

Anna Trindade Falcão

Postdoctoral Researcher

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Education

- 2019–2022 : **Doctor of Philosophy, Physics**, *Catholic University of America*, Washington, DC.
Active Galactic Nuclei, Supermassive Black Holes, Photoionization Modeling, *HST* Imaging and Spectroscopy.
- 2018–2019 : **Master of Science, Physics**, *Catholic University of America*, Washington, DC.
- 2014–2017 : **Bachelor of Science, Physics**, *Universidade Federal de Minas Gerais*, Brazil.

Research Experience

Harvard & Smithsonian | Center for Astrophysics

- June 2022 – present **Post Doctoral Research Fellow.**
Multiwavelength Studies of AGN-Host Galaxy Interaction in the Nearby Universe
[Catholic University of America](#)
- Jan 2018 – May 2022 **Research Assistant.**
Spatially-Resolved Mass Outflows in Nearby Quasars: Implications for AGN Feedback

Publications

Journal Articles

- 2024 **Trindade Falcão, Anna**, T. J. Turner, S. B. Kraemer, V. Braitto, J. Reeves, H. Schmitt, and L. Feuillet. Resolving a Candidate Dual Active Galactic Nuclei with ~ 100 pc separation in MCG-03-34-64. *ApJ*, volume 972, page 185, September 2024.
- 2024 **Trindade Falcão, Anna**, G. Fabbiano, M. Elvis, A. Paggi, W. P. Maksym, and M. Karovska. Discovery of Kiloparsec-scale Semirelativistic Fe $K\alpha$ Complex Emission in NGC 5728. *ApJ*, volume 963, page 6, March 2024.
- 2024 **Trindade Falcão, Anna**, S. B. Kraemer, T. C. Fischer, H. R. Schmitt, L. Feuillet, D. M. Crenshaw, M. Revalski, W. P. Maksym, M. Vestergaard, M. Elvis, C. M. Gaskell, L. C. Ho, H. Netzer, T. Storchi-Bergmann, T. J. Turner, and M. J. Ward. *Hubble Space Telescope* Observations of Nearby Type 1 Quasars. I. Characterisation of the Extended [O III] 5007Å Emission. *MNRAS*, submitted 2024.
- 2023 **Trindade Falcão, Anna**, G. Fabbiano, M. Elvis, A. Paggi, and W. P. Maksym. Deep Chandra Observations of NGC 5728: Morphology and Spectral Properties of the Extended X-Ray Emission. *ApJ*, volume 950, page 143, June 2023.
- 2023 H. R. Russell, L. A. Lopez, S. W. Allen, G. Chartas, P. P. Choudhury, R. A. Dupke, A. C. Fabian, A. M. Flores, K. Garofali, E. Hodges-Kluck, M. J. Koss, L. Lanz, B. D. Lehmer, J. T. Li, W. P. Maksym, A. B. Mantz, M. McDonald, E. D. Miller, R. F. Mushotzky, Y. Qiu, C. S. Reynolds, F. Tombesi, P. Tozzi, **Trindade Falcão, Anna**, S. A. Walker, K. W. Wong, M. Yukita, and C. Zhang. The evolution of galaxies and clusters at high spatial resolution with AXIS. *arXiv e-prints*, page arXiv:2311.07661, November 2023.

- 2023 W. Peter Maksym, Martin Elvis, Giuseppina Fabbiano, **Trindade Falcão, Anna**, Steven B. Kraemer, Travis C. Fischer, D. Michael Crenshaw, and Thaisa Storchi-Bergmann. A UFO Seen Edge-on? Resolving Ultrafast Outflow Emission on 200 pc Scales with Chandra in the Active Nucleus of Mrk 34. *ApJ*, volume 951, page 146, July 2023.
- 2022 **Trindade Falcão, Anna**, S. B. Kraemer, D. M. Crenshaw, M. Melendez, M. Revalski, T. C. Fischer, H. R. Schmitt, and T. J. Turner. Tracking X-ray outflows with optical/infrared footprint lines. *mnras*, volume 511, pages 1420–1430, February 2022.
- 2021 **Trindade Falcão, Anna**, S. B. Kraemer, T. C. Fischer, D. M. Crenshaw, M. Revalski, H. R. Schmitt, M. Vestergaard, M. Elvis, C. M. Gaskell, F. Hamann, L. C. Ho, J. Hutchings, R. Mushotzky, H. Netzer, T. Storchi-Bergmann, T. J. Turner, and M. J. Ward. Hubble Space Telescope observations of [O III] emission in nearby QSO2s: physical properties of the ionized outflows. *mnras*, volume 500, pages 1491–1504, January 2021.
- 2021 **Trindade Falcão, Anna**, S. B. Kraemer, T. C. Fischer, D. M. Crenshaw, M. Revalski, H. R. Schmitt, W. P. Maksym, M. Vestergaard, M. Elvis, C. M. Gaskell, F. Hamann, L. C. Ho, J. Hutchings, R. Mushotzky, H. Netzer, T. Storchi-Bergmann, T. J. Turner, and M. J. Ward. Hubble Space Telescope [O III] emission-line kinematics in two nearby QSO2s: a case for X-ray feedback. *mnras*, volume 505, pages 3054–3069, August 2021.

[In Conference Proceedings](#)

- 2023 **Trindade Falcão, Anna**, Giuseppina Fabbiano, Martin Elvis, and W. Maksym. Deep Chandra Observations of NGC 5728: A Study of Morphology and Spectral Properties of the Extended X-ray Emission. In *American Astronomical Society Meeting Abstracts*, volume 55 of *American Astronomical Society Meeting Abstracts*, page 360.22, January 2023.
- 2023 Christopher S. Reynolds, Erin A. Kara, Richard F. Mushotzky, Andrew Ptak, Michael J. Koss, Brian J. Williams, Steven W. Allen, Franz E. Bauer, Marshall Bautz, Arash Bogadhee, Kevin B. Burdge, Nico Cappelluti, Brad Cenko, George Chartas, Kai-Wing Chan, Lía. Corrales, Tansu Daylan, Abraham D. Falcone, Adi Foord, Catherine E. Grant, Mélanie Habouzit, Daryl Haggard, Sven Herrmann, Edmund Hodges-Kluck, Oleg Kargaltsev, George W. King, Marina Kounkel, Laura A. Lopez, Stefano Marchesi, Michael McDonald, Eileen Meyer, Eric D. Miller, Melania Nynka, Takashi Okajima, Fabio Pacucci, Helen R. Russell, Samar Safi-Harb, Keivan G. Strassun, Anna **Trindade Falcão**, Stephen A. Walker, Joern Wilms, Mihoko Yukita, and William W. Zhang. Overview of the advanced x-ray imaging satellite (AXIS). In Oswald H. Siegmund and Keri Hoadley, editors, *UV, X-Ray, and Gamma-Ray Space Instrumentation for Astronomy XXIII*, volume 12678 of *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, page 126781E, October 2023.
- 2023 W. Maksym, Giuseppina Fabbiano, Martin Elvis, **Trindade Falcão, Anna**, Steven Kraemer, Travis Fischer, D. Crenshaw, and Thaisa Storchi-Bergmann. A UFO Seen Edge-On: Resolving Ultrafast Outflow Emission on 200-pc Scales with Chandra in the Active Nucleus of Mrk 34. In *American Astronomical Society Meeting Abstracts*, volume 55 of *American Astronomical Society Meeting Abstracts*, page 442.06, January 2023.
- 2023 Steven Kraemer, Travis Fischer, Mitchell Revalski, **Trindade Falcão, Anna**, D. Michael Crenshaw, Henrique Schmitt, Mark Bottorff, and John Raymond. Evidence for X-ray Wind/Cloud Interaction in NGC 1068. In *American Astronomical Society Meeting Abstracts*, volume 55 of *American Astronomical Society Meeting Abstracts*, page 336.07, January 2023.
- 2022 **Trindade Falcão, Anna** Luiza. Tracking X-ray Outflows With Optical/IR Footprint Lines. In *Multiphase AGN Feeding & Feedback II*, page 66, June 2022.

2019 **Trindade Falcão, Anna**, Steven Kraemer, Travis Fischer, D. Michael Crenshaw, and Mitchell Revalski. HUBBLE SPACE TELESCOPE OBSERVATIONS OF EXTENDED [O III] λ 5007 EMISSION IN NEARBY QSO2S: PHYSICAL PROPERTIES OF THE OUTFLOWS. In *American Astronomical Society Meeting Abstracts #233*, volume 233 of *American Astronomical Society Meeting Abstracts*, page 242.19, January 2019.

Invited and Contributed Talks

- 2024 • Oral Presentation at the 21st American Astronomical Society High Energy Astrophysics Division Meeting
- 2024 • Oral Presentation at the CfA Booth - American Astronomical Society Winter Meeting
- 2023 • AXIS Probe Mission Seminar
 - Oral Presentation at the AGN Winds on the Chesapeake Conference
 - Oral Presentation at the American Astronomical Society Winter Meeting
- 2022 • Oral Presentation at the Multiphase AGN Fueling & Feeding II
- 2021 • CfA High Energy Seminar
 - Space Telescope Science Institute Colloquium
 - University of Washington Colloquium
- 2019 • Catholic University Colloquium

Press Releases

- 2024 • NASA Press Release, "*NASA's Hubble, Chandra Find Supermassive Black Hole Duo*", September 09, 2024; Release ID: 2024-022

Fellowships & Awards

- 2022 **Postdoctoral Research Fellow** in the High-Energy Astrophysics Division of the Smithsonian Astrophysical Observatory, Cambridge, MA.
- 2021 **Best Doctoral Oral Presentation** at the Catholic University of America Research Day.

Activities & Achievements

- 2024–present Member of the HEASARC Users Group (HUG)
- 2023–present Member of the AXIS High Resolution X-ray Imager Science Team
- 2023 Member of the Science Organizing Committee of the "AGN Winds on the Chesapeake" Conference, Easton, MD, USA.
- 2023–present Journal Referee (ApJ, Nature, ApJL)
- 2022–present CfA HEAD Seminar Organizer

Mentoring and Supervision

- Fall, 2024: **Mentoring High School Student Tony Zhang**, Amity Science Research Program Mentor.