

TERESA PANURACH

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RESEARCH INTERESTS

globular clusters, X-ray binaries, accretion physics, radio astronomy, and high energy phenomena

EDUCATION

Michigan State University (MSU)

East Lansing, MI, USA

Ph.D in Astronomy and Astrophysics

Expected 2023

M.S in Astronomy and Astrophysics

2021

Advisors: J. Strader and L. Chomiuk

The City University of New York (CUNY) at Hunter College

New York, NY, USA

B.A in Physics

2018

AWARDS, GRANTS, AND FELLOWSHIPS

#iteachmsu Educator Award

2021

NSF Graduate Research Fellowship, \$138,000

2020 - 2023

AstroCom NYC Fellowship, Full Tuition Coverage and Summer Research Stipend

2016 - 2018

American Astronomical Society FAMOUS Travel Grant, \$500

2018

AstroCom NYC Senior Scholarship, \$700

2017

PUBLICATIONS

Research Publications:

GS2000+25: The Least Luminous Black Hole X-ray Binary

J. Rodriguez, R. Urquhart, R. Plotkin, **T. Panurach**, L. Chomiuk, J. Strader, J. Miller-Jones, E. Gallo, G.R. Sivakoff. 2020, *Astrophysical Journal*, 889, 58R

Constraints On Blue Straggler Formation Mechanisms in Galactic Globular Clusters from Proper Motion Velocity Distributions.

N. W. C. Leigh, **T. Panurach**, M. Simunovic, A. M. Geller, D. Zurek, M. M. Shara, A. Sills, C. Knigge, N. Gosnell, R. Mathieu, T. H. Puzia, J. Ventura, Q. Minor. 2019, *Monthly Notices of the Royal Astronomical Society*, 482, 231

When Do Clusters Become Multiple Star Systems?: II. Towards a Half-Life Formalism with Four Bodies.

T. Ibragimov, N. W. C. Leigh, T. Ryu, **T. Panurach**, R. Perna. 2018, *Monthly Notices of the Royal Astronomical Society*, 477, 4213

Other Publications:

- Undergraduate Jessie Miller Wins Thomas Osgood Outstanding Senior Award* June 2021
T. Panurach. MSU Astronomy Group Newsletter.
- Four Astronomy Undergraduates Receive Lawrence W. Hantel Endowed Fellowship* March 2021
T. Panurach. MSU Astronomy Group Newsletter.

SELECTED RESEARCH EXPERIENCES

Graduate Research Assistant:

Dept. of Physics and Astronomy, MSU, East Lansing, MI
 Advisors: J. Strader and L. Chomiuk 2018 - Present

- Radio and X-ray observations of low-mass X-ray binaries in globular clusters

Undergraduate Research Assistant:

Dept. of Astrophysics, American Museum of Natural History, New York, NY
 Advisor: N. W. C. Leigh 2017 - 2018

- Constrained the formation of blue stragglers in globular clusters using proper motion velocity distributions observed by *Hubble Space Telescope*; resulted in second-author publication
- Created numerical simulations of binary-binary star systems using FEWBODY; resulted in n-author publication

TEACHING AND OUTREACH

Teaching:

Teaching Assistant AST 208: Planets and Telescopes (31 students, MSU) Spring 2020

- Assistant instructor for introductory astronomy lab and lecture for astronomy majors

Teaching Assistant ISP 205L: Visions of the Universe (8 sections, 300 students, MSU) 2018 - 2019

- Instructor of record for introductory astronomy lab for non-majors

Outreach:

Intrepid Sea, Air and Space Museum's GOALS for Girls Presenter (Virtual) July 2021
 MSU Twitter Manager (@MSU_astro) April 2021 - Present
 One Million Women in STEM Featured Scientist Jan 2021
 Intrepid Sea, Air and Space Museum's GOALS for Girls Presenter (Virtual) July 2020
 MSU's Science Festival Presenter (East Lansing, MI) April 2019
 Astronomy on Tap: Lansing Presenter (Lansing, MI) Sept 2018
 Astronomy on Tap: New York City Presenter (Brooklyn, NY) June 2018

PRESENTATIONS

Talks:

Compact Objects 9 (Virtual) May 2021
 Vanderbilt University Astronomy Seminar (Virtual) Nov 2020
 Chandra Frontiers in Time-Domain Science Lightning Talk (Virtual) Oct 2020
 MSU Physics Graduate Organization Seminar (Virtual) Sept 2020
 AAS: High Energy Astronomy Division Frontier Seminar (Virtual) Sept 2020
 REU Symposium (New York, NY) Aug 2017
 CUNY at Hunter College Undergraduate Research Conference (New York, NY) April 2017
 Society for Physics and Astronomy Research Conference (New York, NY) Oct 2016
 REU Symposium (New York, NY) Aug 2016

Posters:

235th American Astronomical Society Meeting (Honolulu, HI)	Jan 2020
231st American Astronomical Society Meeting (Washington D.C)	Jan 2018
Columbia University Astrofest (New York, NY)	Sept 2017
229th American Astronomical Society Meeting (Grapevine, TX)	Jan 2017
Princeton University Conference for Undergraduate Women in Physics (CUWiP)	Jan 2017

ADVISING, DEI, AND ACADEMIC SERVICE

Advising:Research

Jennifer Rodriguez (MSU, Charles Drew Scholar) 2019 - Present

- Reduced and analyzed *VLA* observations of black hole X-ray binary, GS2000+25; resulted in student's first-author publication

Jerry Ortiz (CUNY at College of Staten Island, AstroCom NYC Scholar) Summer 2019

- Calculated the velocity dispersion of nucleated galaxies in the Virgo Cluster using optical spectroscopy from *Keck*

Career

Atticus Chong (MSU, Charles Drew Scholar) 2021 - Present

Ryan Copeland (MSU, Charles Drew Scholar) 2021 - Present

Elias Taira (MSU, Charles Drew Scholar) 2021 - Present

Anita Agasaveeran (MSU, Charles Drew Scholar) 2021 - Present

Ashley Stone (MSU) 2021 - Present

Wasundara Athukoralalage (MSU, Wielenga Scholar) 2020 - Present

Diversity, Equity, and Inclusion:

Stellar Mentorship Program Mentor (East Lansing, MI) 2020 - Present

Maximizing Your Mentoring Relationships Workshop (East Lansing, MI) June 2020

P-A Research Experiences with Drew Scholars Director (East Lansing, MI) 2020 - Present

Maximizing Your Mentoring Relationships Workshop (Charlottesville, VA) June 2019

Maximizing Your Mentoring Relationships Workshop (New York, NY) June 2019

Maximizing Your Mentoring Relationships Workshop (East Lansing, MI) June 2019

National Radio Consortium Chapter Leader (East Lansing, MI) 2019 - Present

Applying to REU and Internships Workshop (MSU CUWiP) Jan 2019

Maximizing Your Mentoring Relationships Workshop (New York, NY) June 2018

Maximizing Your Mentoring Relationships Workshop (New York, NY) June 2017

MSU Academic Service:

Co-creator and organizer of Astro Coffee Journal Club 2021 - Present

Physics and Astronomy Department Colloquium Host 2020 - Present

X-ray Binary Journal Club Host 2020 - Present

Graduate Student Search Committee Representative for Astronomy Faculty Position 2020

Graduate Student Recruitment Organizer 2019

CUWiP Local Organizing Committee 2018 - 2019

SKILLS

Programming: Python (numpy, scipy, scikit-learn, matplotlib)

Major Astronomical Packages: AstroPy, CASA

Languages: English (native), Thai (fluent)