

# Lindsay Fuller, Ph.D.

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## EDUCATION:

**University of Texas at San Antonio, January 2013 – December 2017**

**Ph.D., Physics**, College of Sciences, Department of Physics and Astronomy

**M.S., Physics**, College of Sciences, Department of Physics and Astronomy

**University of Texas at Austin, January 2008 – May 2012**

**B.S., Physics**, College of Natural Sciences, Department of Physics

**B.S., Astronomy**, College of Natural Sciences, Department of Astronomy

## RESEARCH APPOINTMENTS:

**Assistant Professor of Research, September 2020 – present**

University of Texas at San Antonio, Department of Physics and Astronomy, San Antonio, TX

- Infrared observations of active galaxies

**Postdoctoral Researcher, January 2018 – August 2020**

University of Texas at San Antonio, Department of Physics and Astronomy, San Antonio, TX

- SOFIA telescope infrared observation analysis of active galaxies
  - Research topic: Disentangling infrared AGN emission into constituent parts (torus, narrow line region, star formation) using new SOFIA observations in conjunction with archival observations from Spitzer, Hubble, and Herschel space telescopes.
- Infrared observing technique research

**Research Scientist, 2015 – 2019**

Southwest Research Institute, Division of Space Sciences, San Antonio, TX

- Instrument development team: high-resolution space-based spectrometer sensitive to atmospheric greenhouse gas absorption
- Astrophysical science case development: need assessment for space-based spectrometer
- M-dwarf stellar catalog development for future use in exoplanet research

**Graduate Research Assistant, January 2013 – December 2017**

University of Texas at San Antonio, Department of Physics and Astronomy, San Antonio, TX

- SOFIA telescope infrared observation analysis of active galaxies
- Bayesian inference of AGN parameters
- New Horizons instrument characterization: Solar Wind Around Pluto (SWAP) characterization at low energies using twin instrument SWAP2

**Undergraduate Research Assistant, 2009 – 2012**

University of Texas at Austin, Department of Physics, Austin, TX

- Terawatt class laser operator
- Instrument development team: laser cavity for petawatt class laser facility

**Undergraduate Research Assistant, 2010 – 2011**

University of Texas at Austin, Department of Astronomy, Austin, TX

- Fiber optic cable testing for the Hobby Eberly Telescope Dark Energy eXperiment (HETDEX)

**RELEVANT PUBLICATIONS (Complete publication list below):**

**Fuller, L.** (in prep) “Atlas of AGN Imaging from SOFIA”

**Fuller, L.**, et al., 2019, MNRAS, 483, 3404, “SOFIA/FORCAST resolve 30 – 40  $\mu\text{m}$  extended dust emission in nearby AGN”

**Fuller, L.**, et al. 2016, MNRAS, 462, 2618, “Investigating the dusty torus of Seyfert galaxies using SOFIA/FORCAST photometry”

**TEACHING:**

**Substitute Lecturer, 2017-2019**

University of Texas at San Antonio

- AST1013: Undergraduate Astronomy

**Lab Instructor, 2016 - 2020**

St. Mary’s University, San Antonio TX

- PY1401: Undergraduate Physics I Lab, non-science majors
- PY2401: Undergraduate Physics II Lab, non-science majors
- PY1404: Undergraduate Physics I Lab, science and engineering majors
- PY2404: Undergraduate Physics II Lab, science and engineering majors

**Teaching Assistant, 2013 – 2016**

University of Texas at San Antonio

- AST 1031: Undergraduate Astronomy Lab
- PHY 1611: Undergraduate Physics I Lab, non-science majors
- PHY 1951: Undergraduate Physics I Lab, science and engineering majors

**Accepted OBSERVING PROPOSALS:**

JWST Cycle 1, **Co-I:** “Dust in the Wind: testing a new paradigm for the nature of AGN feedback” (PI: D. Rosario)

SOFIA Cycle 8, **Co-I:** “SOFIA/ALMA Survey of Active Galactic Nuclei” (PI: Lopez-Rodriguez)

SOFIA Cycle 4, **Co-I:** “AGN Survey to Characterize the Clumpy Torus Using FORCAST” (PI: Lopez-Rodriguez)

SOFIA Cycle 2, **Co-I:** “Constraining Parameters of the Clumpy Torus of Active Galactic Nuclei Using FORCAST” (PI: Lopez-Rodriguez)

## **PRESENTATIONS:**

### **Professional Talks:**

- January 2021*, “Characterizing MIR Emission in AGN”, AAS Winter Meeting, January 2021
- December 2019*, “Disentangling Infrared Emission in Active Galaxies Using FORCAST and HAWC+”, NASA Ames, Mountain View, CA
- October 2018*, “Resolving Dust Emission in Active Galaxies Using the SOFIA Telescope”, COS Research Symposium, UTSA
- June 2018*, **(Invited)** “Observing Cool Dust Around Active Galactic Nuclei Using the SOFIA Telescope”, AAS Summer Meeting, Denver, CO
- April 2018*, **(Invited)** “Observing Cool Dust Around Active Galactic Nuclei Using the SOFIA Telescope”, SOFIA Tele-talk
- December 2017*, **(Invited)** “SOFIA Finds Cool Dust Surrounding Energetic Black Holes”, NASA Ames, Mountain View, CA
- September 2017*, “Investigating Dust Surrounding Seyfert Nuclei Using SOFIA/FORCAST Photometry”, Southwest Research Institute (SwRI)/UTSA Symposium, San Antonio
- June 2017*, “Investigating the Dusty Torus of Seyfert Galaxies Using SOFIA/FORCAST photometry”, American Astronomical Society Summer Meeting, Austin, TX
- April 2016*, “Investigating the Dusty Torus of Active Galactic Nuclei Using SOFIA/FORCAST Photometry”, The University of Texas at Austin Extragalactic Seminar, Austin, TX
- September 2014*, “SOFIA Observations of Active Galactic Nuclei”, SwRI/UTSA Graduate Symposium, San Antonio TX

### **Conference Posters:**

- October 2020*, “Deconstructing IR Emission in Active Galaxies”, IR2020 meeting, Virtual
- September 2019*, *1<sup>st</sup> place poster award*, “SOFIA/FORCAST Resolves 30 – 40  $\mu\text{m}$  Extended Dust Emission in Nearby AGN”, UT Health Sciences Post-doctoral Symposium, San Antonio, TX
- December 2018*, “SOFIA/FORCAST Resolves 30 – 40  $\mu\text{m}$  Extended Dust Emission in Nearby AGN”, Torus Conference, Puerto Varas, Chile
- January 2016*, “31.5  $\mu\text{m}$  Imaging Observations of AGN Using SOFIA/FORCAST”, American Astronomical Society Winter Meeting, Kissimmee FL
- September 2014*, “Characterization of Active Galactic Nuclei Using Imaging and Polarimetry at Infrared Wavelengths”, UTSA College of Sciences Research Conference
- September 2013*, “Infrared Analysis of Active Galactic Nuclei”, UTSA College of Sciences Research Conference
- July 2011*, “THOR Petawatt Laser System Upgrade”, Women in Physics Conference, University of Nebraska, Lincoln, NE
- January 2011*, “Hobby-Eberly Telescope Dark Energy Experiment Fiber Optic Testing System”, American Astronomical Society Winter Meeting, Seattle WA

## **PUBLIC OUTREACH:**

- May 2019*, “Exploring the Neighborhood of Supermassive Black Holes”, Hill Country Astronomers monthly meeting, Fredericksburg, TX
- April 2019*, “Active Galactic Nuclei: How to Feed a Supermassive Black Hole”, Texas State University, San Marcos, TX
- October 2018*, (Panelist) San Antonio ComicCon, Topic: Building Science Fiction Worlds
- April 2018*, “Observing Active Galaxies on the SOFIA Telescope”, Astronomy on Tap SA, San

Antonio, TX  
March 2018, Hill Country Science Mill Math & Physics Day, Johnson City, TX  
October 2016, “Observing on SOFIA, NASA’s Airborne Telescope”, El Dorado Star Party, El Dorado, TX

**San Antonio Teacher Training Astronomy Academy (SATTA) for Educators interested in Astronomy/STEM:**

([HYPERLINK "http://www.utsa.edu/physics/workshop/2020/index.html" }](http://www.utsa.edu/physics/workshop/2020/index.html))

- *June 6 – 17, 2022*
  - Online lecture on climate change with activity
  - Online lecture on the electromagnetic spectrum
  - Online demonstration regarding Micro-Observatory
- *June 7 – 18, 2021*
  - Online lecture on climate change with activity
  - Online lecture on the electromagnetic spectrum
- *June 8 – 12, 2020*
  - Online lecture on climate change with activity
  - Online lecture on the electromagnetic spectrum
- *June 10 – 21, 2019*
  - Lecture on climate change with activity
  - Field trip to McDonald Observatory
- *May 14 – 25, 2018*
  - Lecture on climate change with activity, “Planetary Atmospheres: Focus on Earth”
  - Field trip to McDonald Observatory

**IN THE MEDIA:**

- *January 2019*, UTSA 50<sup>th</sup> Anniversary Feature “Roadrunners You Should Know”, <https://www.utsa.edu/50/your-stories/roadrunners-you-should-know/>
- *Fall/Winter 2018*, UTSA Sombrilla Magazine Alumni Profile, “Star Bright”
- *February 2018*, UTSA’s Meet a Roadrunner Feature, “Lindsay Fuller ’17 is reaching for the stars”, <https://www.utsa.edu/today/2018/02/story/LindsayFuller.html>
- *January 2018*, (Interview) Scitech Now! on KLRN, San Antonio, TX
- *June 2017*, “SOFIA Finds Cool Dust Around Energetic Active Black Holes”, [www.nasa.gov/feature/sofia-finds-cool-dust-around-energetic-active-black-holes](http://www.nasa.gov/feature/sofia-finds-cool-dust-around-energetic-active-black-holes)

**STUDENT ADVISING:**

- *May 2019 – Present*, Claudio Hewgley (Undergraduate Summer Research, Home Institution: Boston University)
- *May 2018 – Present*, Mason Leist (UTSA Graduate student)
- *January – May 2019*, Aldo Sepulveda (Undergraduate Research Semester Credit)

**ORGANIZATIONAL MEMBERSHIPS:**

- *2017 – present*, GATOS (International AGN research team focusing on IR)
- *2011 – present*, American Astronomical Society

## OBSERVING EXPERIENCE:

- SOFIA/FORCAST, Palmdale, CA, *May 2014*
- Gran Telescopio Canarias (GTC), La Palma, Canary Islands, Spain, *July 2013*

## MILITARY-RELATED EDUCATION:

*September 2000 – October 2006*

### **Airborne Cryptologic Linguist**

Offutt Air Force Base, NE; Al Udeid Air Base, Qatar; NSA Souda Bay, Crete, Greece

- *January – December 2001*, Hebrew Basic Course Certification, Defense Language Institute, Monterey, CA
- *April – May 2004*, Accelerated Dari language program, Offutt AFB, Bellevue, NE

## LIST OF REFEREED PAPERS:

Garcia-Bernete, I.; Ramos-Almeida, C.; Alonso-Herrero, A.; Ward, M. J.; Acosta-Pulido, J. A.; Pereira-Santaella, M.; Hernan-Caballero, A.; Asensio Ramos, A.; Gonzalez-Martin, O.; Levenson, N. A.; Mateos, S., Carrera, F. J.; Ricci, C.; Roche, P.; Marquez, I.; Packham, C.; Masegosa, J.; **Fuller, L.**, 2019, MNRAS, 486, 4917, “Torus model properties of an ultra-hard X-ray selected sample of Seyfert galaxies”

Ichikawa, K.; Ricci, C.; Ueda, Y.; Bauer, F.; Kawamuro, T.; Koss, M.; Oh, K.; Rosario, D.; Shimizu, T.; Stalevski, M.; **Fuller, L.**; Packham, C.; Trakhtenbrot, B.; 2019, ApJ, 870, 31, “BAT AGN Spectroscopic Survey. XI. The Covering Factor of Dust and Gas in Swift/BAT AGN”

Lopez-Rodriguez, E.; **Fuller, L.**; Alonso-Herrero, A.; Efstathiou, A.; Ichikawa, K.; Levenson, N. A.; Packham, C.; Radomski, J.; Ramos-Almeida, C.; Benford, D.; Berthoud, M.; Hamilton, R.; Harper, D.; Kovavcs, A.; Santos, F.; Staguhn, J.; Herter, T.; 2018, “The first evidence of the spectral turnover of the torus emission in NGC 1068”

Hegelich, B. M.; Pomerantz, I.; Yin, L.; Wu, H. C.; Jung, D.; Albright, B. J.; Gautier, D. C.; Letzring, S.; Palaniyappan, S.; Shah, R.; Allinger, K.; Horlein, R.; Schreiber, J.; Habs, D.; Blakeney, J.; Dyer, G.; **Fuller, L.**; Gaul, E.; Mccary, E.; Meadows, A. R.; Wang, C.; Ditmire, T.; Fernandez, J.C.; 2013, New J. Phys. 15, 085015, “Laser-driven ion acceleration from relativistically transparent nanotargets”

Pomerantz, I.; Blakeney, J.; Dyer, G.; **Fuller, L.**; Gaul, E.; Gautier, D. C.; Jung, D.; Meadows, A. R.; Shah, R.; Wang, C.; Fernandez, J. C.; Ditmire, T.; Hegelich, M.; 2013, SPIE, 8779, “Laser-ion acceleration from transparent overdense plasmas at the Texas Petawatt”

Murphy, J.; Hill, G.; MacQueen, P.; Taylor, T.; Soukup, I.; Moreira, W.; Cornell, M.; Good, J.; Anderson, S.; **Fuller, L.**; Lee, H.; Kelz, A.; Rafal, M.; Rafferty, T.; Tuttle, S.; Vattiat, B.; 2012, SPIE, 8446, “The influence of motion and stress on optical fibers”