

# TERESA PANURACH

tpanurach.github.io  $\diamond$  panurach@msu.edu

## RESEARCH INTERESTS

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

## EDUCATION

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**Michigan State University (MSU)**

Expected 2023

East Lansing, MI, USA

Ph.D in Astronomy and Astrophysics

Advisors: J. Strader and L. Chomiuk

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

2014 - 2018

New York, NY, USA

B.A in Physics

## AWARDS, GRANTS, AND FELLOWSHIPS

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NSF Graduate Research Fellowship, \$138,000

2020

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

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3. *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. Sivakoff. 2020, *Astrophysical Journal*, 889, 58R

2. *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

1. *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

## SELECTED RESEARCH EXPERIENCES

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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

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### 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:

MSU's Science Festival Presenter (East Lansing, MI) April 2019

Astronomy on Tap: Lansing (Lansing, MI) September 2018

Astronomy on Tap: New York City (Brooklyn, NY) June 2018

## PRESENTATIONS

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### Talks:

Vanderbilt University Astronomy Seminar (Virtual) November 2020

Chandra Frontiers in Time-Domain Science Lightning Talk (Virtual) October 2020

MSU Physics Graduate Organization Seminar (Virtual) September 2020

AAS High Energy Astronomy Division Talk (Virtual) September 2020

REU Symposium (New York, NY) August 2017

CUNY at Hunter College Undergraduate Research Conference (New York, NY) April 2017

Society for Physics and Astronomy Research Conference (New York, NY) October 2016

REU Symposium (New York, NY) August 2016

### Posters:

235th American Astronomical Society Meeting (Honolulu, HI) January 2020

231st American Astronomical Society Meeting (Washington D.C) January 2018

Columbia University Astrofest (New York, NY) September 2017

229th American Astronomical Society Meeting (Grapevine, TX) January 2017

Princeton University Conference for Undergraduate Women in Physics (CUWiP) January 2017

## ADVISING, DEI, AND ACADEMIC SERVICE

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### 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
Intrepid Sea, Air and Space Museum's GOALS for Girls Presenter (Virtual)	July 2020
Maximizing Your Mentoring Relationships Workshop (East Lansing, MI)	June 2020
P-A Research Experiences with Drew Scholars Lead Coordinator (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 (CUWiP)	January 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-organizer of Astro 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**

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Programming: Python (astropy, numpy, scipy, scikit-learn, matplotlib)  
Major Astronomical Packages: AstroPy, CASA  
Languages: English (native), Thai (fluent)