

NASA EINSTEIN FELLOW

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- Time-domain astronomy
- Multi-messenger astrophysics
- Gamma-ray Bursts & Fast X-ray Transients
- *r*-process nucleosynthesis

Ph.D. in Astronomy 2025
Northwestern University
Advisor: Prof. Wen-fai Fong

M.S. in Astronomy
Northwestern University

B.A. in Physics, Human Rights, *cum laude* 2019
Minors in Astrophysics, Mathematics
University of Connecticut

- *Honors Thesis in Physics*: "Black Hole Feedback at Cosmic High Noon Revealed by 3D-HST Spectroscopy".
Advisor: Prof. Jonathan Trump
- *Honors Thesis in Human Rights*: "Forces Behind the Numbers: Explaining Gender Disparities in Human Rights and Physics Enrollment".
Advisor: Prof. Shareen Hertel

Einstein Fellowship 2025
NASA Hubble Fellowship Program

Neil Gehrels Prize Postdoctoral Fellowship 2028
Joint Space-Science Institute - UMD & NASA Goddard Space Flight Center

Northwestern University Presidential Fellowship 2024
For promising students who display outstanding intellectual or creative potential,
and have the capacity to be a leader in their respective disciplines and beyond.

Gemini Observatory Graduate Student Visitor 2024
One of five students selected from over 60 international applicants to visit Gemini.

Honorable Mention, NSF Graduate Research Fellowship	2021
Northwestern University Data Science Initiative Fellowship	2019
To support graduate students dedicated to applied advancement in data science.	

PUBLICATIONS

★ **Authored 37 papers with >2000 citations, combined, including 7 first-author papers with ~600 citations, combined. Full list of papers available on my [ADS library](#).**

First-author:

7. **Rastinejad, J. C.**, Srinivasaragavin, G., Sarin, N. et al. 2026 *Submitted to ApJL*. [Arxiv:2606.10011](#) “A Multi-Wavelength View of the First Type Ic-BL Supernova with an X-ray Shock Breakout.”
6. **Rastinejad, J. C.**, Levan, A. J., Jonker, P. G. et al. 2025 *ApJL*, 988, 13. “EP 250108a/ SN2025kg: Observations of the most nearby Broad-Line Type Ic Supernova following an Einstein Probe Fast X-ray Transient.”
5. **Rastinejad, J. C.**, Fong, W., Kilpatrick, C. D. et al. 2025 *ApJ*, 979, 190. “Uniform Modeling of Observed Kilonovae: Implications for Diversity and the Progenitors of Merger-Driven Long Gamma-Ray Bursts.”
4. **Rastinejad, J. C.**, Fong, W., Levan, A. J. et al. 2024 *ApJ*, 968, 14. “A Hubble Space Telescope Search for *r*-Process Nucleosynthesis in Gamma-ray Burst Supernovae.”
3. **Rastinejad, J. C.**, Gompertz, B. P., Levan, A. J. et al. 2022 *Nature*, 612, 7939. “A Kilonova Following a Long-Duration Gamma-ray Burst at 350 Mpc.”
2. **Rastinejad, J. C.**, Paterson, K., Fong, W. et al. 2022 *ApJ*, 927, 50. “A Systematic Exploration of Kilonova Candidates from Neutron Star Mergers During the Third Gravitational Wave Observing Run.”
1. **Rastinejad, J. C.**, Fong, W., Kilpatrick, C. D. et al. 2021, *ApJ*, 916, 89. “Probing Kilonova Ejecta Properties Using a Catalog of Short Gamma-Ray Burst Observations.”

Major contributions as co-author:

4. Pieterse, D., Levan, A. J., Ravasio, M. E., **Rastinejad, J. C.** et al. 2026 *MNRAS*, 548, 2. “GRB 210704A: a luminous fast blue transient in a GRB afterglow at $z=2.34$.”
3. Hosseinzadeh, G., Paterson, K., **Rastinejad, J. C.** et al. 2024 *ApJ*, 946, 35. “SAGUARO: Time-domain Infrastructure for the Fourth Gravitational-wave Observing Run and Beyond.”
2. Paterson, K., Lundquist, M., **Rastinejad, J. C.** et al. 2021 *ApJ*, 912, 128. “Searches after Gravitational Waves Using ARizona Observatories

(SAGUARO): Summary of Observations and Analysis of Candidates from Advanced LIGO/Virgo’s Third Observing Run.”

1. Fong, W., Laskar, T., **Rastinejad, J. C.** et al. 2021 *ApJ*, 906, 127. “The Broad-band Counterpart of the Short GRB 200522A at $z = 0.5536$: A Luminous Kilonova or a Collimated Outflow with a Reverse Shock?”

25 additional contributions as co-author.

TELESCOPE
TIME AWARDED
AS P.I.

★ **Awarded over 28 observing nights and support funding of \$81,455 across 21 proposals as Principal Investigator.**

Gemini Observatory - 66 hours over 8 programs.

- “Mapping the Progenitors of Fast X-ray Transients” - 9 hours, 2026A
- “Gemini Observations of a Short GRB Kilonova” - 10 hours, 2025B
- “Investigating the Sites of R-Process Nucleosynthesis with Strategic Follow-Up of a Nearby Long Gamma-Ray Burst” - 40 hours across 2023A, 2024A, 2024B, 2025A
- “Observing a Once-in-a-Millennium Gamma-ray Burst with Gemini” - Director’s Discretionary Time, 4 hours, 2022B
- “Probing the Properties of Neutron Star Mergers: Rapid Observations of Short Gamma-ray Bursts” - 3 hours, 2022B

Very Large Array - 8 hours in 1 program.

- “Uncovering the Power Sources of Nearby Fast X-ray Transients” - 2026B

Hubble Space Telescope - 14 orbits over 2 programs.

- “Identifying a New Source of r-Process Nucleosynthesis with HST” - 12 orbits, Cycle 31-33
- “Solidifying the Origin of a Possible Kilonova at 350 Mpc” - 2 orbits, Cycle 29

W. M. Keck Observatory - 12 hours over 4 programs (2 NASA TAC, 2 Northwestern/CIERA TAC).

- “ToO Observations of a GRB Kilonova” - 6 hours over 2026A-2026B (NASA)
- “Follow up of Explosive Transients with Keck Target-of-Opportunity Observations” - 6 hours over 2024B-2025A (Northwestern/CIERA)

Lowell Discovery Telescope - 18 hours through UMD.

- “ToO Observations of Relativistic Transients” - 18 hours over 2026A-2026B

MMT Observatory - 14 nights through Northwestern/CIERA.

- “Rapid Observations of Gamma-Ray Bursts and Gravitational Wave Events” - 14 nights over 2021B-2025A

INVITED

★ **20 invited talks at national and international venues.**

PRESENTATIONS

- Review Talk - Intern'l Symposium on Relativistic Astrophysics exp. 12/2026
Shanghai, China. *"TBD"*
- Review Talk - ERC HEAVYMETAL VI Consortium Meeting 6/2026
Kinlochard, UK. *"Observing the Origins of R-Process Elements with GRBs"*
- Colloquium - University of California, San Diego 4/2026
San Diego, USA. *"Constraining the Explosive Origins of r-Process Elements"*
- Review Talk - RAPID-Response: Hot-wiring the Time-Domain Universe 3/2026
Pasadena, USA. *"Catching Kilonovae in the Era of Rubin and Roman"*
- Seminar - Princeton Gravity Initiative 2/2026
Princeton, USA. *"Where is the Second Multi-Messenger Merger? Insights from GRB, Kilonova & Afterglow Observations"*
- Review Talk - Kilonova Session, European Astro. Soc. (EAS) Meeting 6/2025
Cork, Ireland. *"Kilonova Detections from GRBs"*
- Review Talk - Fast X-ray Transient Session, EAS Meeting 6/2025
Cork, Ireland. *"The connection between Fast X-ray Transients and Supernovae"*
- Review Talk - HEAD Special Session, 245th AAS 1/2025
National Harbor, USA. *"The Diversity of EM Counterparts to Neutron Star Mergers: Lessons Learned from Observations of GRBs, Kilonovae and Afterglows"*
- Seminar - Berkeley Theoretical Astrophysics Center 9/2024
Berkeley, USA. *"Observing the origins of R-process elements with GRBs"*
- Seminar - CfA/Harvard ITC Luncheon 9/2024
Cambridge, USA. *"Observing the origins of R-process elements with GRBs"*
- Review Talk - "Fast-Evolving Extragalactic Transients" Conference 2/2024
Bormio, Italy. *"Long/Short and Short/Long "Crossover" GRBs"*
- Colloquium - University of Maryland, College Park 11/2023
College Park, USA. *"Revealing the origins of the Universe's heavy metals with observations of GRBs"*
- Review Talk - "Celebrating 50 years of GRBs" Conference 8/2023
Warrenton, USA. *"Observational Searches for Kilonovae"*
- Colloquium - Illinois State University 3/2023
Normal, USA. *"Revealing the origins of the Universe's heavy metals with observations of GRBs"*
- Seminar, CfA/Harvard High Energy Astrophysics 2/2023
Cambridge, USA. *"Gamma-ray Bursts as signposts of heavy element formation"*
- Review Talk, Roman Obs. Transient Session, 241st AAS 1/2023

Seattle, USA. *“Observing the Diversity of NS Merger Counterparts with Roman”*

○ Review Talk - Gemini Obs. Science Session, 241st AAS 5/2023

Seattle, USA. *“Observing the Diversity of NS Merger Counterparts with Gemini”*

○ Seminar - Explosive Astronomy Series, UC Berkeley 5/2022

Virtual. *“The paradigm-shifting GRB 211211A: A Long GRB from a NS Merger”*

○ Talk - Astronomy Journal Club, University of Chicago 5/2022

Virtual. *“The paradigm-shifting GRB 211211A: A Long GRB from a NS Merger”*

○ Seminar - SPIMAX Seminar Series, Oxford University 11/2021

Virtual. *“Needles in the Haystack: Optimizing Searches for Kilonovae.”*

CONTRIBUTED	Talk, 20 years of <i>Swift Observatory</i> Conference	3/2025
PRESENTATIONS	Thesis Talk, 245th AAS	1/2025
	Talk, Monday Afternoon Talk Series, MIT	9/2024
	Talk, Rise_Time Conference	8/2024
	Talk, Gemini-North Observatory Journal Club	5/2024
	Talk, TASTY Talk Series, University of Toronto	4/2024
	Talk, 243rd AAS	1/2024
	Talk, Transient Science at Space Telescope Group Meeting, STScI	11/2023
	Talk, Windows on the Universe Conference	10/2023
	Talk, The Transient & Variable Universe 2023	6/2023
	Talk, Radboud University	5/2023
	Talk, Theory Group Seminar, Northwestern University	3/2023
	Talk, GWPAW 2022	12/2022
	Talk, SuperVirtual 2022	11/2022
	Talk, Las Cumbres Observatory Seminar	10/2022
	Talk, Gemini Observatory Science Meeting 2022	7/2022
	Talk, Big Boom Seminar Series, University of Arizona	4/2022
	Talk, Exploring the Transient Universe with <i>Roman Observatory</i>	2/2022
	Talk, Gravitational Wave Physics & Astronomy Workshop (GWPAW)	12/2021
	Talk, European Astronomical Society Meeting 2021	6/2021
	Talk, 238th AAS	6/2021
	Talk, AAS HEAD Frontier Seminar Series	5/2021
	Poster, Conference for Undergraduate Women in Physics	1/2019
	Poster, 233rd American Astronomical Society (AAS) Meeting	1/2019

STUDENTS ADVISED	David Morejon , UMD Undergraduate	2025-present
	“Testing Shock Cooling and Free Neutron Decay in GRB Kilonovae”	
	Awarded UMD Department of Astronomy Summer Reserach Funding (2026)	

Lucas Kritz , Northwestern Undergraduate	2024-2026
Co-mentored with Wen-fai Fong	
“Off-axis Afterglow Predictions for Neutron Star Mergers with Afterglowpy”	
Jake M. , High school student	2023
“Comparing Afterglow and Supernova Properties of Four GRB Events”	
León García , High school student	2021 - 2022
“Simulating Off-Axis Short GRB Afterglows to Inform GW Follow-Up”	
Finalist, International Science and Engineering Fair 2022	
Sophie L. , High school student	2021
“Estimating the Ejecta Masses of Short GRB Kilonova Candidates”	

PRESS

★ **My work has been highlighted in four distinct press releases. I was also spotlighted in a [NASA Universe Twitter takeover](#) post with >125,000 views.**

Selected articles on [Rastinejad+25b](#):

- NOIRLab, “[International Gemini Observatory and SOAR Discover Surprising Link Between Fast X-ray Transients and the Explosive Death of Massive Stars](#)”
- Keck Observatory, “[Mysterious cosmic explosion is traced to a massive stellar explosions](#)”

Selected articles on [Rastinejad+22](#) (94 total mentions, total reach 13.9 million):

- Quanta, “[Extra-Long Blasts Challenge Our Theories of Cosmic Cataclysms](#)”
- NOIRLab, “[Kilonova Discovery Challenges our Understanding of Gamma-Ray Bursts](#)”
- CNN, “[Rare cosmic collision acted like one of the ‘factories of gold’ in the universe](#)”
- BBC, “[Remarkable space blast identified as black hole collision](#)”

Selected press on our optical follow-up of the “Brightest Of All Time” GRB (126 total mentions, total reach of 20.7 million):

- NOIRLab Science Release, “[Record-Breaking Gamma-Ray Burst Possibly Most Powerful Explosion Ever Recorded](#)”
- NSF Science Now Video, “[Star Collapses into NEW Black Hole](#)”

Selected articles on [Fong, Laskar, Rastinejad et al. 2021](#):

- National Science Foundation News, “[Birth of magnetar from colossal collision potentially spotted for first time](#)”
- Pop Science, “[This ‘kilonova’ shines so bright, it defies the odds](#)”

TEACHING

Teaching Assistant , <i>Dept. of Physics & Astronomy, Northwestern University</i>	
Physics 135: General Physics, Electricity & Magnetism	Fall 2020
Astronomy 120: Highlights of Astronomy	Fall 2021

JILLIAN RASTINEJAD — CURRICULUM VITAE

LEADERSHIP, OUTREACH & SERVICE	Invited Public Talk, University of Toronto ASX Symposium	2026
	Panelist, NASA Proposal Review	2026
	Reviewer, JWST DD Proposal	2026
	Mentor, UMD GRAD-MAP Program	2026
	Co-organizer, High Energy and Transient (HEAT) Seminar, UMD	2025–
	Referee for <i>ApJL</i> , <i>MNRAS</i>	2022–
	Mentor to Astronomy Postdoc Applicant, National AMP-UP Program	2025
	Short GRB Topical Coordinator, <i>Swift</i> NASA Senior Review	2024
	Organizer, CIERA High School Mentoring Program (REACH)	2020-2023
	Mentor of 3 high schoolers on astronomy projects. Lead organizer for 1-on-1 mentoring in 2022, leading weekly group meetings with 12 students.	
	Lead Organizer, CIERA Data Science for Public Good Conference [Website] 2020-2021	
	Created and led the organization of a virtual conference for high schoolers held July 2021. Developed approachable demonstrations of using data science techniques to further public good (e.g., using machine learning to model past women's health decisions and predict future needs in public health).	
OTHER OUTREACH & COMMUNITY ENGAGEMENT	Astronomy on Tap Talks:	
	Feb. 2023, Chicago: “The Dramatic Inspirals of Cosmic Couples”	
	Oct. 2022, Santa Barbara, “Things That Go Bump in the Night”	
	SPARK Stargazing Nights , <i>Storrs, CT</i> , Summer 2019:	
	Co-led weekly stargazing nights for STEM summer camp girls ages 10-13.	
	Community Legal Services and Counseling Center (now De Novo Center for Justice and Healing), <i>Cambridge, MA</i> , Summer 2018 (20 hours/week):	
	Performed research and analysis of news articles, NGO publications, data from human rights organizations, and government reports to create summaries that would be submitted with asylum applications.	
	Kids In Need of Defense , <i>Boston, MA</i> , Summer 2017 (30 hours/week):	
	Helped Central American minors seeking asylum in the U.S. obtain social services.	
	Windham High School Tutoring , <i>Windham, CT</i> , 2016–2017:	
	Weekly tutor of a ninth-grade science class in an under-served area.	
	West Avenue After School Program , <i>Windham, CT</i> , 2016–2017:	
	Volunteered weekly at a community center in an under-served area, helping elementary school-age children with homework and leading them in group activities.	