Cosmology May 2026
- S^5 Collaboration Meeting February 2026
- New Approaches to Dark Matter in Galaxies and the Local Group August 2025
- XMC II: Clouds over Yellowstone May 2025
- Dark Matter Theory, Simulation, and Analysis in the Era of Large Surveys June 2024
- Northeastern Regional Meeting on Low-Mass Galaxies July 2023
- DES Collaboration Meeting Plenary May 2021
- LSST Dark Matter Workshop August 2019
- Fermilab New Perspectives June 2019
- DECam Community Science Workshop May 2018

Contributed Conference Talks

- The Hidden Beauty of the Galactic Outskirts October 2025
- Galactic Frontiers II: Dwarf Galaxies in the Local Volume and Beyond June 2025
- 244th Meeting of the American Astronomical Society January 2024
- 243rd Meeting of the American Astronomical Society January 2023
- IAUS379: Dynamical Masses of Local Group Galaxies March 2023
- 241st Meeting of the American Astronomical Society January 2023
- Towards Real-Time Galactic Dynamics July 2022
- Satellites and Streams in the Framework of Cosmological Models at EAS June 2022
- 53rd Meeting of the AAS Division on Dynamical Astronomy April 2022
- Streams 21: Constraints on Dark Matter February 2021
- 237th Meeting of the American Astronomical Society January 2021
- STScI Symposium, The Local Group: Assembly and Evolution August 2020
- Small Galaxies, Cosmic Questions July 2019
- KICP Near-field Cosmology Workshop June 2018
- American Physical Society April Meeting April 2018
- 231st Meeting of the American Astronomical Society January 2018

- PUBLIC PRESS
- Rubin Observatory Will Reveal Dark Matter’s Ghostly Disruptions of Stellar Streams
 - Rubin Observatory Profile: Nora Shipp
 - Rivers in the Sky, *Symmetry Magazine*
 - Dark Energy Survey finds remains of 11 galaxies eaten by the Milky Way, UChicago News
 - Dark Energy Survey Reveals That The Milky Way Has Devoured 11 Other Galaxies, IFL Science

ADVISING

Postdoctoral Scholars

- Chin Yi Tan, DiRAC Fellow, UW 2026–
- Arpit Arora, Gordon & Betty Moore Foundation Postdoctoral Fellow, UW 2024–
- Peter Ferguson, DiRAC Fellow, UW 2024–

Graduate Students

- Ella Marin, UW (PhD advisor) 2025–
- Jack Kohm, UW (PhD advisor) 2025–
- Gray Thoron, UW (PhD advisor) 2024–
- Lainey Gammon, UW (mentoring committee) 2026–
- Sam Charney, UW (research co-advisor, mentoring committee) 2025–
- Ian Chow, UW (mentoring committee) 2025–
- Pip Peterson, UW (mentoring committee) 2024–
- Brenda Gomez, University of Pittsburgh (thesis committee) 2024–2025
- Juan Guerra, Yale University (research mentor & thesis committee) 2023–2024
- Adriana Dropulic, Princeton University (research mentor) 2021–2025
now DARK Fellow, Niels Bohr Institute, University of Copenhagen

Undergraduate Students

- Sophie Johnsen, UW 2026–
- Shriya Prasanna, UW 2025–
- Videep Reddy, UW 2025–
- Elliott Burdett, UW 2025–
- Rutong Pei, Carnegie Mellon University 2023–
- Kiyang Tavangar, University of Chicago 2019–2021
now PhD student, Columbia University

OUTREACH &
COMMUNITY
SERVICE

- Co-chair, LSST DESC Climate Survey Task Force 2025–2026
- Co-chair, LSST DESC Equity, Diversity, & Inclusion Committee 2024–2026
- Mentor, Stellar Streams Mentoring Program 2024–2025
- Mentor, LSST DESC Mentoring Program 2023–2025
- Mentor, AMP-UP Mentoring Program 2023–2024
- Co-founder, UChicago IDEA (Inclusion, Diversity, and Equity in Astronomy) 2017–2021
- Co-lead organizer, Working Groups to Support Black Astronomers at UChicago 2020–2021
- Member, UChicago Improving Graduate Admissions Working Group 2020–2021
- Member, UChicago Improving Graduate Mentoring Working Group 2020–2021
- Presenter, Life Long Learning Chicago 2019
- Founder, UChicago Astronomy & Astrophysics Graduate Mentoring Program 2018
- Co-chair, Astrobites Diversity Committee 2019–2020
- Research Coordinator, Astrobites in the Classroom Study 2017–2018
- Writer, Astrobites 2016–2018
- Presenter, Astronomy Conversations at Adler Planetarium 2015–2017
- Founding Member, Astronomy on Tap Chicago 2015–2017

PROFESSIONAL
SERVICE &
LEADERSHIP

Collaboration Leadership

- Co-convener, LSST DESC Stellar Streams Topical Team 2025–
- Co-convener, LSST DESC Dark Matter Working Group 2023–2025
- Builder, Proper Motion Coordinator, S⁵ Collaboration 2018–

Collaboration Membership

- Member, DECam Local Volume Exploration Survey (DELVE)
- Builder, Southern Stellar Stream Spectroscopic Survey (S⁵)
- Full Member, LSST Dark Energy Science Collaboration (DESC)

Collaboration Observing

- Dark Energy Survey (DES)
- DECam Local Volume Exploration (DELVE) Survey

Workshops and Seminars Organized

- Near Field Cosmology in the Era of Big Data, University of Toronto July 2026
- DESC DKM Stellar Streams Workshop, University of Washington October 2025
- Streams24: The Theory Edition, Durham University August 2024
- LSST DESC Sprint Week, Carnegie Mellon October 2023
- Streams Across Simulations Workshop, CCA April 2023
- MIT Milky Way Journal Club 2021–2023
- UChicago Milky Way Discussion Group 2019–2021
- IDEA (Inclusion, Diversity, and Equity in Astronomy) Week August 2020
- KICP LSST Dark Matter Workshop August 2019
- IDEA (Inclusion, Diversity, and Equity in Astronomy) Day May 2019

Journal Review

Astrophysical Journal, Astronomy & Astrophysics, Monthly Notices of the Royal Astronomical Society, Nature, Nature Astronomy

Grant & Fellowship Review

NSF AAG, NASA ATP, NASA Roman, NASA FINESST, SMASH Fellowship

Department Committees, University of Washington

- Institutional Representative to the LSST Discovery Alliance 2026–
- DiRAC Institute Leadership 2024, 2025, 2026
- Wallerstein Fund 2025
- DiRAC Fellowship Hiring 2023, 2024, 2025 (chair)
- Graduate Admissions 2024

Department Committees, University of Chicago

- Graduate Admissions 2020
- Diversity 2017, 2018, 2019
- Undergraduate Education 2016

TEACHING

University of Washington

- ASTR 575: Seminar in Astronomy Spring 2025, Winter 2026
- ASTR 511: Galactic Structure and Dynamics Winter 2025
- ASTR 102: Introduction to Astronomy Fall 2024, 2025

MIT

- Gaia DR3 Hackathon (Lecturer) June 2022

University of Chicago

- Space Explorers Summer Institute (Lead instructor) Summer 2018
- ASTR 133: Introduction to Astrophysics (Guest lecturer) Spring 2020
- ASTR 119: Physics of Stars (Guest lecturer) Summer 2018
- ASTR 182: The Origin and Evolution of the Universe (TA) Winter 2018
- PHSC 126: The Big Bang (TA) Spring 2016
- PHSC 126: Black Holes (TA) Winter 2016
- PHSC 126: Matter, Energy, Space, and Time (TA) Fall 2015

Brown University

- PHYS 0270: Introduction to Astronomy (TA) Spring 2012, 2014
- PHYS 0220: Astronomy (TA) Fall 2012, 2013, 2014

Primary Contributor

Papers where I was a significant contributor to analysis and/or writing.

* indicates work led by a student or postdoc I advised or co-advised.

- [1] *Nguyen, T., *Pei, R., *Li, Z., **Shipp, N.**, et al. “Forecasting Dark Matter Subhalo Constraints from Stellar Streams using Implicit Likelihood Inference”, 2026, submitted to JCAP, arXiv:2512.07960
- [2] *Riley, A., Bieri, R., Deason, A. J., **Shipp, N.**, et al. “Auriga Streams III: the mass-metallicity relation does not rule out tidal mass-loss in Local Group satellites”, 2026, MNRAS, 546, 3, arXiv:2509.06859
- [3] *Ferguson, P. & **Shipp, N.** “The DECam Field of Streams: a deep view of the Milky Way halo”, 2025, arXiv:2506.05469
- [4] **Shipp, N.**, Riley, A., Simpson, C., et al. “Auriga Streams II: orbital properties of tidally disrupting satellites of Milky Way-mass galaxies”, 2025, MNRAS, 542, 2, arXiv:2410.09143
- [5] *Riley, A., **Shipp, N.**, Simpson, C., et al. “Auriga Streams I: disrupting satellites surrounding Milky Way-mass haloes at multiple resolutions”, 2025, MNRAS, 542, 3, arXiv:2410.09144
- [6] *Dropulic, A., **Shipp, N.**, Kim, S., et al. “StreamGen: Connecting Populations of Streams and Shells to Their Host Galaxies”, 2025, ApJ, 990, 2, arXiv:2409.13810
- [7] *Nguyen, T., *Ou, X., *Panithanpaisal, N., **Shipp, N.**, et al. “Synthetic Gaia DR3 surveys from the FIRE cosmological simulations of Milky-Way-mass galaxies”, 2024, ApJ, 966, 1, arXiv:2306.16475
- [8] **Shipp, N.**, *Panithanpaisal, N., Necib, L., et al. “Streams on FIRE: Populations of Detectable Stellar Streams in the Milky Way and FIRE”, 2023, ApJ, 949, 44, arXiv:2208.02255
- [9] Li, T. S., Ji, A. P., Pace, A. B., Erkal, D., Koposov, S. E., **Shipp, N.**, et al. “S⁵: The Orbital and Chemical Properties of One Dozen Stellar Streams”, 2022, ApJ, 928, 30, arXiv:2110.06950
- [10] *Tavangar, K., Ferguson, P. S., **Shipp, N.**, et al. “From the Fire: A Deeper Look at the Phoenix Stream”, 2022, ApJ, 925, 118, arXiv:2110.03703
- [11] Ferguson, P. S., **Shipp, N.**, Drlica-Wagner, A., et al. “DELVE-ing into the Jet: a thin stellar stream on a retrograde orbit at 30 kpc”, 2022, AJ, 163, 18, arXiv:2104.11755
- [12] **Shipp, N.**, Erkal, D., Drlica-Wagner, A., et al. “Measuring the Mass of the LMC with Stellar Streams Observed by S5”, 2021, ApJ, 923, 149, arXiv:2107.13004
- [13] Li, T. S., Koposov, S., Erkal, D., Ji, A. P., **Shipp, N.**, et al. “Broken into Pieces: ATLAS and Aliqa Uma as One Single Stream”, 2021, ApJ, 911, 194, arXiv:2006.10763
- [14] **Shipp, N.**, Price-Whelan, A., *Tavangar, K., et al. “Discovery of Extended Tidal Tails Around the Globular Cluster Palomar 13”, 2020, AJ, 160, 244, arXiv:2006.12501
- [15] Li, T. S., Koposov, S., Zucker, D., Lewis, G. F., Kuehn, K., Simpson, J. D., Ji, A. P., **Shipp, N.**, et al. “The Southern Stellar Stream Spectroscopic Survey (S5): Overview, Target Selection, Data Reduction, Validation, and Early Science”, 2019, MNRAS, 490, 3508, arXiv:1907.09481
- [16] **Shipp, N.**, Li, T. S., Pace, A. B., et al. “Proper Motions of Stellar Streams Discovered in the Dark Energy Survey”, 2019, ApJ, 885, 3, arXiv:1907.09488
- [17] Drlica-Wagner, A., Mao, Yao-Yuan, [...], **Shipp, N.**, et al. “Probing the Fundamental Nature of Dark Matter with the Large Synoptic Survey Telescope”, 2019, arXiv:1902.01055
- [18] **Shipp, N.**, Drlica-Wagner, A., Balbinot, E., et al. “Stellar Streams Discovered in the Dark Energy Survey”, 2018, ApJ, 862, 114, arXiv:1801.03097

Co-Author

- [19] Han, J. J., Chiti, A., Chen, K.-F., [...], **Shipp, N.**, et al., “A Path to an All-Sky Survey with Roman”, 2026, submitted, [arXiv:2602.21280](#)
- [20] Webber, K. B., Hansen, T. T., Marshall, J. L., [...], **Shipp, N.**, et al., “Detailed Chemical Abundance Analysis of the Brightest Stars in the Turranburra and Willka Yaku Stellar Streams”, 2026, *ApJ*, 999, 1, [arXiv:2512.10003](#)
- [21] Limberg, G., Ji, A. P., Li, T. S., [...], **Shipp, N.**, et al., “ S^5 : Tidal Disruption in Crater 2 and Formation of Diffuse Dwarf Galaxies in the Local Group”, 2025, submitted to *ApJ*, [arXiv:2512.02177](#)
- [22] Wainer, T. M., Davenport, J. R. A., Bellm, E. C., [...], **Shipp, N.**, et al., “Crowded Field Photometry with Rubin: Exploring 47 Tucanae with Data Preview 1”, 2025, *RNAAS*, 9, 171, [arXiv:2507.03228](#)
- [23] Chiti, A., Tavangar, K., Ferguson, P. S., [...], **Shipp, N.**, et al., “DELVE-ing into the Milky Way’s Globular Clusters: Assessing extra-tidal features in NGC 5897, NGC 7492, and testing detectability with deeper photometry”, 2025, *ApJ*, 170, 5, [arXiv:2507.11629](#)
- [24] *Arora, A., Garavito-Camargo, N., Sanderson, R. E., [...], **Shipp, N.**, et al., “Shaping the Milky Way: The interplay of mergers and cosmic filaments”, 2025, *ApJ*, 988, 2, [arXiv:2504.20133](#)
- [25] Yang, Y., Lewis, G. F., Erkal, D., [...], **Shipp, N.**, et al., “Flipping of the tidal tails of the Ophiuchus stream due to the decelerating Galactic bar”, 2025, *ApJ*, 984, 2, [arXiv:2503.19221](#)
- [26] Vienneau, E., Evans, A. J., Hartl, O. V., [...], **Shipp, N.**, et al., “Significant impact of Galactic dark matter particles on annihilation signals from Sagittarius analogues”, 2024, *JCAP*, 2024, 019, [arXiv:2403.15544](#)
- [27] Arora, A., Sanderson, R., Regan, C., [...], **Shipp, N.**, et al., “Efficient and accurate force replay in cosmological-baryonic simulations”, 2024, *ApJ*, 977, 23, [arXiv:2407.12932](#)
- [28] Hilmi, T., Erkal, D., Koposov, S., [...], **Shipp, N.**, et al., “Inferring dark matter subhalo properties from simulated subhalo-stream encounters”, 2024, submitted to *MNRAS*, [arXiv:2404.02953](#)
- [29] Koposov, S., Erkal, D., Li, T. S., [...], **Shipp, N.**, et al., “ S^5 : Probing the Milky Way and Magellanic Clouds potentials with the 6-D map of the Orphan-Chenab stream”, 2023, *MNRAS*, 521, 4, [arXiv:2211.04495](#)
- [30] Lilleengen, S., Petersen, M. S., Erkal, D., [...], **Shipp, N.**, et al., “The effect of the deforming dark matter haloes of the Milky Way and the Large Magellanic Cloud on the Orphan-Chenab stream”, 2023, *MNRAS*, 518, 1, [arXiv:2205.01688](#)
- [31] Bechtol, K., Birrer, S., Cyr-Racine, F., [...], **Shipp, N.**, et al., “Snowmass2021 Cosmic Frontier White Paper: Dark Matter Physics from Halo Measurements”, 2022, [arXiv:2203.07354](#)
- [32] Ji, A. P., Koposov, S. E., Li, T. S., [...], **Shipp, N.**, et al., “Kinematics of Antlia 2 and Crater 2 from The Southern Stellar Stream Spectroscopic Survey (S^5)”, 2021, *ApJ*, 921, 1, [arXiv:2106.12656](#)
- [33] Drlica-Wagner, A., Carlin, J. L., Nidever, D. L., [...], **Shipp, N.**, et al., “The DECam Local Volume Exploration Survey: Overview and First Data Release”, 2021, *ApJS*, 256, 2, [arXiv:2103.07476](#)
- [34] Hansen, T. T., Ji, A. P., Da Costa, G. S., [...], **Shipp, N.**, et al., “ $S5$: The Destruction of a Bright Dwarf Galaxy as Revealed by the Chemistry of the Indus Stellar Stream”, 2021, *ApJ*, 915, 103, [arXiv:2104.13883](#)
- [35] Ji, A. P., Li, T. S., Hansen, T. T., [...], **Shipp, N.**, et al., “The Southern Stellar Stream Spectroscopic Survey (S^5): Chemical Abundances of Seven Stellar Streams”, 2020, *ApJ*, 60, 181, [arXiv:2008.07568](#)
- [36] Wan, Z., Lewis, G., Li, T. S., [...], **Shipp, N.**, et al., “The tidal remnant of an unusually metal-poor globular cluster”, 2020, *Nature*, 583, 768, [arXiv:2007.14577](#)
- [37] Mau, S., Cerny, W., Pace, A. B., [...], **Shipp, N.**, et al., “Two Ultra-faint Milky Way Stellar Systems Discovered in Early Data from the DECam Local Volume Exploration Survey”, 2020, *ApJ*, 80, 136, [arXiv:1912.03301](#)

- [38] Koposov, S., Boubert, D., Li, T. S., [...], **Shipp, N.**, et al., “*The Great Escape: Discovery of a nearby 1700 km/s star ejected from the Milky Way by Sgr A**”, 2020, MNRAS, 491, 2465, [arXiv:1907.11725](#)
- [39] Bechtol, K., Drlica-Wagner, A., [...], **Shipp, N.**, et al., “*Dark Matter Science in the Era of LSST*”, 2019, [arXiv:1903.04425](#)
- [40] Erkal, D., Li, T. S., Koposov, S. E., [...], **Shipp, N.**, et al., “*Modeling the Tucana III stream – a close passage with the LMC*”, 2018, MNRAS, 481, 3148, [arXiv:1804.07762](#)
- [41] Li, T. S., Simon, J. D., Kuehn, K., [...], **Shipp, N.**, et al., “*The First Tidally Disrupted Ultra-Faint Dwarf Galaxy? – Spectroscopic Analysis of the Tucana III Stream*”, 2018, ApJ, 866, 22, [arXiv:1804.07761](#)
- [42] Abbott, T. M. C., Abdalla, F. B., Allam, S., [...], **Shipp, N.**, et al., “*The Dark Energy Survey Data Release 1*”, 2018, ApJS, 239, 18, [arXiv:1801.03181](#)
- [43] Avva, J., Bechtol, K., Chesebro, T., [...], **Shipp, N.**, et al., “*Development toward a ground-based interferometric phased array for radio detection of high energy neutrinos*”, 2017, Nucl. Inst. Meth. A, 869, 46, [arXiv:1605.03525](#)

Other

- [44] Thais, S., Leibowitz, S., Rios Gutierrez, A., Passarelli, A., Santo, S., **Shipp, N.**, “*Identifying At-Risk Communities and Key Vulnerability Indicators in the COVID-19 Pandemic*”, 2021, [medRxiv:2021.09.19.21263805](#)
- [45] Khullar, G., Kohler, S., Konchady, T., [...], **Shipp, N.**, et al., “*Astrobites as a Community-led Model for Education, Science Communication, and Accessibility in Astrophysics*”, 2019, BAAS, 51, 230, [arXiv:1907.09496](#)