



Thomas Taro Shimizu

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Research Interests	Active galactic nuclei; Galaxy formation and evolution; AGN feedback; Star formation and stellar populations; AGN time variability	
Education	University of Maryland , College Park, MD Ph.D., Astronomy, expected June 2016 • Thesis Title: <i>The Star-Forming Properties of an Ultra-Hard X-ray Selected Sample of AGN</i> • Adviser: Professor Richard Mushotzky • Area of Study: AGN, Star Formation M.S., Astronomy, December 2012 • Thesis Title: <i>The First Hard X-ray PSDs of AGN</i> • Adviser: Professor Richard Mushotzky • Area of Study: AGN, X-ray time variability Washington University in St. Louis , St. Louis, MO B.A., Physics, May 2010	
Research Experience	Postdoctoral Fellow IR/Submm Group, MPE	Oct 2016–Present • Leading the study of circumnuclear gas in AGN and inactive galaxies • Leading the development of a PYTHON package for modeling and fitting the kinematics of galaxies Research Assistant Department of Astronomy, University of Maryland
	• Studied the X-ray time variability of AGN using <i>Swift</i>/BAT light curves. • Studied the relationship between AGN and nuclear star formation in low-z galaxies. USRP Research Intern NASA/JPL, Pasadena, CA	June 2011–Oct. 2016 September 2008–August 2010 • Developed software to convert BATSE Gamma-ray light curves into images using the Radon Transform.
Leadership Positions	Graduate Student President	Spring 2013–Present • Liaison between graduate students and faculty • Organize department events and activities • Plan and help lead prospective graduate student visit • Created and ran department social media accounts • Created and organized peer mentor program for young graduate students

Journal Publications

- Lutz, D, **Shimizu, T. T.**, Davies, R. I, Herrera-Camus, R., Sturm, E., Tacconi, L. J., & Veilleux, S., 2017, in press for A&A: *Local Swift-BAT active galactic nuclei prefer circumnuclear star formation*
- Shimizu, T. T.**, Mushotzky, R. F., Meléndez, M., Koss, M. J, Barger, A. J., & Cowie, L. L., 2017, MNRAS, 416, 3161: *Herschel Far-infrared Photometry of the Swift Burst Alert Telescope Active Galactic Nuclei Sample of the Local Universe. III. Global star-forming properties and the lack of a connection to nuclear activity*
doi:[10.1093/mnras/stw3268](https://doi.org/10.1093/mnras/stw3268)
- Shimizu, T. T.**, Mushotzky, R. F., Meléndez, M., Barger, A. J., & Cowie, L. L., 2016, MNRAS, 456, 3335: *Herschel Far-infrared Photometry of the Swift Burst Alert Telescope Active Galactic Nuclei Sample of the Local Universe. II. SPIRE Observations*
doi:[10.1093/mnras/stv2828](https://doi.org/10.1093/mnras/stv2828)
- Shimizu, T. T.**, Mushotzky, R. F., Meléndez, M., & Koss, M., 2015, MNRAS, 452, 1841: *Decreased Specific Star Formation Rates in AGN Host Galaxies*
doi:[10.1093/mnras/stv1407](https://doi.org/10.1093/mnras/stv1407)
- Meléndez, M., Mushotzky, R. F., **Shimizu, T. T.**, Barger, A. J., & Cowie, L. L., 2014, ApJ, 794, 152: *Herschel Far-infrared Photometry of the Swift Burst Alert Telescope Active Galactic Nuclei Sample of the Local Universe. I. PACS Observations*
doi:[10.1088/0004-637X/794/2/152](https://doi.org/10.1088/0004-637X/794/2/152)
- Mushotzky, R. F., **Shimizu, T. T.**, Meléndez, M., & Koss, M., 2014, ApJL, 781, 34: *Do Most Active Galactic Nuclei Live in High Star Formation Cusps?*
doi:[10.1088/2041-8205/781/2/L34](https://doi.org/10.1088/2041-8205/781/2/L34)
- Shimizu, T. T.** & Mushotzky, R. F, 2013, ApJ, 770, 60: *The First Hard X-ray Power Spectral Density Functions of Active Galactic Nuclei*
doi:[10.1088/0004-637X/770/1/60](https://doi.org/10.1088/0004-637X/770/1/60)
- Vasudevan, R. V., Brandt, W. N., Mushotzky, R. F., Winter, L. M., Baumgartner, W. H., **Shimizu, T. T.**, Schneider, D. P. & Nousek, J., 2013, ApJ, 763, 111: *X-ray Properties of the Northern Galactic Cap Sources in the 58 Month Swift/BAT Catalog.*
doi:[10.1088/0004-637X/763/2/111](https://doi.org/10.1088/0004-637X/763/2/111)

Contributed Talks

AAS 227: Dissertation Talk	January 2016
MIT Astrophysics Brown Bag Lunch Series	October 2015
The Physics of Supermassive Black Hole Formation and Feedback	October 2015
Harvard/CFA Large Scale Seminar	October 2015
The Fate of the Gas in Galaxies: AGN vs. Star Formation	July/August 2014
The Universe Explored by Herschel	October 2013

Awards

University of Maryland

- Andrew S. Wilson Prize for Excellence in Research 2015
- Graduate Dean's Dissertation Fellowship 2015-2016
- AAS International Travel Grant 2013
- International Conference Student Support Award 2013
- Jacob K. Goldhaber Travel Grant 2013
- Graduate Student Summer Research Fellowship 2013
- The John Wang Award for Academic Excellence 2012
- Gregor Wentzel Scholarship 2010

Washington University in St. Louis

- The Otis and Carol Bowden Scholarship for Physics 2008-10
- National Merit Scholar 2006-10

Teaching Experience	Teaching Assistant Department of Astronomy, University of Maryland • Course: ASTR 100, <i>Introduction to Astronomy</i> • Prepared for and led 2 discussion sections per week. • Graded worksheets, homework, and exams. • Held office hours to help and guide students.	Fall 2010/ Spring 2011
	Guest Lecturer Department of Astronomy, University of Maryland • Course ASTR 695, <i>Introduction to Research</i> • Lecture on Unix commands.	Fall 2011
Outreach/ Mentoring	Master of Ceremonies for UMD Observatory Open House	2010-2015
	Mentored GRAD-MAP Winter Workshop Student	January 2015
	Volunteer for Dept. Booth at Maryland Day	2014-2015
Professional Affiliations	American Astronomical Society	2013–Present
Observing Experience	Ground-based observing programs	
	• Discovery Channel Telescope/LMI: 5 nights • IRAM 30m Telescope: 168 hours	September 2014 June–Nov. 2017
Computer Skills	Astronomy Analysis Software:	
	• DS9, XSPEC, PyRaf, IRAF, HIPE, Astropy, Photutils, emcee	
	Computer Programming:	
	• Python, C, UNIX, MATLAB, IDL, HTML/CSS	
	Productivity Applications:	
	• $\text{\TeX}$ ($\text{\LaTeX}$, $\text{\BibTeX}$), Vim, MS Office products, OpenOffice	