

Jaelyn S. Roth

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EDUCATION

Vanderbilt University, Nashville, TN Aug 2023 — Present
Ph.D., Astrophysics
Denison University, Granville, OH Aug 2019 — May 2023
B.S., Physics, *Summa Cum Laude*
Thesis: Investigating Methods for Improving Image Deconvolution of Extragalactic Radio Jets
Advisor: Daniel C. Homan, Ph.D.

PROFESSIONAL AFFILIATIONS

Establishing Multi-messenger astronomy Inclusive Training (EMIT) Program Apr 2024 — Present
Graduate Student Member
Laser Interferometer Space Antenna (LISA) Consortium, Astrophysics WG Mar 2024 — Present
Associate Member

RESEARCH

PUBLICATIONS

- [1] D. C. Homan, J. S. Roth, and A. B. Pushkarev. “Residual Entropy as a Diagnostic and Stopping Metric for CLEAN”. In: *The Astronomical Journal* 167.1 (Dec. 2023), p. 11. DOI: 10.3847/1538-3881/ad0beb. URL: <https://dx.doi.org/10.3847/1538-3881/ad0beb>.

PRESENTATIONS

Incorporating satellite orbit into MBHB merger time delays in Romulus25 July 2024
(Contributed talk)
Roth, Jaelyn and Holley-Bockellmann, Kelly
15th International LISA Symposium 2024
Entropy as a Stopping Metric for Deconvolving VLBI Images of AGN Jets (iPoster) Jan 2023
Roth, Jaelyn and Homan, Daniel C.
AAS241 Chambliss Astronomy Achievement Student Award Winner
Entropy as a Stopping Metric for Deconvolving Extragalactic Radio Images (Poster) Sept 2022
Roth, Jaelyn and Homan, Daniel C.
Denison University Research Symposium
Investigating the CLEAN Algorithm to Improve Imaging of Extragalactic Radio Jets (Poster) Sept 2021
Roth, Jaelyn and Homan, Daniel C.
Denison University Research Symposium

TEACHING

Vanderbilt University, Dept. of Physics & Astronomy
Teaching Assistant; ASTR 1010-L Fa2023 — Present
EXPLO School, Pre-College Program
Instructor; Soft Robotics Su2023
Residential Advisor
Teaching Assistant; Mechanical Engineering, Forensic Biology
Denison University, Dept. of Physics & Astronomy
Course Assistant; PHYS 126 Sp2023
Course Assistant; PHYS 125 Fa2022
Department Tutor Fa2021
Denison University, Academic Resource Center
Tutor; PHYS 121, 122, 125, 126 Sp2021 — Sp2022
Tutor; MATH 130, 135, 145 Sp2021 — Sp2022

OUTREACH

Denison University, Society of Physics Students

Volunteer; Go-Baby-Go Mobility Program	Sp2023
Volunteer; Granville Elementary School Demonstrations	Fa2020 — Sp2023
Co-President	Fa2021
Secretary	Fa2020 — Sp2021

Denison University, Delta Gamma Fraternity

Director of Social Awareness	Sp2022 — Fa2022
Director of Dialogues	Sp2021 — Fa2021
Sexual Respect Chair	Sp2021 — Fa2021

AWARDS & HONORS

• McMinn Research Award	May 2024
• Vanderbilt Provost's Graduate Fellow, Russell G. Hamilton Scholar	Aug 2023
• Phi Beta Kappa Honor Society	May 2023
• Denison University President's Medalist	May 2023
• Mike Mickelson Research Award	May 2023
• Ron Winters Graduate School Award in Physics	May 2023
• Chambliss Astronomy Achievement Student Award	Mar 2023
• Sigma Xi Research Honor Society	Mar 2023
• Society of Physics Students Leadership Scholarship	May 2022
• Denison University Physics & Astronomy Senior Fellow	Apr 2022
• Anderson Scholarship for Excellence in Science	Apr 2021
• Denison University Physics & Astronomy Junior Fellow	Apr 2021
• Sigma Pi Sigma Physics Honor Society	Apr 2021
• Introductory Physics Book Award	Apr 2020
• Phi Society	Oct 2020