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NSF Graduate Research Fellow

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RESEARCH INTERESTS

I study fast radio bursts through optical and radio observations of their host galaxies and associated counterparts, tracing their progenitors and physical origins.

EDUCATION

Northwestern University, *Ph.D.*, Astronomy 2021–present

Advisor: Prof. Wen-fai Fong

Northwestern University, *M.S.*, Astronomy 2021–2023

Advisor: Prof. Wen-fai Fong

Purdue University, *B.S.*, Physics Honors 2017–2021

Minors in Mathematics, Astronomy; Honors College

Advisor: Prof. Danny Milisavljevic

AWARDS & HONORS

NSF Graduate Research Fellowship 2021–2026

Best Oral Presentation Award 2023

FRB Symposium, Taiwan

Ramdas Award 2020–2021

For an exceptional senior undergraduate research project, Purdue University

NASA Illinois Space Grant Summer Research Fellowship 2020

Northwestern University

Best Poster Award 2019

CUWiP at University of Chicago

PUBLICATIONS

Authored 23 papers with >1,100 citations combined, including 4 first-author publications and 2 second-author publications. A full listing of my publications can be found on the [ADS](#).

First-author:

4. *Searching for Historical Extragalactic Optical Transients Associated with Fast Radio Bursts*
Y. Dong, C. Kilpatrick, W. Fong, et al. (2025), ApJ, 991, 199 ([arXiv](#))
3. *A Radio Study of Persistent Radio Sources in Nearby Dwarf Galaxies: Implications for Fast Radio Bursts*
Y. Dong, T. Eftekhari, W. Fong, et al. (2024b), ApJ, 973, 133 ([arXiv](#))
2. *Mapping Obscured Star Formation in the Host Galaxy of FRB 20201124A*
Y. Dong, T. Eftekhari, W. Fong, et al. (2024a), ApJ, 961, 44 ([arXiv](#))
1. *Physical Properties of the Host Galaxies of Ca-rich Transients*
Y. Dong, D. Milisavljevic, J. Leja, et al. (2022), ApJ, 927, 199 ([arXiv](#))

Co-author with Major Contributions:

6. *The Massive and Quiescent Elliptical Host Galaxy of the Repeating Fast Radio Burst FRB 20240209A*
T. Eftekhari, **Y. Dong**, W. Fong et al. (2025), ApJL, 979, L22
5. *A Fast Radio Burst in a Compact Galaxy Group at $z \sim 1$*
A.C. Gordon, W. Fong, S. Simha, **Y. Dong**, et al. (2024), ApJL, 963, L34
4. *Short GRB Host Galaxies II: A Legacy Sample of Redshifts, Stellar Population Properties, and Implications for their Neutron Star Merger Origins*
A.E. Nugent, W. Fong, **Y. Dong**, et al. (2022), ApJ, 940, 57
3. *Short GRB Host Galaxies I: Photometric and Spectroscopic Catalogs, Host Associations, and Galactocentric Offsets*
W. Fong, A.E. Nugent, **Y. Dong**, et al. (2022), ApJ, 940, 56
2. *Chronicle the Host Galaxy Properties of the Remarkable Repeating FRB 20201124A*
W. Fong, **Y. Dong**, J. Leja, et al. (2021), ApJ, 919, L23
1. *The distant, galaxy cluster environment of the short GRB 161104A at $z \sim 0.8$ and a comparison to the short GRB host population*
A.E. Nugent, W. Fong, **Y. Dong**, et al. (2020), ApJ, 904, 52

Nth-author:

13. *Unveiling the Local Environment of FRB 20220912A: Sub-arcsecond 4–26 GHz Radio Continuum Mapping*
Y. Bhusare, [incl. **Y. Dong**] et al., (2026), accepted to ApJ
12. *The Environments of Luminous Fast Blue Optical Transients: Evidence for a Compact Object and Wolf-Rayet Star Merger Origin*
A.E. Nugent, [incl. **Y. Dong**] et al., (2026), ApJ, 1006, 75
11. *Discovery and Localization of the Swift-Observed FRB 20241228A in a Star-forming Host Galaxy*
A.P. Curtin, [incl. **Y. Dong**] et al., (2026), ApJ, 998, 97
10. *James Webb Space Telescope Observations of the Nearby and Precisely Localized FRB 20250316A: A Potential Near-IR Counterpart and Implications for the Progenitors of Fast Radio Bursts*
P.K. Blanchard, [incl. **Y. Dong**] et al., (2025), ApJL, 989, L49
9. *FRB 20250316A: A Brilliant and Nearby One-off Fast Radio Burst Localized to 13 pc Precision*
The CHIME/FRB Collaboration, [incl. **Y. Dong**] et al., (2025), ApJL, 989, L48
8. *A Catalog of Local Universe Fast Radio Bursts from CHIME/FRB and the KKO Outrigger*
The CHIME/FRB Collaboration, [incl. **Y. Dong**] et al., (2025), ApJSS, 280, 6
7. *The Long-lived Broadband Afterglow of Short Gamma-Ray Burst 231117A and the Growing Radio-Detected Short GRB Population*
G. Schroeder, W. Fong, C.D. Kilpatrick, [incl. **Y. Dong**] et al., (2025), ApJ, 982, 24
6. *A repeating fast radio burst source in the outskirts of a quiescent galaxy*
V. Shah, K. Shin, C Leung, [incl. **Y. Dong**] et al., (2025), ApJ, 979, L21
5. *A repeating fast radio burst source in a low-luminosity dwarf galaxy*
D.M. Hewitt, M. Bhardwaj, A.C. Gordon, [incl. **Y. Dong**] et al., (2024), ApJL, 977, L4
4. *An X-ray Census of Fast Radio Burst Host Galaxies: Constraints on AGN and X-ray Counterparts*
T. Eftekhari, W. Fong, A.C. Gordon, [incl. **Y. Dong**] et al., (2023), ApJ, 958, 66

3. *The Demographics, Stellar Populations, and Star Formation Histories of Fast Radio Burst Host Galaxies: Implications for the Progenitors*
A.C. Gordon, W. Fong, C.D. Kilpatrick, [incl. **Y. Dong**] et al. (2023), ApJ, 954, 80
2. *The Broad-band Counterpart of the Short GRB 200522A at $z = 0.5536$: A Luminous Kilonova or a Collimated Outflow with a Reverse Shock*
W. Fong, T. Laskar, J. Rastinejad, [incl. **Y. Dong**] et al. (2021), ApJ, 906, 127
1. *A Mildly Relativistic Outflow from the Energetic, Fast-rising Blue Optical Transient CSS161010 in a Dwarf Galaxy*
D.L. Coppejans, R. Margutti, G. Terreran, [incl. **Y. Dong**] et al. (2020), ApJ, 895, L23

Non-refereed:

3. *Deep MMT upper limit on transient optical emission in the host galaxy of FRB 20250316A*
Dong on behalf of CHIME/FRB Collaboration (2025), Astronomer's Telegram
2. *Keck Spectroscopy and Redshift of the Putative Host Galaxy of the Repeating FRB 20240209A*
Dong on behalf of CHIME/FRB Collaboration (2024), Astronomer's Telegram
1. *GRB 200623A: MMT observations at XRT Source #3*
Rastinejad, **Dong**, et al. (2020), Gamma-ray Coordinates Network

PRESS RELEASES AND MEDIA COVERAGE

Selected articles on **CHIME/FRB Collaboration**, [incl. **Y. Dong**] et al. (2025)

- CNN “Brightest fast radio burst ever detected could help solve an enduring cosmic mystery”
- AAS Nova “Selections from 2025: Pinpointing a Bright Fast Radio Burst with CHIME”
featured in Northwestern and other institutional press releases.

Selected article on **Gordon, Fong, Simha, Dong et al. (2024)**

- Northwestern News “Blob-like’ home of farthest-known fast radio burst is collection of seven galaxies”

Joint NASA–Northwestern release.

Nugent, Fong, Dong, et al. (2022); Fong, Nugent, Dong, et al. (2022)

- Keck Observatory Science News “Tracing the Origins of Rare, Cosmic Explosions”

Joint Keck Observatory–Northwestern release

Dong et al. (2022)

- Astrobites “UR: Physical Properties of the Host Galaxies of Ca-rich Transients.”

TELESCOPE TIME ALLOCATION AS PI

Karl G. Jansky Very Large Array - ~60 hours over 2 programs

- “The First Radio Survey of Fast Radio Burst Host Environments” - 55.9 hr, 2026A
- “Constraining the Origin of the First Persistent Radio Source Coincident with a Fast Radio Burst” - 2.83 hr, 2023B

Robert C. Byrd Green Bank Telescope - 66 hours over 1 program

- “Exploring a New Pathway to Discover Fast Radio Bursts in Dwarf Galaxies” - 66 hr, 2024B

W.M. Keck Observatory - 3 nights over 2 programs (CIERA/Northwestern TAC)

- “Unveiling the Lowest-Luminosity FRB Host Galaxies” - 1.5 n, 2026B
- “Mapping the FRB Population: From the faintest dwarfs to the most distant host” - 1.5 n, 2026A

MMT Observatory - 1.5 nights in 1 program (CIERA/Northwestern TAC)

- “Navigating the Environments of Fast Radio Bursts” - 1.5 n, 2025A

PRESENTATIONS

4 invited talks and 17 contributed talks at national and international venues

Invited Talks:

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| 1. Review Talk - Precursors: Soirée for Rising Stars
<i>“A Brief Introduction to Fast Radio Bursts”</i> | 08/2026 |
| 2. Review Talk - Fast Radio Transient Sky, ICTS Bengaluru (Virtual)
<i>“Connecting FRBs and Cosmic Transients Across the Spectrum”</i> | 10/2025 |
| 3. Seminar - Kavli Institute for Astronomy and Astrophysics, Peking University
<i>“Illuminating the Origins of Fast Radio Bursts with Persistent Radio Sources”</i> | 12/2023 |
| 4. Talk - Astronomy Coffee, The Ohio State University
<i>“Physical Properties of the Host Galaxies of Ca-rich Transients”</i> | 03/2022 |

Contributed Talks:

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| 1. Rise_Time 2026, Purdue University | 08/2026 |
| 2. FRB 2026, Guiyang, China (Invited Discussion Co-chair) | 07/2026 |
| 3. IAU Symposium 406: Future Landscape of Astrophysical Transients, Turku, Finland | 05/2026 |
| 4. HEAT Seminar, University of Maryland | 05/2026 |
| 5. FLASH Seminar, UC Santa Cruz | 02/2026 |
| 6. STRAND Seminar, UC San Diego | 02/2026 |
| 7. Journal Club, Carnegie Observatories | 02/2026 |
| 8. Radio Lunch Seminar, Caltech | 02/2026 |
| 9. Rutgers Summer Transient Soirée, Rutgers University | 07/2025 |
| 10. FRB 2024, Khao Lak, Thailand | 11/2024 |
| 11. Rise_Time 2024, Purdue University | 08/2024 |
| 12. Texas in Shanghai Symposium | 12/2023 |
| 13. Physics & Astronomy Early Career Research Seminar, Northwestern University | 10/2023 |
| 14. The Transient and Variable Universe, University of Illinois Urbana-Champaign | 06/2023 |
| 15. Taiwan Fast Radio Bursts Symposium, National Chung Hsing University | 02/2023 |
| 16. IAU Symposium 369: The Dawn of Cosmology & Multi-Messenger Studies with Fast
Radio Bursts, Busan, South Korea | 07/2022 |
| 17. Early Career Research Meeting | 03/2022 |

Posters:

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| 1. CIERA Fellows at 15, Northwestern University | 08/2025 |
| 2. 243rd American Astronomical Society Meeting, New Orleans, LA | 01/2024 |
| 3. Conferences for Undergraduate Women in Physics, UChicago | 01/2020 |
| 4. Physics Congress Research Symposium, Providence, RI | 11/2019 |
| 5. Summer Undergraduate Research Fellowship Symposium, Purdue University | 08/2019 |

TEACHING & ADVISING

Tanmay Raswant , UIUC Undergraduate	2026–present
CHIME/FRB Baseband FRB–SN crossmatching and chance-coincidence analysis	
Erin Nothdorf , IIT Undergraduate/LSST Summer Grant Student	2025–present
Searching for Rubin/LSST transients associated with CHIME-Outrigger FRBs	
FRB host data reduction, observing preparations, and FFFF-PZ database maintenance	
Sarah Yaa-Pokuwaa Opoku , Northwestern Undergraduate	2024–2026
FRB redshift estimation from DM and CHIME/Outrigger FRB–SN crossmatching	
Isabella Deutsch , High school student	2022
Fitting short gamma-ray burst radio afterglow models	
Guest Lecturer , UC San Diego	2026
The Explosive Universe	
Prof. Floor Broekgaarden	
Guest Lecturer , CIERA high-school mentoring program (REACH)	2025
Introduction to Time Domain Astronomy	
Teaching Assistant , Northwestern University	2023–2024
Astronomy 111: Intro to Astrobiology	
Astronomy 120: Highlights of Astronomy	
Guest Lecturer , CIERA REU	2022
High-energy Astronomical Transients	

OBSERVING EXPERIENCE

Green Bank Telescope	44.5 hours
Keck (DEIMOS, LRIS, MOSFIRE)	9.5 nights

LEADERSHIP, OUTREACH & SERVICE

Co-chair, CHIME/FRB Counterpart Working Group	2025–present
Referee for <i>ApJ</i> , <i>ApJL</i> , and <i>MNRAS</i>	2025–present
Lead Organizer, Astronomy on Tap, Northwestern	2021–present
President, Graduate Womxn in Physics (GWIP), Northwestern	2024–2026
Lead Organizer, FRB Early Career Researcher Journal Club	2023–2026
Admission Committee Member, CIERA REACH	2025
Admission Committee Member, CIERA REU	2024
Professional Development Committee Executive, GWIP	2023–2024
President/Event Coordinator, Women in Physics, Purdue	2017–2021
Co-founder/Vice President, Undergraduate Physics Student Council, Purdue	2019–2021
Volunteer, Saturday Morning Astrophysics at Purdue	2017–2021

PROFESSIONAL DEVELOPMENT

NRAO Synthesis Imaging Workshop	2023
GROWTH Astronomy School: The Dynamic Universe at All Wavelengths	2020