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EDUCATION

Ph.D. in Physics, 2012-2018, The George Washington University, Washington D.C.
Dissertation Title: *Search, Identification, and Study of Galactic Compact Objects: Methods, Environments, and Populations*

MPhil in Physics, May 2017, The George Washington University, Washington D.C.

B.S. in Physics, April 2011, University of Pittsburgh, Pittsburgh, PA
Graduated Cum Laude

B.S. in Applied Mathematics, April 2011, University of Pittsburgh, Pittsburgh, PA
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POSITIONS HELD

NICER Calibration Scientist October 2022-Present
NASA Goddard Space Flight Center, Greenbelt, MD

NASA Postdoctoral Program Fellow: October 2019-October 2022
NASA Goddard Space Flight Center, Greenbelt, MD

NuSTAR Postdoctoral Researcher: September 2018-September 2019
University of California, Berkeley, Berkeley, CA

Graduate Research Assistant: May 2014-September 2018
The George Washington University, Washington, D.C.

Graduate Teaching Assistant, August 2012-May 2014
The George Washington University, Washington, D.C.

Graduate Student Intern, June 2013-August 2013
NASA Goddard Space Flight Center, Greenbelt, Maryland

RESEARCH EXPERIENCE

Multi-wavelength studies of pulsars, unidentified GeV/TeV sources using machine learning, and high mass gamma-ray binaries, November 2013-September 2018
The George Washington University, Washington, D.C.
Advisor- Oleg Kargaltsev, Ph.D.

Multi-wavelength studies of unidentified Fermi gamma-ray sources, June 2013-August 2013
NASA Goddard Space Flight Center, Greenbelt, Maryland
Advisor- John Hewitt, Ph.D.

Experimental Nuclear Physics, June 2012-July 2012
Johannes Gutenberg University of Mainz, Mainz, Germany
Advisor- William Briscoe, Ph.D.

REFEREED PUBLICATIONS

First Author:

Hare, J., Pavlov, G. G., Posselt, B., Younes, G., Kargaltsev, O., "Pulsed Infrared Emission from Magnetar 4U 0142+61 Detected by JWST", *Submitted to ApJ* (June 2026).

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Hare, J., Rangelov, B., Sonbas, E., Kargaltsev, O., & Volkov, I. "Multi-wavelength study of HESS J1741-302" *ApJ*, 816, 2 (Jan. 2016)

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NON-REFEREED PUBLICATIONS

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Coughenour, B. M., Tomsick, J. A., Buisson, D. J. K., Coley, J. B., Gandhi, P., García, J. A., **Hare, J.**, Ludlam, R. M., Mallick, L., Shaw, A., " NuSTAR observation of recent MAXI transient confirms a new outburst of the black hole X-ray binary MAXI J1543-564" ATEL No. 17569 (Dec. 2025)

Koss, M.,+....+**Hare, J.**, et al. "The Advanced X-ray Imaging Satellite (AXIS) Community Science Book" arXiv:2511.00253 (Oct. 2025)

O'Connor, B., Pasham, D., Andreoni, I., **Hare, J.**, Hall, X., Carney, J., Palmese, A., Busmann, M., Gruen, D., *GCN 41309* (Aug. 2025)

O'Connor, B., Pasham, D., Andreoni, I., **Hare, J.**, "EP250702a/ GRB 250702B: NuSTAR X-ray Observations " *GCN 41014* (July 2025)

O'Connor, B., Pasham, D., **Hare, J.**, "EP250302a: Chandra X-ray Detection" *GCN 39698* (Mar. 2025)

Ng, M., **Hare, J.**, Jaisawal, G. K., Malacaria, C., Markwardt, C. B., Sanna, A., "Tentative Blazar Candidate EP240709A Associated with 4FGL J0031.5-5648: NICER and Archival Multiwavelength Observations" *RNAAS*, 8, 11, 292 (Nov. 2024)

Younes, G., Hu, C. -P., Enoto, T., Gendreau, K. C., Arzoumanian, Z., **Hare, J.**, Ng, M. , Wadiasingh, Z., "NICER, NuSTAR, and Swift-XRT observations of the Magnetar 1E 1841-045" ATEL 16802 (Sept. 2024)

Jaisawal, G. K., Guillot, S., Ng, M., Gendreau, K. C., Arzoumanian, Z., **Hare, J.**, Younes, G., Ferrara, E. C., Ray, P. S., Wadiasingh, Z. , Strohmayer, T. E., Sanna, A. , Enoto, T., "NICER observations of CXOU J005245.0-722844", ATEL 16636 (May 2024)

Lin, Y., Yang, H., **Hare, J.**, Volkov, I., Kargaltsev, O.,"Multiwavelength Catalog of 10,000 4XMM-DR13 Sources with Known Classifications " RNAAS 8, 74 (Mar. 2024)

Ng, M. , Sanna, A. , Strohmayer, T. E., Arzoumanian, Z., Gendreau, K. C., Ray, P. S., Coley, J. B., Chakrabarty, D., Guillot, S., Bogdanov, S., Altamirano, D., Chenevez, J., **Hare, J.**, Wolff, M. T., Guver, T., Jaisawal, G. K., Wadiasingh, Z. , Ferrara, E. C., "NICER Discovers Millisecond Pulsations and a Type I X-ray Burst from SRGA J144459.2-604207" ATEL 16474 (Feb. 2024)

Safi-Harb, S., Burdge, K. B., Bodaghee, A., An, H., Guest, B., **Hare, J.**, Hebbar, P., Ho, W. C. G., Kargaltsev, O., Kirmizibayrak, D., Klingler, N., Nynka, M., Reynolds, M. T., Sasaki, M., Sridhar, N., Vasilopoulos, G., Woods, T. E., Yang, H., Heinke, C., Kong, A., Li, J., MacMaster, A., Mallick, L. search by orcid, Treyturik, C., Tsuji, N., Binder, B., Braun, C., Chang, H. -K., Chatterjee, A., Ferrand, G., Holland-Ashford, T., Ng, C. -Y., Plotkin, R., Romani, R., Zhang, S., "From Stellar Death to Cosmic Revelations: Zooming in on Compact Objects, Relativistic Outflows and Supernova Remnants with AXIS" AXIS white paper, arXiv:2311.07673 (Nov. 2023)

Chen, S., Kargaltsev, O., Yang, H., **Hare, J.,**, Pavlov, G. G., "Dataset of Classified Chandra Sources in Globular Clusters" *RNAAS*, 7, 215 (Oct. 2023)

Dethero, M. G., **Hare, J.**, Airapetian, V. S., Namekata, K., Coley, J., Ferrara, E. C., Gendreau, K. "Energetic Superflare from a Young Solar Analog, DS Tucanae A, Observed with NICER" *RNAAS*, 7, 203 (Sept. 2023)

Draghis, P. A., Miller, J. M., Homan, J., Uttley, P., Bollemeijer, N., Steiner, J. F., **Hare, J.**, Tombesi, F., Gendreau, K. C., Arzoumanian, Z., Strohmayer, T. E., Sanna, A., Altamirano, D., Buisson, D., Fabian A. C., "Preliminary spectral fitting and QPO evolution in NICER observations of black hole candidate Swift J1727.8-1613", ATEL, 16219 (Aug. 2023)

O'Connor, B., **Hare, J.**, Younes, G., Gendreau, K. C., Arzoumanian, Z., Ferrara, E. C., "NICER detection of Swift J1727.8-1613 (GRB 230824A)" ATEL, 16207 (Aug. 2023)

Homan, J., Baglio, M.C., Saikia, P., Alabarta, K., Russell, D.M., Bramich, D.M., Lewis, F., van den Berg, M., Plotkin, R. M., **Hare, J.**, "Fading of the black hole transient MAXI J1820+070 in X-rays and UV" ATEL, 16200 (Aug. 2023)

Dethero, M. G. and Charles, E., **Hare J.**, Coley, J. B., Ferrara, E. C., Gendreau, K. C., Markwardt, C. B., Arzoumanian, Z., Strohmayer, T. E., "NICER X-ray Observations of V1716 Sco" ATEL, 16167 (Aug. 2023)

Hare, J., Pavlov, G. G., Kargaltsev, O., Garmire, G. P., "First Ejection from the PSR B1259-63/LS 2883 High Mass Gamma-Ray Binary Detected During the 2021-2024 Binary Cycle" *RNAAS*, 7, 52 (Mar. 2023)

Jiang, J., Tomsick, J., Liu, H., Fabian, A. C., Connors, R., Garcia, J., **Hare, J.**, "Swift Follow-up of 4U 1630-47 in Outburst" ATEL, 15575 (Aug. 2022)

Gobat, C., Yang, H., Kargaltsev, O., **Hare, J.**, Volkov, I. "Catalog of X-ray Detected Be Stars (XDBS)" *RNAAS*, 6, 163 (July 2022)

Hare, J., Kargaltsev, O., Cenko, S. B., Klingler, N. J., "X-Rays from V723 Mon are due to Optical Loading in Swift XRT" *RNAAS*, 5, 259 (Nov. 2021)

Yang H., **Hare J.**, Volkov I., Kargaltsev O., "Visualizing Multi-wavelength Properties of Classified X-ray Sources from Chandra Source Catalog" *RNAAS*, 5, 102 (May 2021)

Johnson, T. J., Coley, J. B., Marti-Devesa, G., Corbet, R. H. D., Cheung, C. C., Kerr, M., Pearlman, A. B., **Hare, J.**, Wadiasingh, Z. "Continuing ¿100 MeV Activity from the PSR B1259-63/LS 2883 System 85 Days Post-periastron Detected with the Fermi-LAT ", ATEL, 14612 (May 2021)

Hare J., Yang H., Kargaltsev O., Rangelov B., Pike S. N., Tomsick, J., "Chandra Observations of MAXI J1848-015 prior to its outburst and a possible NIR counterpart" The Astronomer's Telegram, 14499 (Mar. 2021)

Buisson, D. J. K., **Hare, J.**, Guver, T., Altamirano, D., Gendreau, K. C., Arzoumanian, Z., Bult, P. M.,

Strohmayer, T. E., Castro Segura, N., Garcia, Javier A., Remillard, R. A., Tomsick, J. A., Chenevez, J., Jaisawal, G. K., Ozbey Arabaci, M., Vincentelli, F., Homan, J., Guillot, S., Wolff, M. T., Chakrabarty, D. Ng, M., "NICER and NuSTAR detections of Type I bursts and periodic dips in Swift J1858.6-0814" The Astronomer's Telegram, 13563 (Mar. 2020)

Tomsick, J. A., Garcia, J., Fabian, A., Walton, D., Jiang, J., Fuerst, F., Buisson, D., Shaw, A., **Hare, J.**, Bachetti, M., Connors, R., Gandhi, P., Xu, Y. "A NuSTAR Observation of MAXI J0637-430: A New X-ray Transient and Likely Black Hole X-ray Binary" The Astronomer's Telegram, 13270 (Nov. 2019)

Pavlov, G. G., **Hare, J.**, & Kargaltsev, O., "High-speed Ejecta from the Gamma-ray Binary PSR B1259-63/LS 2883" 2019, arXiv:1903.00781 (Mar. 2019)

Hare, J., Gandhi, P., Paice, J. A., & Tomsick, J, " NuSTAR shows continued X-ray activity of Swift J1858.6-0814 in an unusual spectral state" 2019, The Astronomer's Telegram, 12512 (Feb. 2019)

JOURNAL REFEREE

Astronomy & Astrophysics 2023-Current
MNRAS 2019-Current
ApJ 2020-Current
The Physics Teacher 2020-Current

PEER REVIEW PANELS

Subject-matter expert reviewer in a NASA Peer Review (2026)
Subject-matter expert reviewer in a NASA Peer Review (2025)
Subject-matter expert reviewer in a NASA Peer Review (2024)
Subject-matter expert reviewer in a NASA Peer Review (2023)
Subject-matter expert reviewer in a NASA Peer Review (2022)
NASA Neil Gehrels Swift Observatory Cycle 16 panel
NASA Fermi Gamma-ray Observatory Cycle 13 panel
NASA Fermi Gamma-ray Observatory Cycle 14 panel
NASA NICER Cycle 2 panel
NASA Chandra X-ray Observatory Cycle 22 panel

INVITED TALKS

Hare, J. "X-ray Binaries and Novae Science" Swift Senior Review Workshop (Oct. 2024)

Hare, J. *"X-ray source classification in wide-field surveys using a multiwavelength Machine Learning approach"* Carnegie Mellon University astro seminar (Mar. 2024)

Hare, J. *"X-ray source classification in wide-field surveys using a multiwavelength Machine Learning approach"* University of Pittsburgh astro coffee (Mar. 2024)

Hare, J. *"Stellar clusters: compact objects and source populations"*, AXIS CO/SNR science working group, Online (July 2022)

Hare, J. *"A dragon out of breath? Monitoring High velocity outflows from the high mass gamma-ray binary LS 2883/PSR B1259-63"*, Naval Research Lab Astrophysics Talk (May 2022)

Hare, J. *"Finding Needles in Wide Field Survey Haystacks"*, Pennsylvania State University Astronomy and Astrophysics colloquium (Apr. 2022)

Hare, J., *"High-mass gamma-ray binaries in X-rays: PSR B1259-63 and others"*, Columbia high-energy astrophysics group seminar (Mar. 2018)

CONFERENCES & PRESENTATIONS

Hare, J. "AXIS and MW facilities-synergies: Globular Clusters and Long Period Transients", AXIS Online Community Workshop (April 2025)

Hare, J., Yang, H., Chen, S., Lin, Y., Kargaltsev, O., "Classifying potential X-ray counterparts to unidentified Fermi-LAT sources using automated machine learning methods" (11th International Fermi Symposium (Sept. 2024)

Hare, J., Yang, H., Chen, S., Kargaltsev, O., "Classifying Serendipitous X-ray Sources with Machine Learning" High Energy Astrophysics Division Meeting (May 2024)

Hare, J., Markwardt, C., "A NICER look at cross-calibration using 3C 273" International Astronomical Consortium for High-Energy Calibration (May 2024)

Hare, J., Yang, H., Kargaltsev, O., Chen, S. "Classifying Serendipitous X-ray Sources with Machine Learning" 21st High Energy Astrophysics Division Meeting (Apr. 2024)

Hare, J., Pavlov, G. G., Kargaltsev, O., "Fast Moving Ejections from the High Mass Gamma-ray Binary hosting LS 2883/PSR B1259-63" JSI Winds throughout the Universe (Oct. 2023)

Hare, J., Markwardt, C., Gendreau, K., Arzoumanian, Z., Ferrara, E., "A NICER look at cross-calibration using 3C 273 and the Crab" International Astronomical Consortium for High-Energy Calibration (April 2023)

Hare, J., Pavlov, G. G., Posselt, B., Kargaltsev, O., Chen, S., Temim, T., "JWST observations of the magnetar 4U 0142+61" 16th Bonn workshop on the formation and evolution of neutron stars (April 2023).

Hare, J., Kargaltsev, O., Younes, G., Volkov, I., Rangelov, B., "Chandra observations of the pulsar candidate 4FGL J1015.5-6030" 19th High Energy Astrophysics Division Meeting (Mar. 2022)

Hare, J., Kargaltsev, O., Pavlov, G. G., Volkov, I., "NuSTAR observations of two young and energetic pulsars" Poster at IAU symposium 363: Neutron Star Astrophysics at the Crossroads: Magnetars and the Multimessenger Revolution (Nov. 2021)

Hare, J., Yang, H., Volkov, I., Kargaltsev, O., "Crowdsourcing X-ray source catalogs with an eye towards machine learning" Talk at the Chandra Data Science Conference (August 2021)

Hare, J., Yang. H., Kargaltsev O., Volkov I., "Automated Classification of X-ray sources within the extent of Fermi-LAT sources" Poster at the Ninth international Fermi symposium (April 2021)

Hare, J., Tomsick J., García, J., Walton, D., Fuerst, F., Shaw, A., Clavel, M., Fabian, A., Harrison, F., Fryer, C., Miller, J., Parker, M., Pottschmidt, K., Xu, Y., Wilms, J., "The black hole transient Swift J1858.6-0814: a new V404 Cyg analog?" Poster at the 17th HEAD meeting (March 2019)

Hare, J., Kargaltsev, O., Bettina P., Pavlov, G., Volkov, I., "X-ray emission from AR Scorpii", Poster at the 17th HEAD meeting (March 2019)

Hare, J., Kargaltsev, O., Rangelov, B., Pavlov, G., Posselt, B., & Volkov, I., "Searching for compact objects within X-ray catalogs using Machine Learning" Dissertation Talk at 233rd AAS meeting (Jan. 2019)

Hare,. J., Kargaltsev, O., Rangelov, B., "A multi-wavelength study of the massive GLIMPSE-C01 cluster with the Hubble Space Telescope and Chandra X-ray Observatory" 231st AAS meeting (Jan. 2018)

Hare, J., Kargaltsev, O., Rangelov, B., Pavlov, G., Posselt, B., & Volkov, I., "Multiwavelength classification

of Galactic X-ray sources using machine-learning" 231st AAS meeting (Jan. 2018)

Hare, J., Kargaltsev, O., Pavlov, G., "Chandra monitoring of high-velocity ejecta from high-mass gamma-ray binary LS 2883/PSR B1269-63" Cosmic Accelerators Conference (Nov. 2017)

Hare, J., Kargaltsev, O., Rangelov, B., Pavlov, G., Posselt, B., Volkov, I., "A Machine-learning approach to classification of X-ray sources", 16th High Energy Astrophysics Division Meeting (Aug. 2017)

Hare, J., Kargaltsev, O., Pavlov, G., "Peculiar plasma ejections from the high mass gamma-ray binary PSR B1259-63", Variable Galactic Gamma-Ray Sources (IV) (July 2017)

Hare, J., Kargaltsev, O., Rangelov, R., Townsley, L., Broos, P., "Chandra X-ray Observatory and Hubble Space Telescope Observations of the Cluster Glimpse-C01", JWST Proposal Preparation Workshop information (May 2017)

Hare, J., Rangelov, B., Kargaltsev, O., Volkov, I., & Pavlov, G. G., "A Multi-Wavelength Machine Learning Approach to Classify Unidentified X-ray Sources". The George Washington University Research Days 2017 (April 2017)

Hare, J., Kargaltsev, O., Pavlov, G., Rangelov, B., Volkov, I., Hall, C., "Using Machine Learning to Uncover the Nature of TeV Sources", Fermi-Veritas-HAWC Workshop (March 2017)

Hare, J., Kargaltsev, O., Rangelov, B., Pavlov, G. G., Volkov, I., &, "Searching for Unique Objects in X-ray Catalogs using Machine Learning", Detecting the Unexpected (Feb. 2017)

Hare, J., Kargaltsev, O., Rangelov, B., Pavlov, G. G., Volkov, I., &, "Application of Machine-learning Techniques to Understand the Nature of X-ray and Gamma-ray Sources" 2016, IAU Symposium #325 on Astroinformatics (Oct. 2016)

Hare, J., Rangelov, B., Kargaltsev, O., Volkov, I., & Pavlov, G. G., "Machine-learning approach to multi-wavelength classification of high-energy sources". Statistical Challenges in Modern Astronomy VI (June 2016)

Hare, J., Kargaltsev, O., Pavlov, G. G., & Rangelov B., "Extended X-ray object ejected from the PSR B1259-63/LS 2883 binary", *Sixth International Fermi Symposium* (Nov. 2015)

Hare, J., Rangelov, B., Kargaltsev, O., Volkov, I., & Pavlov, G. G., "Applying machine-learning to understand the nature of gamma-ray sources", *IAU General Assembly*, 22, (Aug. 2015), #2258368

Hare, J., Rangelov, B., Kargaltsev, O., Volkov, I., & Pavlov, G. G., "Unveiling the Nature of High Energy Sources Using Machine Learning". DC/MD/VA Astrophysics Summer Meeting for Graduate Students (June 2015)

Hare, J, Rangelov, B., Posselt, B., Kargaltsev, O., & Pavlov, G. G., "The Dynamic X-ray Nebula Powered by the Pulsar B1259-63" and "Chandra and Suzaku Observations of Two Galactic TeV Sources". DC/MD/VA Astrophysics Summer Meeting for Graduate Students (July 2014)

Hare, J, Rangelov, B., Posselt, B., and Kargaltsev, O., & Pavlov, G. G., "Chandra and Suzaku observations of two galactic TeV sources". *American Astronomical Society Meeting Abstracts*, 223, (Jan. 2014), 153.21

Hare, J, Rangelov, B., Posselt, B., and Kargaltsev, O., & Pavlov, G. G., "Chandra and Suzaku observations of two galactic TeV sources". The George Washington University Research Days 2014 (April 2014)

Hare, J., Rangelov, B., Kargaltsev, O., Volkov, I., & Pavlov, G. G., "The Cosmic Snail: Spiral Structure

from the Intra-Binary Shock of the Gamma-Ray Binary B1259-63". DC/MD/VA Astrophysics Summer Meeting for Graduate Students (June 2013)

Hare, J., Rangelov, B., Kargaltsev, O., Volkov, I., & Pavlov, G. G., "The Cosmic Snail: Spiral Structure from the Intra-Binary Shock of the Gamma-Ray Binary B1259-63". The George Washington University Research Days 2013 (April 2013)

WORKING GROUPS

Co-lead of Hi-ReX SAG WG3, Galactic Astrophysics (2026)
Member of the AXIS CO-SNR working group (2025)

WORKSHOPS

Joint NICER+IXPE Workshop co-organizer, George Washington University, 2024

PROFESSIONAL DEVELOPMENT

JWST Proposal Preparation Workshop information, May, 2017
Space Telescope Science Institute, Baltimore, Maryland

- Learned how to plan and create observations for JWST using APT
- Learned how to use the exposure time calculator and other proposal planning tools

User Training in JWST Data Analysis II, November, 2016
Space Telescope Science Institute, Baltimore, Maryland

- Learned about the specifications and uses of the instruments on JWST
- Learned how to use some of the preliminary software packages available for JSWT and played with simulated data

The 4th Annual DC/VA/MD Summer Astrophysics Meeting, July, 2016
The George Washington University, Washington, D.C.

- Organized the annual conference for local graduate and undergraduate astrophysics students
- Chaired the conference

Summer School in Statistics for Astronomers, 2015
Pennsylvania State University, State College, Pennsylvania

- Attended detailed statistics courses taught by both statisticians and astronomers
- Learned how to use the R statistics software package
- Learned how to properly integrate statistics into astronomy

NRAO Community Day at the Space Telescope Science Institute, April 2015
Space Telescope Science Institute, Baltimore, Maryland

- Learned about some NRAO facilities and how they work (VLA and ALMA)
- Practiced reducing data with the CASA software

Astro Hack Week, September, 2014
University of Washington, Seattle, Washington

- Hacked on a python version of Machine Learning pipeline
- Learned how to use the Sci-Kit Learn python package and applied it to our Chandra data set

Cottrell Scholars Collaborative National Teaching Assistant Workshop, May, 2014
Georgia Institute of Technology, Atlanta, Georgia

- Discussed and developed plans (e.g., mentoring programs) to assist TAs in becoming more impactful in the classroom at GWU

Future Faculty Program, Fall, 2013
The George Washington University, Washington, D.C.

- Weekly workshops on learning and implementing different innovative pedagogical techniques
- Focused on active learning

Fermi Summer School, May 2013 - June, 2013
University of Delaware Conference Center, Lewes, DE

- Sponsored by NASA Goddard Space Flight Center
- Learned how to download and analyze Fermi Large Area Telescope (LAT) data
- Specific workshops on special techniques for analyzing Fermi LAT data

GWU Physics Department Colloquium, August 2012-2018
The George Washington University, Washington, D.C.

- Colloquial talks given by distinguished speakers on a variety of topics in physics

PRESS RELEASES

"PSR B1259-63: Pulsar Punches Hole In Stellar Disk", NASA/CXC Media Release, July 2015

APPROVED OBSERVING AND ARCHIVAL PROGRAMS

Principle Investigator

ADAP 2024: "Living Catalogs: A foundation for high-energy machine learning training datasets"
Chandra Cycle 26: "Measuring the Quiescent X-Ray and Radio Luminosities of the Black Hole Binary MAXI J1820+070"
XMM-Newton AO-23: "Probing the quiescent emission of a unique Isolated Neutron Star"
NICER Cycle 6: "A NICER timing study of the gamma-ray pulsar candidate 4FGL J1015.5-6030"
NuSTAR Cycle 9: "Unveiling a potential hard X-ray counterpart to the unidentified TeV source HESS J1626-490" (Priority C)
NuSTAR Cycle 8: "Probing the High-energy Infrared connection for 4U 0142+61"
Chandra Cycle 23: "Measuring the Quiescent X-ray and Radio Luminosities of the Black Hole Binary MAXI J1820-070"
Chandra Cycle 21: "High-resolution Imaging and timing of 3FGL J1016.5-6034"
XMM-Newton Cycle 16: "Bright X-ray counterparts of galactic 3FGL sources"
XMM-Newton Cycle 20: "Investigating the Nature of Unidentified Galactic HAWC Sources" (Priority C)
NICER and NuSTAR TOO: Swift J1858.6-0814 in the non-flaring state

Co-Investigator

NuSTAR Cycle 12 "Unusual Suspects: An X-ray Search for the Hidden Corners of the PeVatron Zoo" (PI: Woo)
NuSTAR Cycle 12 "PROBING INTRABINARY EMISSION IN THE REDBACK CANDIDATE 4FGL J2054.2+6904 WITH NUSTAR" (PI: Coley)
NuSTAR Cycle 12 "Exploring the high-energy properties of the remarkable Lighthouse nebula" (PI: Kargaltsev)
XMM-Newton AO-23: "Evolution of aging pulsars as seen in X-rays" (PI: Pavlov)
XMM-Newton AO-23: "Bright X-ray Counterparts of Galactic 4FGL Sources" (PI: Yang)
NICER Cycle 6: "A NICER view of black hole X-ray binary outbursts in the soft X-ray band" (PI: Jiang)
Chandra Cycle 25: "The high-speed ejecta from a gamma-ray binary" (PI: Pavlov)
Chandra Cycle 25: "Exploring the nature of PeVatron Candidate HESS J1702-420A" (PI: Yang)
Chandra Cycle 25: "The Nature of INTEGRAL Sources in the Galactic Plane" (PI: Tomsick)
JWST Cycle 2: "Hunting for IMBHs in the Omega Centauri Globular Cluster" (PI: Kargaltsev)
NuSTAR Cycle 9: "Probing Rapid Variability in Black Hole X-ray Binary Jets" (PI: Shaw)
NuSTAR Cycle 9: "Constraining newfound Fermi gamma-ray emission likely from an old pulsar wind nebula in the Large Magellenic Cloud" (PI: Eagle)

Chandra Cycle 24: "A Census of Pulsar Wind Nebulae and Their Pulsars" (PI: Kargaltsev)
Hubble Cycle 30: "The legacy UV survey of 28 pulsars" (PI: Kagaltsev)
NuSTAR Cycle 8: "Probing Rapid Variability in Black Hole X-ray Binary Jets" (PI: Shaw)
NuSTAR Cycle 7: "A Magnetar in gamma-ray binary LS 5039?" (PI: Kargaltsev)
NuSTAR Cycle 7: "Spin and reflection in a black hole transient" (PI: Coughenour)
NuSTAR Cycle 7: "White dwarf masses and spin periods for hard X-ray selected Galactic sources" (PI: Tomsick)
JWST Cycle 1: "Infrared emission from magnetar 4U 0142+61: A dusty fallback disk?" (PI: Pavlov)
Swift Cycle 17: "Swift X-ray monitoring of the magnetar SGR 0755-2933" (PI: Younes)
NuSTAR Cycle 6: "NuSTAR study of PSR J1101-6101 and its remarkable Nebula" (PI: Klingler)
NuSTAR Cycle 6: "The Vela Pulsar and its PWN in hard X-Rays" (PI: Kargaltsev)
Chandra Cycle 22: "Magnetosphere-PWN Connection: Resolving the X-ray PWN around the MeV PSR J1849-0001" (PI: Kargaltsev)
Chandra Cycle 22: "Survey of Gamma-ray Pulsars" (PI: Rangelov)
Chandra Cycle 22: "The High Velocity Ejecta from a Gamma-ray Binary" (PI: Pavlov)
NASA ADAP: "Multiwavelength Identification of Galactic High-Energy Sources" (PI: Kargaltsev)
XMM-Newton Cycle 19 "External and internal heating in the old pulsar PSR B0950+08" (PI: Pavlov)
NICER Cycle 1: "Is the brightest serendipitous NuSTAR source an UCXB and AMXP?" (PI:Tomsick)
Chandra Cycle 20: "X-ray ejecta after the strongest gamma-ray flare in the PSR B1259-63/LS 2883 binary" (PI: Pavlov)
Chandra Cycle 20: "The intermediate-age cluster GLIMPSE-C01" (PI: Rangelov)
Chandra Cycle 20: "Discovering compact objects in intermediate age clusters" (PI: Kargaltsev)
Chandra Cycle 20: "The Pulsar Wind Nebula of PSR J1016-5857" (PI: Klingler)
Chandra Cycle 19: "Discovering extended sources in Chandra images" (PI: Kargaltsev)
Chandra Cycle 19: "Revealing pulsars hidden in the 3rd Fermi Catalog" (PI: Rangelov)
Chandra Cycle 18: "Mysterious ejecta from a high-mass gamma-ray binary" (PI: Pavlov)
XMM-Newton Cycle 17: "HAWC source 2HWC J1928+177: A unique gamma-ray binary emitting 100 TeV photons?" (PI: Mori)
XMM-Newton Cycle 16: "Snap-shot survey of INTEGRAL sources in the Galactic plane" (PI: Kargaltsev)
XMM-Newton Cycle 15: "Sleuthing for compact objects accreting from the interstellar medium" (PI: Kargaltsev)
XMM-Newton Cycle 15: "Snap-shot Survey of Fermi Pulsar Candidates" (PI: Kargaltsev)
HST DDT "Optical counterpart of high-speed ejecta from the gamma-ray binary LS 2883" (PI: Pavlov)
HST Cycle 23: "The intermediate-age cluster GLIMPSE-C01" (PI: Rangelov)

STUDENT SUPERVISION

Myles Pope, Summer 2024 (NASA Intern)
Kaleb Martin, Summer 2024 (NASA Intern)
Mary Geer Dethero, Summer 2023 (NASA Intern)
Emma Charles, Summer 2023 (NASA Intern)
Steven Chen, 2020-Current (GWU Graduate Student)
Hui Yang, 2019-Current (GWU Graduate Student)
Haven Vu, 2019 (Undergraduate at UC Berkeley)
Corrine Hall, 2016-2017 (High school student)

VOLUNTEER EXPERIENCE

Instructor at ASTRAL-X X-ray Astronomy School 2025

- Taught graduate students attending from countries all over South America how to analyze X-ray data
- Mentored student projects to help them learn the basics of X-ray data analysis with various modern observatories

Astronomy on Tap 2024
DC9, Washington, D.C.
- Gave a public lecture celebrating 25 years of Chandra, focussed on Chandra's contributions to pulsar wind nebula science

Instructor at X-Ray Vision Capacity Building Workshop in X-ray workshop 2023
- Taught graduate students attending from countries all over Africa how to analyze X-ray data
- Mentored student projects to help them learn the basics of X-ray data analysis with various modern observatories

Guest Lecturer: High energy astrophysics, GWU, 2021, 2024
- Presented a guest lecture in Dr. Kargaltsev's high energy astrophysics class on fitting/interpreting X-ray spectra

Adopt-a-physicist Outreach program, 2018, 2019, 2021,2022
Online
- Interacted with high school students and provided detailed answers to questions about my job/physics/academic trajectory

Cal Day, 2019
Space Sciences Lab, Berkeley, CA
- Led tours of Space Sciences lab
- Discussed ongoing research at Space Sciences Lab with the general public

Astronomy Festival on the National Mall, June, 2014, 2015, 2016, 2017, and 2018
The National Mall, Washington, D.C.
- Sponsored by Hofstra University
- Demonstrated models of astrophysical systems to the general public

Astronomy on Tap 2017
DC9, Washington, D.C.
- Volunteered to help setup/run the event in the D.C. area

PROFESSIONAL SOCIETIES

American Astronomical Society
American Physical Society

HONORS & AWARDS

Gus W. Weiss Prize for Outstanding Student in Physics 2017
Department of Physics, The George Washington University, Washington, D.C.

2nd Place Physics/Mathematics Poster, GWU Research Days Poster Competition 2017
Columbian College of Arts and Sciences, The George Washington University, Washington, D.C.

Outstanding Graduate Teaching Assistant Award 2014
Department of Physics, The George Washington University, Washington, D.C.