

Amanda Wasserman

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EDUCATION

University of Illinois Urbana-Champaign

- Ph.D. Candidate, Department of Astronomy
- M.S. in Astronomy
- GPA: 4.00/4.00
- Advisor: Gautham Narayan

Champaign, Illinois

Expected May 2027

Dec 2023

University of Rochester

Bachelor of Science in Physics and Astronomy
Minor in Mathematics

- GPA: 3.88/4.00
- *Cum Laude* with Highest Distinction
- Thesis Title: *Using Machine Learning to Identify Transients in the DESI Survey*
- Thesis Advisor: Segev BenZvi

Rochester, New York

May 2021

RESEARCH INTERESTS

Time-domain astronomy; Transients in large surveys; SN Ia Cosmology; Machine learning/AI

RESEARCH EXPERIENCE

Graduate Researcher | University of Illinois Urbana Champaign

Advisor: Gautham Narayan

Champaign, Illinois

Aug 2021 – Present

- Improving LSST spectroscopic follow-up in the time-domain with an active learning loop
- Simulating benchmark dataset of transient spectra

Undergraduate Researcher | University of Rochester

Advisor: Segev BenZvi

Rochester, New York

Aug 2018 – May 2021

- Utilized machine learning techniques to identify transients in the Dark Energy Spectroscopic Instrument Survey

Undergraduate Researcher | Columbia University

Advisor: Elena Aprile

Gran Sasso, Italy

May 2019 – Aug 2019

- Modeled liquid xenon purification for XENONnT

FELLOWSHIPS, GRANTS, AND AWARDS

- Fiddler Innovation Fellowship (\$2,000) *2025*
- LINCC Frameworks Incubator Program (\$22,500) *2024*
- Center for Astrophysical Surveys Graduate Fellow (\$66,000) *2022, 2024*
- DOE Science Graduate Student Research Program (\$15,000) *2024*
- LSSTC Wasabi Enabling Science Grant (\$25,000) *2022*
- Janet Fogg Prize for department service, University of Rochester *2021*
- Undergraduate Teaching Award, University of Rochester *2021*
- Joseph C. Wilson "Change" Scholarship, University of Rochester (\$80,000) *2017*
- Ruth Weltman Memorial Begun Scholarship, JFSA of Cleveland (\$50,000) *2017*

PUBLICATIONS

- Jacobson-Galán, W. V., et al. incl. **Wasserman, A.** “Final Moments III: Explosion Properties and Progenitor Constraints of CSM-Interacting Type II Supernovae” *ApJ*, 992, 2025.
- Hoogendam, W. B., et al. incl. **Wasserman, A.** “Seeing the Outer Edge of the Infant Type Ia Supernova 2024epr in the Optical and Near Infrared” *Open Journal of Astrophysics*, 8, 2025.
- Jacobson-Galán, W. V., et al. incl. **Wasserman, A.** “Final Moments II: Observational Properties and Physical Modeling of CSM-Interacting Type II Supernovae” *ApJ*, 970, 2024.
- Kilpatrick, C., et al. incl. **Wasserman, A.** “Type II-P Supernova Progenitor Star Initial Masses and SN 2020jfo: Direct Detection, Light Curve Properties, Nebular Spectroscopy, and Local Environment” *MNRAS*, 524, 2023.
- Aleo, P. D., et al. incl. **Wasserman, A.** “The Young Supernova Experiment Data Release 1 (YSE DR1): Light Curves and Photometric Classification of 1975 Supernovae” *ApJ*, 266, 2023.

TELESCOPE PROPOSALS

- Gemini Observatory – 22 hours awarded (PI) - The Young Supernova Experiment: Creating the Reference low-z Supernova Sample for Cosmology

OBSERVING EXPERIENCE

- Cerro-Tololo Inter-American Observatory with DECam (17 nights)
- University of Rochester C.E.K. Mees Observatory 24 inch Cassegrain Telescope (6 nights)

SUMMER SCHOOL

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| • AIAFI Summer School (<i>Boston, MA</i>) | <i>Aug 2024</i> |
| • LSST Data Science Fellowship Program (<i>Champaign, IL</i>) | <i>Jun 2024</i> |
| • La Serena School for Data Science (<i>La Serena, Chile</i>) | <i>Aug 2023</i> |
| • Michigan Cosmology Summer School (<i>Ann Arbor, MI</i>) | <i>Jun 2023</i> |
| • Zwicky Transient Facility Summer School (<i>Minneapolis, MN</i>) | <i>Jul 2022</i> |

CONFERENCES AND PRESENTATIONS

- **A. Wasserman**, *AI Recommendations for LSST Follow-up*, Summit for AI Institutes Leadership (SAIL) 2025, poster, Oct 2025
- **A. Wasserman**, *Improving Supernova Cosmology with Active Learning Follow-up*, Open SkAI 2025, talk, Sept 2025
- **A. Wasserman**, *The Vera Rubin Observatory LSST Recommendation System for Spectroscopic Follow-up*, NCSA CAPS Seminar, talk, Jul 2025
- **A. Wasserman**, *Improving Supernova Cosmology with Active Learning Follow-up*, Cosmic Lighthouses: Astrophysical and Cosmological Challenges with Type Ia Supernovae, Cambridge UK, talk, Jul 2025
- **A. Wasserman**, *Modular Metrics for the LSST Spectroscopic Recommendation System*, LINCC Tech Talk, talk, May 2025
- **A. Wasserman**, *Modular Metrics of the LSST Spectroscopic Recommendation System*, Transients From Space, poster, Mar 2025
- **A. Wasserman**, *The LSST Spectroscopic Recommendation System*, Astroinformatics 2024 Puerto Natales, Patagonia, Chile, talk, Dec 2024
- **A. Wasserman**, *The LSST Spectroscopic Recommendation System*, Duke Cosmology Seminar, talk, Sept 2024 (invited)
- **A. Wasserman**, *The Time Domain Spectroscopic Recommendation System Pipeline*, LSST DESC Collaboration Meeting, plenary talk, Jul 2024

- **A. Wasserman**, *Uncovering Transient Physics and Optimizing Cosmological Inference with a Recommendation Engine for Rapid-Response Spectroscopy*, AAS, talk, Dec 2023
- **A. Wasserman**, *Uncovering Transient Physics and Optimizing Cosmological Inference with a Recommendation Engine for Rapid-Response Spectroscopy*, NOIRLab AURA La Serena, talk, Oct 2023 (invited)
- **A. Wasserman**, *Optimizing Cosmological Inference Using a Recommendation System for Rapid Response Spectroscopy*, NCSA CAPS Seminar, talk, Apr 2023
- **A. Wasserman**, *Spectroscopic Follow-up in the Time Domain*, LSSTC Board Meeting, talk, Oct 2022
- **A. Wasserman**, *Selecting LSST Transients for Spectroscopic Follow-up with an Active Learning Loop*, LSST Project and Community Workshop, poster, Aug 2022
- **A. Wasserman**, V. Tiwari, S. BenZvi, *Developing a Transient Identification Pipeline for DESI Using Machine Learning*, CUWiP Virtual, talk, Jan 2021
- **A. Wasserman**, V. Tiwari, S. BenZvi, *Using Machine Learning to Develop a Transient Identification Pipeline for DESI*, AAS 237th Meeting, poster, Jan 2021
- **A. Wasserman**, D. Gandhi, S. BenZvi, *Using Machine Learning to Identify Astrophysical Transients in the DESI Survey*, APS April Meeting, poster, 2020
- **A. Wasserman**, *Liquid Xenon Purification Modeling for XENONnT*, CUWiP Pittsburgh, talk, Jan 2020

MENTORING, TEACHING, AND ADVISING EXPERIENCE

Undergraduate Students

Arjun Chainani, (UIUC) August 2024 – present

- Created an anomaly detection algorithm utilizing a hierarchical recurrent neural network

Henna Abunemeh, (University of Illinois Chicago) May 2023 – Present

- Reduced supernova spectra, studied supernova uniqueness and population diversity
- Graduated Spring 2024, began PhD at University of Illinois Urbana-Champaign Fall 2024

Aditya Arunachalam, (UIUC) October 2025 – Present

- Benchmarked transient spectroscopic classifiers

University of Illinois Urbana-Champaign

Teaching Assistant, Department of Astronomy

Champaign, Illinois

Aug 2021 – May 2022

- ASTR 310: Computing in Astronomy, Spring 2022
- ASTR 350: The Big Bang, Black Holes, and the End of the Universe, Fall 2021

University of Rochester

Teaching Intern, Department of Physics & Astronomy

Rochester, New York

Jan 2019 – May 2021

- AST 104: Planets, Life and Civilizations, Spring 2021
- AST 105: Introduction to the Milky Way Galaxy, Fall 2020
- PHY 113P: General Physics I (Self Paced), Spring 2020
- AST 111: The Solar System and its Origin, Fall 2019
- AST 102: Relativity, Black Holes, and the Big Bang, Spring 2019

University of Rochester

Peer Advisor (Physics & Astronomy), College Center for Advising Services

Rochester, New York

Aug 2020 – May 2021

- Advised and counseled undergraduate students on course selection, major declaration, research involvement, independent study, study abroad, and any other academic queries

University of Rochester**Rochester, New York***Pre-College Experience in Physics Instructor, Dept. of Physics & Astronomy**May 2018 – Aug 2018*

- Created and implemented a three-week physics curriculum for twenty high school girls teaching various physics topics through lectures, demonstrations, and activities

LEADERSHIP, SERVICE, AND OUTREACH

Science/Local Organizing Committees:

- Open SkAI 2025 LOC, Chicago, Illinois *Jan 2025 – Sept 2025*
- LSST DESC Collaboration Meeting LOC, Champaign, Illinois *Jan 2025 – Jul 2025*
- LSST DESC Collaboration Meeting, SOC, Zurich, Switzerland *Apr 2024 – Jul 2024*

Graduate Admissions Committee**Champaign, Illinois***Member**Jan 2024 – May 2024*

- Read applications to the UIUC Astronomy Department. Interviewed applicants. Provided input to make final admissions decisions.

Graduate Representative to the Faculty**Champaign, Illinois***Representative**Aug 2022 – Jul 2023*

- Facilitated communications between the graduate students and the faculty

Astronomy on Tap, Urbana-Champaign**Champaign, Illinois***Organizer**Apr 2022 – May 2023*

- Coordinated speakers and location, advertised, and set up for monthly outreach talks

Girls' Astronomy Summer Camp**Champaign, Illinois***Organizer**Mar 2022 – Present*

- Planned camp activities, presented introductory astronomy topics, led coding activities

Astrofest, University of Illinois Urbana-Champaign**Champaign, Illinois***Organizer**Feb 2022 – Apr 2022*

- Organized speakers and poster presenters, coordinated poster judging, and advertised for an annual showcase of research in astronomy

Society for Equity in Astronomy, University of Illinois Urbana-Champaign Champaign, Illinois*Chair, Member**Aug 2021 – Present*

- Organized graduate to undergraduate mentorship program, outreach, and colloquium teas
- Mentored four undergraduate students; aided in research involvement, class selection, and graduate school planning

C.E.K. Mees Observatory University of Rochester**Naples, New York***Student Tour Guide**May 2018 – Aug 2018*

- Presented to the public on the history of the observatory, astronomy facts, and current events
- Led observation tours by operating a 24-inch Cassegrain telescope and giving constellation tours

ARTICLES

- **A. Wasserman**, *Using Machine Learning to Identify Transients in the DESI Survey*, *Astrobites*, 2021
- M. Griston, **A. Wasserman**, *University of Rochester SPS Chapter Responds to Black Lives Matter: How We Need to Change*, *SPS Observer*, 2020

PROFESSIONAL MEMBERSHIPS

- Phi Beta Kappa Academic Honor Society (ΦBK)
- Phi Kappa Phi Honor Society ($\Phi\text{K}\Phi$)
- Sigma Pi Sigma, National Physics Honor Society ($\Sigma\text{P}\Sigma$)
- American Astronomical Society (AAS)

ACTIVE COLLABORATIONS

- Dark Energy Science Collaboration (LSST/DESC)
- Young Supernova Experiment (YSE)
- The DECam Alliance for Transients

SKILLS

Computer Programming and Data Analysis:

- Python, Java, Fortran, C++, C#, Mathematica, SQL, ROOT
- UNIX shell scripting (Bash)
- Git, Docker
- SAOImage DS9, CCDSoft, CCDStack, TheSkyX, Igor Pro

Document Editing:

- LaTeX, Microsoft Office, Google Workspace

Technical Skills:

- Working in a clean room, soldering, working with photomultiplier tubes
- Operating a 24-inch computerized Cassegrain telescope

Languages:

- English (native), Chinese (Mandarin, basic)