

Brendan M. O'Connor

McWILLIAMS FELLOW · CARNEGIE MELLON UNIVERSITY

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Professional Experience

- 2023 - present **McWilliams Postdoctoral Fellow**, Carnegie Mellon University, Department of Physics & The McWilliams Center for Cosmology
- 2019 - 2023 **Faculty Assistant**, Department of Astronomy, University of Maryland, College Park
- 2019 - 2023 **Research Assistant**, Astrophysics Science Division, NASA Goddard Space Flight Center (GSFC)

Education

The George Washington University

PHD PHYSICS – GPA: 4.0

- Advisor: Dr. Chryssa Kouveliotou; Co-Advisors: Eleonora Troja and Brad Cenko
- Thesis: The Transient Universe: Compact Objects Near and Far

Washington, DC

August 2017 - May 2023

The George Washington University

MPHIL PHYSICS – GPA: 4.0

Washington, DC

August 2017 - May 2020

The George Washington University

MS PHYSICS – GPA: 4.0

Washington, DC

August 2017 - January 2020

Union College

BS PHYSICS – GPA: 3.8 (*summa cum laude*)

- Minor in Astrophysics
- Thesis: Colliding Wind Binaries with Orbital Motion; Advisor: Francis Wilkin

Schenectady, NY

August 2013 - June 2017

Research Interests

- Gamma-ray Bursts and their host galaxies and environments
- Gravitational waves and multi-messenger astrophysics
- Neutron star mergers and kilonovae
- Fast Radio Bursts and their host galaxies and environments
- Galactic X-ray transients: Magnetars, Cataclysmic Variables, High-mass X-ray Binaries
- Surveys and serendipitous optical, infrared, or high-energy transients

My analysis has focused on the following telescopes and observatories:

- **X-rays:** *Swift*/XRT, *NICER*, *NuSTAR*, *Chandra*, *XMM-Newton*
- **Optical/infrared:** *Swift*/UVOT, *Gemini*, *Keck*, *Dark Energy Camera*, *Lowell Discovery Telescope*, *Hubble Space Telescope*, *James Webb Space Telescope*

Publications

FIRST AUTHOR

1. **O'Connor, B.**, Göğüş, E., Hare, J., Mukai, K., Huppenkothen, D., et al., 2023. *Classification of Swift J170800-402551.8 as an intermediate polar*. Submitted to MNRAS.

2. **O'Connor, B.**, O'Connor, B., Kouveliotou, C., Evans, P. A., Gorgone, N., van Kooten, A. J., et al., 2023. *The Swift Deep Galactic Plane Survey (DGPS) Phase-I Catalog*. Submitted to ApJL.
3. **O'Connor, B.**, Brink, J., Buckley, D. A. H., Mukai, K., Kouveliotou, C., et al., 2023. *Discovery of 1RXS J165424.6-433758 as a polar cataclysmic variable*. Submitted to ApJ.
4. **O'Connor, B.**, Troja, E., Ryan, G., Beniamini, P., et al., 2023. *A structured jet explains GRB 221009A*. Science Advances, 9, eadi1405.
5. **O'Connor, B.**, Troja, E., Dichiaro, S., Beniamini, P., et al. 2022. *A deep survey of short GRB host galaxies over $z \sim 0 - 2$: implications for offsets, redshifts, and environments*. MNRAS, 485, 4890
6. **O'Connor, B.**, Göğüş, E., Huppenkothen, D., Kouveliotou, C., et al. 2021. *Identification of an X-Ray Pulsar in the BeXRB System IGR J18219–1347*. ApJ, 927, 139
7. **O'Connor, B.**, Troja, E., Dichiaro, S., Chase, E. A., et al. 2021. *A tale of two mergers: constraints on kilonova detection in two short GRBs at $z \sim 0.5$* . MNRAS, 502, 1279
8. **O'Connor, B.**, Beniamini, P., & Kouveliotou, C. 2020. *Constraints on the circumburst environments of short gamma-ray bursts*. MNRAS, 495, 4782

CO-AUTHOR

9. Srinivasaragavan, G., **O'Connor, B.**, Cenko, S. B., et al., 2023. *A Sensitive Search for Supernova Emission Associated with the Extremely Energetic and Nearby GRB 221009A*. ApJL, 949, L39.
10. Chase, E. A., **O'Connor, B.**, Fryer, C. L., Troja, E., et al., 2022. *Kilonova Detectability with Wide-field Instruments*. ApJ, 927, 163.
11. Troja, E., **O'Connor, B.**, Ryan, G., Piro, L., et al., 2022. *Accurate flux calibration of GW170817: is the X-ray counterpart on the rise?*. MNRAS, 510, 1902.
12. Bruni, G., **O'Connor, B.**, Matsumoto, T., Troja, E., et al., 2021. *Late-time radio observations of the short GRB 200522A: constraints on the magnetar model*. MNRAS, 505, L41.
13. Yang, Y.-H., Troja, E., **O'Connor, B.**, Fryer, C. L., et al., 2023. *A lanthanide-rich kilonova in the aftermath of a long gamma-ray burst*. Submitted to Nature.
14. Troja, E., Fryer, C. L., **O'Connor, B.**, Ryan, G., et al., 2022. *A long gamma-ray burst from a stellar merger in the nearby Universe*. Nature, 612, 228–231.
15. Dichiaro, S., Troja, E., **O'Connor, B.**, Marshall, F. E., et al., 2020. *Short gamma-ray bursts within 200 Mpc*. MNRAS, 492, 5011.
16. Piro, L., Bruni, G., Troja, E., **O'Connor, B.**, et al., 2021. *The fast radio burst FRB 20201124A in a star-forming region: Constraints to the progenitor and multiwavelength counterparts*. A&A, 656, L15.
17. Dichiaro, S., Troja, E., Beniamini, P., **O'Connor, B.**, et al., 2021. *Evidence of Extended Emission in GRB 181123B and Other High-redshift Short GRBs*. ApJL, 911, L28.
18. Becerra, R. L., Troja, E., Watson, A., **O'Connor, B.**, et al., 2023. *Deciphering the unusual stellar progenitor of GRB 210704A*. MNRAS, 522, 5204.
19. Gillanders, J. H., Troja, E., Fryer, C. L., Ristic, M., **O'Connor, B.**, et al., 2023, *Heavy element nucleosynthesis associated with a gamma-ray burst*. Submitted to Nature.
20. Hammerstein, E., Cenko, S. B., Gezari, S., Veilleux, S., **O'Connor, B.**, et al., 2023. *Integral Field Spectroscopy of 13 Tidal Disruption Event Hosts from the ZTF Survey*. Submitted to ApJ.
21. Ricci, R., Troja, E., Bruni, G., Matsumoto, T., Piro, L., **O'Connor, B.**, et al., 2021. *Searching for the radio remnants of short-duration gamma-ray bursts*. MNRAS, 500, 1708.
22. Enoto, T., Ng, M., Hu, C.-P., Güver, T., Jaisawal G. K., **O'Connor, B.**, et al., 2021. *A Month of Monitoring the New Magnetar Swift J1555.2–5402 during an X-Ray Outburst*. ApJL, 920, L4.
23. Troja, E., van Eerten, H., Zhang, B., Ryan, G., Piro, L., Ricci, R., **O'Connor, B.**, et al., 2020. *A thousand days after the merger: Continued X-ray emission from GW170817*. MNRAS, 498, 5643.
24. Ghosh, R., Laha, S., Meyer, E., et al., 2023. *Are-emerging bright soft-X-ray state of the changing-look Active Galactic Nucleus 1ES 1927+654: a multi-wavelength view*. Submitted to ApJ.

25. Dichiara S., Troja E., Lipunov V., Ricci R., et al., 2022. *The early afterglow of GRB 190829A*. MNRAS, 512, 2337.
26. Dichiara, S., Becerra, R. L., Chase, E. A., Troja, E., et al., 2021. *Constraints on the Electromagnetic Counterpart of the Neutron-star-Black-hole Merger GW200115*. ApJL, 923, L32.
27. Gorgone, N. M., Woudt, P. A., Buckley, D., Mukai, K., et al., 2021. *Swift/XRT Deep Galactic Plane Survey Discovery of a New Intermediate Polar Cataclysmic Variable, Swift J183920.1–045350*. ApJ, 923, 243.
28. Champion, D., Cognard, I., Cruces, M., Desvignes, G., et al., 2020. *High-cadence observations and variable spin behaviour of magnetar Swift J1818.0-1607 after its outburst*. MNRAS, 498, 6044.

Awards, Fellowships, & Grants

AWARDS

- 2021 **Berman Award for Excellence in Experimental Physics**, The George Washington University

FELLOWSHIPS

- 2023 **McWilliams Postdoctoral Fellowship**, Carnegie Mellon University
 2016 **Davenport Research Fellowship**, Union College
 2013-2017 **Presidential Scholarship**, Union College

ACADEMIC HONOR SOCIETIES

- 2017 **Phi Beta Kappa**, Union College
 2017 **Sigma Xi**, Union College
 2016 **Sigma Pi Sigma**, Union College
 2016 **The Order of Omega**, Union College

GRANTS

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|------|--|-----------|
| 2023 | Hubble Space Telescope Cycle 31 Award (PI: B. O'Connor) , Space Telescope Science Institute (STScI) | |
| 2023 | Chandra Cycle 25 Award (PI: B. O'Connor) , Smithsonian Astrophysical Observatory (SAO) | \$ 80,000 |
| 2022 | Chandra Cycle 24 Award (PI: B. O'Connor) , Smithsonian Astrophysical Observatory (SAO) | \$ 65,209 |
| 2021 | Chandra Cycle 23 Award (PI: B. O'Connor) , Smithsonian Astrophysical Observatory (SAO) | \$ 66,792 |

Accepted Proposals

These proposals have been awarded time on the following telescopes and observatories:

Swift, *Fermi*, *NICER*, *NuSTAR*, *Chandra*, *XMM-Newton*, *James Webb Space Telescope*, *Hubble Space Telescope*, *Lowell Discovery Telescope*, *Large Binocular Telescope*, *Gemini*, *Keck*, *GTC*, *LBT*, *Subaru*, *ATCA*, *VLA*, *uGMRT*, *e-MERLIN*, *EVN*

As PI:

- | | | |
|----|---|-----------------|
| 1. | HST Cycle 31 Award , Zooming in on the locations of short gamma-ray bursts – Awarded 31 orbits | GO-17492 |
| 2. | Chandra Cycle 25 Award , The collimation and energetics of short GRBs: searching for jet-breaks with <i>Chandra</i> – Awarded 80 ks (2 ToOs) | \$ 80,000 |
| 3. | XMM-Newton Director's Discretionary Time , Awarded 100 ks to study GRB 230307A. | |
| 4. | Gemini-South 2023A , The distance and energetics of the second brightest GRB of all time – Awarded 3 hr of Rapid ToO | GS-2023A-DD-104 |
| 5. | Gemini-North 2023A , Identifying the fingerprints of r-process heavy metals in a short GRB – Awarded 9.5 hr of Rapid ToO | GN-2023A-Q-131 |
| 6. | Gemini-South 2023A , Identifying the fingerprints of r-process heavy metals in a short GRB – Awarded 9.5 hr of Rapid ToO | GS-2023A-Q-130 |

7.	Lowell Discovery Telescope 2023A (Co-PI) , Classically Scheduled Imaging and Spectroscopy of Transients and Their Host Galaxies – Awarded 5 full nights	
8.	Gemini-North/South Director’s Discretionary Time , Unveiling heavy elements from the ultra-long GRB 221009A – Awarded 3.5 hr of Rapid ToO	GS-2022B-DD-104
9.	Chandra Cycle 24 Award , The collimation and energetics of short GRBs: searching for jet-breaks with <i>Chandra</i> – Awarded 80 ks (2 ToOs)	\$ 65,209
10.	Gemini-North 2022B , Identifying the fingerprints of r-process heavy metals in a short GRB – Awarded 9.5 hr of Rapid ToO	GN-2022B-Q-130
11.	Gemini-South 2022B , Identifying the fingerprints of r-process heavy metals in a short GRB – Awarded 9.5 hr of Rapid ToO	GS-2022B-Q-134
12.	Gemini-South 2022B , Off-axis afterglows from compact binary mergers – Awarded 8.5 hr of Slow ToO	GS-2022B-Q-232
13.	Lowell Discovery Telescope 2022B (Co-PI) , Classically Scheduled Imaging and Spectroscopy of Transients and Their Host Galaxies – Awarded 5 full nights	
12.	Gemini-South 2022A , Identifying the fingerprints of r-process heavy metals in a short GRB – Awarded 9.5 hr of Rapid ToO	GS-2022A-Q-141
13.	Lowell Discovery Telescope 2022A , Gamma-ray bursts and their host environments – Awarded 4 half-nights	
14.	Chandra Cycle 23 Award , The collimation and energetics of short GRBs: searching for jet-breaks with <i>Chandra</i> – Awarded 80 ks (2 ToOs)	\$ 66,792
15.	Gemini-South Director’s Discretionary Time , Probing the unusual long GRB 211227A with Gemini – Awarded 2.1 hr of Rapid ToO	DT-2021B-019

ADDITIONAL CO-I PROPOSALS:

1.	JWST Cycle 2 (PI: E. Troja) , Identifying the fingerprints of heavy r-process elements with the James Webb Telescope	GO-3704
2.	HST Cycle 31 (PI: E. Troja) , A holistic view of compact binary mergers: from kilonova to afterglow	GO-17450
3.	HST Cycle 30 (PI: E. Troja) , The afterglow, supernova and distance scale of a record-breaking gamma-ray burst	GO/DD-17298
4.	HST Cycle 30 (PI: E. Troja) , Mapping the diversity of kilonovae through rapid Hubble observations of a short gamma-ray burst	GO-17175
5.	HST Cycle 29 (PI: E. Troja) , Identifying the fingerprints of r-process heavy metals in a short GRB	GO-16846
6.	HST Cycle 25 (PI: E. Troja) , Identify the signature of neutron star mergers through rapid Hubble observations of a short GRB	GO-15089
7.	Gemini-South 2023A (PI: S. Dichiara) , Searching for the SN associated with the extremely bright GRB 230307A	GS-2023A-DD-106
8.	Gemini-South 2023A (PI: N. Klingler) , Resolving the First Bow Shock Pulsar Wind Nebula in Near-IR	GS-2023A-Q-224
9.	Gemini-North 2023A (PI: M. Im) , Optical/NIR Follow-up Observation of Gravitational-Wave Sources	GN-2023A-Q-116
10.	Gemini-South 2023A (PI: M. Im) , Optical/NIR Follow-up Observation of Gravitational-Wave Sources	GS-2023A-Q-121
11.	Gemini-North 2022B (PI: M. Im) , Long-term Monitoring in Optical/NIR of Gravitational-wave Sources	GN-2022B-Q-117
12.	Gemini-South 2022B (PI: M. Im) , Long-term Monitoring in Optical/NIR of Gravitational-wave Sources	GS-2022B-Q-120
13.	Gemini-North 2022B (PI: M. Im) , Optical/NIR Follow-up Observation of Gravitational-Wave Sources	GN-2022B-Q-118

14.	Gemini-South 2022B (PI: M. Im) , Optical/NIR Follow-up Observation of Gravitational-Wave Sources	<i>GS-2022B-Q-119</i>
15.	Gemini-South 2021A (PI: E. Troja) , Mapping the diversity of neutron star mergers with rapid Gemini observations of short gamma-ray bursts	<i>GS-2021A-Q-102</i>
16.	Gemini-North 2021A (PI: E. Troja) , Mapping the diversity of neutron star mergers with rapid Gemini observations of short gamma-ray bursts	<i>GN-2021A-Q-103</i>
17.	Gemini-North 2020B (PI: E. Troja) , Mapping the diversity of neutron star mergers with rapid Gemini observations of short gamma-ray bursts	<i>GN-2020B-Q-102</i>
18.	Gemini-South 2020B (PI: E. Troja) , Mapping the diversity of neutron star mergers with rapid Gemini observations of short gamma-ray bursts	<i>GS-2020B-Q-101</i>
19.	Keck 2023B (PI: S. B. Cenko) , ToO Spectroscopy of GW Counterparts	
20.	Keck 2023A (PI: S. B. Cenko) , ToO Spectroscopy of GW Counterparts	
21.	Keck 2022B (PI: S. B. Cenko) , ToO Spectroscopy of GW Counterparts	
22.	GTC 2023A (PI: A. Watson) , Characterizing Gravitational-Wave Mergers of Neutron Stars	
23.	GTC 2022B (PI: A. Watson) , Characterizing Gravitational-Wave Mergers of Neutron Stars	
24.	Large Binocular Telescope 2023A (PI: Troja) , Identifying the fingerprints of r-process heavy metals in a short GRB	
25.	Lowell Discovery Telescope 2023A (PI: S. B. Cenko) , Target of Opportunity Transient Follow-Up with LDT	
26.	Lowell Discovery Telescope 2023A (PI: I. Andreoni) , ToO Observations of Gravitational Wave Counterparts in the Fourth LIGO-Virgo-KAGRA Observing Run	
27.	Lowell Discovery Telescope 2022B (PI: S. B. Cenko) , Target of Opportunity Transient Follow-Up with LDT	
28.	Lowell Discovery Telescope 2022B (PI: I. Andreoni) , ToO Observations of Gravitational Wave Counterparts in the Fourth LIGO-Virgo-KAGRA Observing Run	
29.	Lowell Discovery Telescope 2022A (PI: A. Gottlieb) , LDT observations of Fast Radio Bursts: counterparts and environment	
30.	Lowell Discovery Telescope 2022A (PI: Cenko) , Target of Opportunity Gamma-Ray Burst Follow-Up with LDT	
31.	Lowell Discovery Telescope 2021B (PI: Cenko) , Target of Opportunity Gamma-Ray Burst Follow-Up with LDT	
32.	Lowell Discovery Telescope 2021B (PI: S. Dichiara) , Gamma-ray bursts and their host environments	
33.	Lowell Discovery Telescope 2021B (PI: E. Troja) , LDT observations of Fast Radio Bursts: counterparts and environment	
34.	Lowell Discovery Telescope 2021A (PI: S. Dichiara) , Gamma-ray bursts and their host environments	
35.	Lowell Discovery Telescope 2021A (PI: E. Troja) , LDT observations of Fast Radio Bursts: counterparts and environment	
36.	Fermi Cycle 14 (PI: C. Kouveliotou) , Magnetar Observations with the Fermi/Gamma Ray Burst Monitor	
37.	Chandra Cycle 25 (PI: E. Troja) , Beyond the GRB jet: searching for the remnant of a neutron star merger	
38.	Chandra Cycle 25 (PI: E. Troja) , GOTCHA! Gravitational wave counterparts Observed wiTh CHAndra	
39.	Chandra Cycle 24 (PI: E. Troja) , GOTCHA! Gravitational wave counterparts Observed wiTh CHAndra	
40.	Chandra Cycle 24 (PI: E. Troja) , Identifying the fingerprints of r-process heavy metals in a short GRB	
41.	Chandra Cycle 24 (PI: S. Dichiara) , Chandra Sub-arcsecond Localization of Swift Short GRBs	

42. **Chandra Cycle 23 (PI: C. Kouveliotou)**, *Chandra* ToO observations of Phase II *Swift* Deep Galactic Plane Survey (DGPS) sources
43. **Chandra Cycle 23 (PI: E. Troja)**, Beyond the GRB jet: searching for the remnant of a neutron star merger
44. **Chandra Cycle 23 (PI: E. Troja)**, Identifying the fingerprints of r-process heavy metals in a short GRB
45. **Chandra Cycle 23 (PI: S. Dichiara)**, Chandra Sub-arcsecond Localization of Swift Short GRBs
46. **Chandra Cycle 22 (PI: E. Troja)**, The Collimation and Energetics of Short GRBs: Searching for Jet-breaks with Chandra
47. **Chandra Director's Discretionary Time (PI: E. Troja)**, A luminous kilonova or a faint supernova? The curious case of GRB210704A
48. **Chandra Director's Discretionary Time (PI: L. Piro)**, Unraveling the nature of the persistent radio source associated to FRB201124A with *Chandra*
49. **Swift Cycle 18 (PI: S. Dichiara)**, Searching High and Low for Elusive Short GRBs
50. **XMM-Newton AO21 (PI: E. Troja)**, The collimation and energetics of short GRBs: searching for jet-breaks with XMM
51. **XMM-Newton AO20 (PI: E. Troja)**, Identifying the fingerprints of r-process heavy metals in a short GRB
52. **NICER Cycle 4 (PI: C. Kouveliotou)**, *NICER* ToO observations of *Swift*/XRT Deep Galactic Plane Survey (DGPS) sources
53. **NICER Cycle 3 (PI: C. Kouveliotou)**, *NICER* ToO observations of *Swift*/XRT Deep Galactic Plane Survey (DGPS) sources
54. **EVN E23 (PI: G. Bruni)**, Characterising the progenitors of fast radio bursts with the EVN EB099
55. **EVN E21 (PI: G. Bruni)**, Characterising the progenitors of fast radio bursts with the EVN EB094
56. **EVN DDT (PI: F. Panessa)**, Disclosing the nature of the persistent radio source associated to FRB20201124A
57. **e-MERLIN Cycle 13 (PI: G. Bruni)**, Characterising the progenitors of fast radio bursts with e-MERLIN
58. **e-MERLIN DDT (PI: G. Bruni)**, Disclosing the nature of the persistent radio source associated to FRB 20201124A with e-MERLIN
59. **ATCA 2022 (PI: R. Ricci)**, Characterizing the spectral behaviour of the Persistent Radio Emission of a Fast Radio Burst
60. **GMRT Cycle 42 (PI: G. Bruni)**, Spectral characterization of the persistent radio emission in fast radio bursts
61. **GMRT DDT (PI: G. Bruni)**, Characterising starburst activity in the host of the repeating FRB 20201124A
62. **VLA 2022B (PI: E. Troja)**, The collimation and energetics of short gamma-ray bursts
63. **VLA 2022B (PI: S. Chastain)**, Electromagnetic counterparts of gravitational wave events
64. **VLA 2021B (PI: E. Troja)**, The collimation and energetics of short gamma-ray bursts
65. **VLA 2021B (PI: E. Troja)**, Beyond the GRB jet: searching for the remnant of a neutron star merger
66. **VLA 2021A (PI: E. Troja)**, Beyond the GRB jet: searching for the remnant of a neutron star merger

Presentations

INVITED TALKS

1. **GROWTH MMA Meeting**. Invited presentation (15m). *A structured jet explains the extreme GRB 221009A*. Presented virtually. March 2023.
2. **Union College**. Invited colloquia presentation (45m). *The Transient Universe: Compact Objects Near and Far*. Schenectady, NY. February 2023.

3. **Harvard-Smithsonian Center for Astrophysics (CfA)**. Invited talk (45m) at High Energy Seminar. *The Transient Universe: Compact Objects Near and Far*. Cambridge, MA. November 2022.
4. **Lowell Observatory**. Invited talk (15m) at A Decade of Exploration with the Lowell Discovery Telescope. *The host galaxies and environments of short gamma-ray bursts.*. Presented virtually. October 2022.
5. **California Institute of Technology (Caltech)**. Invited talk (45m) at Astronomy Tea Talk series. *The Transient Universe: Compact Objects Near and Far*. Presented virtually. October 2022.
6. **University of California, Berkeley**. Invited talk (45m) at Explosive Astro talk series. *The Transient Universe: Compact Objects Near and Far*. Berkeley, CA. September 2022.
7. **University of California, Santa Cruz**. Invited talk (45m) at FLASH Seminar. *The Transient Universe: Compact Objects Near and Far*. Santa Cruz, CA. September 2022.
8. **Universidad Nacional Autónoma de México**. Invited talk (45m) at High Energy Astrophysics (HEAP) seminar. *Shedding light on hostless short GRBs with large aperture telescopes*. Presented virtually. March 2022.

CONTRIBUTED PRESENTATIONS

9. **High Energy Astrophysics Division (HEAD 20) Meeting**. Dissertation talk (15m). *The Transient Universe: Compact Objects Near and Far*. Kona, HI. March 2023.
10. **High Energy Astrophysics Division (HEAD 20) Meeting**. Poster presentation. *A structured jet explains the extreme GRB 221009A*. Kona, HI. March 2023.
11. **241st meeting of the American Astronomical Society (AAS)**. Dissertation talk (15m). *The Transient Universe: Compact Objects Near and Far*. Seattle, WA. January 2023.
12. **Kilonova: Multimessenger and Multiphysics**. Contributed Early Career talk (20m) at WE-Heraeus Seminar. *The host galaxies and environments of short gamma-ray bursts*. Bad Honnef, Germany. November 2022.
13. **Lowell Discovery Telescope Partners' Meeting at Boston University**. Contributed talk (15m). *The host galaxies and environments of short gamma-ray bursts*. Presented virtually. November 2022.
14. **High Energy Astrophysics Division (HEAD 19) Meeting**. Poster presentation. *A search for hostless short GRBs with large aperture telescopes*. Pittsburgh, PA. March 2022.
15. **IAU Symposium 363**. Contributed talk (20m). *Shedding light on hostless short GRBs with large aperture telescopes*. Presented virtually. December 2021.
16. **Marcel Grossman 16th Meeting**. Contributed talk (15m). *Constraints on kilonova emission in two short GRBs at $z \sim 0.5$* . Presented virtually. June 2021.
17. **European Astronomical Society (EAS) Annual Meeting**. Contributed talk (15m). *Constraints on kilonova emission in two short GRBs at $z \sim 0.5$* . Presented virtually. June 2021.
18. **Square Kilometer Array (SKA) Science Conference**. Contributed talk (10m). *Constraints on kilonova emission in two short GRBs at $z \sim 0.5$* . Presented virtually. March 2021.
19. **237th meeting of the American Astronomical Society (AAS)**. Contributed talk (5m). *Constraints on kilonova emission in two short GRBs at $z \sim 0.5$* . Presented virtually. January 2021.
20. **Chandra Frontiers in Time Domain Astrophysics**. Contributed talk (15m). *The merger environments of short gamma-ray bursts*. Presented virtually. October 2020.

Press

The “Brightest of All Time” Gamma-Ray Burst.

- The Science Advances [article](#) on GRB 221009A led to 119 news reports, below are some highlights.
- GWU: <https://gwtoday.gwu.edu/what-makes-gamma-ray-burst-brightest-all-time>
- NuSTAR: <https://www.nustar.caltech.edu/news/nustar230608>
- NOIRLab: <https://noirlab.edu/public/blog/the-brightest-of-all-time/>
- Nature Italy: <https://www.nature.com/articles/d43978-023-00084-x>
- Independent: [Independent](#)
- Forbes: [Forbes](#)

Kilonova Discovery Challenges our Understanding of Gamma-Ray Bursts.

- Nature “Behind-the-paper”: <https://astronomycommunity.nature.com/>
- GWU: <https://mediarelations.gwu.edu/gw-phd-student-plays-key-role-gamma-ray-burst-discovery>
- Inverse: <https://www.inverse.com/science/kilonova-white-dwarf-neutron-star-merger/amp>
- NOIRLab: <https://noirlab.edu/public/news/noirlab2228/>
- NASA: <https://www.nasa.gov/feature/goddard/2022/nasa-missions-probe-game-changing-cosmic-expl>

Record-Breaking Gamma-Ray Burst Possibly Most Powerful Explosion Ever Recorded.

- NSF Science Now: <https://youtu.be/Do2oFQjAS8o>
- NOIRLab: <https://noirlab.edu/public/news/noirlab2224/>
- CNN: <https://www.cnn.com/2022/10/17/world/gamma-ray-burst-detection-scn/index.html>
- Space.com: <https://www.space.com/gamma-ray-burst-brightest-of-all-time>
- Forbes: [Forbes](#)
- Phys.org: [Phys.org](#)
- Times of Israel: [TimesofIsrael](#)
- France24: [France24](#)

Gemini Telescopes Help Uncover Origins of Castaway Gamma-Ray Bursts.

- NOIRLab: <https://noirlab.edu/public/news/noirlab2218/>
- Keck: <https://www.keckobservatory.org/castaway-grbs/>
- UMD: <https://cmns.umd.edu/news-events/features/4958>

Teaching Experience _____

- 2019 **Secondary Instructor**, Solar System Astronomy, The George Washington University
- 2017-2019 **Graduate Teaching Assistant**, Physics and Astronomy, The George Washington University

Mentoring Experience _____

- Summer 2023 **Supervised the research of an undergraduate student**, Aidan Catalano, Carnegie Mellon University
- Summer 2022 **Supervised the research of a first-year graduate student**, Seth Gagnon, The George Washington University
- Summer 2021 **Supervised the research of a first-year graduate student**, Alex van Kooten, The George Washington University

Outreach & Professional Development _____

PEER REVIEW

- 2023 - now **Journal referee**, Astronomy & Astrophysics (A&A)
- 2023 - now **Proposal referee**, Italian TAC for TNG/REM
- 2022 - now **Journal referee**, The Astrophysical Journal (ApJ)
- 2022 - now **Proposal referee**, Gemini Observatory Canadian Time Allocation Committee (CanTAC)

PROFESSIONAL MEMBERSHIPS

2023 - now **The Gravity Collective**, Member
 2023 - now **Gravitational Wave Multi-Messenger Astronomy DECam Survey (GW-MMADS)**, Member
 2023 - now **DECam Alliance for Transients (DECAT)**, Member
 2023 - now **DECam Survey of Intermediate Redshift Transients (DESIRT)**, Member
 2023 - now **The Dark Energy Spectroscopic Instrument (DESI)**, Junior Member
 2023 - now **Athena Science Working Group (SWG3.6: Athena multimessenger)**, Member
 2022 - now **STROBE-X Science Working Group**, Member
 2020 - now **MeerKAT Galactic Plane Survey**, Member
 2020 - 2023 **Swift Deep Galactic Plane Survey (SGPS)**, Observation Lead
 2020 - 2022 **Gamow Explorer Science Team**, Member

WEEKLY COLLOQUIA

2022 - 2023 **GWU Astronomy Data Analysis Seminars**, Organizer/Presenter
 2022 - 2023 **UMD Transient Astronomy Meetings**, Member/Presenter
 2019 - 2023 **NASA GSFC GRB Lunch**, Member/Presenter
 2018 - 2023 **GWU Astronomy Group Meetings**, Member/Presenter

SERVICE AND OUTREACH

2022	2022 Physics Congress (PhysCon) , Volunteer	<i>Washington, DC</i>
2018 & 2019	Astronomy Festival on the National Mall , Volunteer	<i>Washington, DC</i>
2016-2017	Union College Student Affairs Council , Student Representative	<i>Schectady, NY</i>
2016-2017	Union College Student Conduct Committee , Committee Member	<i>Schectady, NY</i>
2016 & 2017	Dudley Observatory at Museum of Innovation and Science , Volunteer at Astronomy Days	<i>Schectady, NY</i>
2015-2016	Union College Men's Club Soccer , Treasurer	<i>Schectady, NY</i>
2015 & 2016	Special Olympics New York Annual 5k rUndead Event Service , Volunteer	<i>Schectady, NY</i>
2014, 2015, & 2016	John Calvin Toll Day of Community Service , Volunteer	<i>Schectady, NY</i>
2015	Town of Niskayuna Recreational Soccer , Volunteer Coach	<i>Niskayuna, NY</i>
2014	Food Bank of Western Massachusetts , Volunteer	<i>Hatfield, MA</i>