

GABRIELA TORRINI

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☎ (314) 974-7715

EDUCATION

University of Illinois Urbana-Champaign

M.S. in Astronomy

Aug. 2020 – Aug. 2022

Urbana, IL

The Ohio State University

B.S. in Astronomy & Astrophysics, Minor in Spanish

Aug. 2016 – May 2020

Columbus, OH

RESEARCH

Graduate Fellow

Department of Astronomy, University of Illinois

Jan. 2021 – Aug. 2022

Urbana, IL

Advisor: Dr. Xin Liu

- Performed optical variability selection to hunt for dwarf AGNs in the COSMOS field
 - Analyzed 31,000 sources in DES deep field data using astroPy, pandas, sciPy, & numpy
 - Identified 51 dwarf AGN candidates
- Measured the offset distribution of dwarf AGN candidates in the DES wide field
 - Analyzed 6 seasons of DECam difference/template images using astroPy, numPy, & pandas
 - Found no statistically significant offset fraction

Research Assistant

Department of Astronomy, The Ohio State University

Sep. 2019 – May 2020

Columbus, OH

Advisors: Dr. Laura Lopez & Dr. Udara Abeysekara

- Completed a senior thesis

Research Assistant

Department of Astronomy, The University of Utah

May 2019 – Aug. 2019

Salt Lake City, UT

Advisors: Dr. Udara Abeysekara & Dr. David Kieda

- Optimized cosmic-ray background subtraction algorithm
- Processed 97 hours of V6-epoch VERITAS data
- Analyzed optimization factors such as gamma-ray shower shape, elevation, azimuth, & season; determined observing season to be the most critical factor

WORK EXPERIENCE

Software Development Intern

Turnell Corp

Dec. 2022 – July 2023

St. Charles, MO

Supervisor: Victor Turnell

- Developed a full-stack, web-based pilot application to simulate & optimize cement production processes
- Created web forms for equipment flowsheets & optimization problems
- Built an API to process requests, perform mass-energy balance calculations, & manage database interactions

Graduate Student Trainee, SPT-3G

National Center for Supercomputing Applications

Jan. 2022 – May 2022

Urbana, IL

Supervisor: Dr. T. Andrew Manning

- Helped develop cutout request form to access microwave maps
- Researched monitoring strategies to maintain access to data services

TECHNICAL SKILLS

Operating Systems: Windows, Linux

Programming Languages: Python, JavaScript, HTML, C++

Software Systems: Mathematica, LaTeX, Git

Frameworks & Libraries: Flask, React, pandas, astroPy, numPy, sciPy

POSTER PRESENTATIONS

Astrofest <i>Department of Astronomy, University of Illinois Urbana-Champaign</i>	April 2022 <i>Urbana, IL</i>
Sloan Conference <i>University Center of Exemplary Mentoring, University of Illinois Urbana-Champaign</i>	April 2022 <i>Urbana, IL</i>
Planetary Nebulae & Supernova Remnants Session, 235th AAS Meeting <i>American Astronomical Society</i>	Jan. 2020 <i>Honolulu, HI</i>
Research Experience for Undergraduates (REU) Symposium <i>Council on Undergraduate Research</i>	Oct. 2019 <i>Alexandria, VA</i>
Office of Undergraduate Research Summer Symposium <i>The University of Utah</i>	Aug. 2019 <i>Salt Lake City, UT</i>

RELEVANT COURSEWORK

Astronomy: Galaxies, Cosmology, Stellar Evolution, Radiative Processes, Dynamics, AI & Big Data in Astro

Physics: Statistical Mechanics, Quantum Mechanics, Electricity & Magnetism

Mathematics: Multivariable Calculus, Differential Equations, Linear Algebra

LEADERSHIP & OUTREACH

Treasurer, SACNAS Chapter <i>The Ohio State University</i> <ul style="list-style-type: none">Secured \$1100 in funding for a keynote & documentary screening with Catalina Martinez, Regional Program Manager at the National Oceanic and Atmospheric Administration (NOAA)	Aug. 2019 – May 2020 <i>Columbus, OH</i>
Mentor, Latinx Early Arrival Program <i>Office of Diversity & Inclusion, The Ohio State University</i> <ul style="list-style-type: none">Mentored 3 Latina undergraduates during their academic & social transition to college	Aug. 2019 – May 2020 <i>Columbus, OH</i>
President, The Astronomical Society <i>The Ohio State University</i> <ul style="list-style-type: none">Equipped 1,500 Central Ohioans with glasses & safety instructions to view the August 2017 solar eclipsePlanned an annual educational trip to the Green Bank Observatory for 35 undergraduates in February 2018/2019Hosted 8 seasonal star parties for up to 100 members of the general public; operated 12-inch Meade telescope and dome, provided free educational content, & led guided night sky toursWrote a transition manual for future executive boards	Aug. 2017 – May 2019 <i>Columbus, OH</i>
Social Media Coordinator, SACNAS Chapter <i>The Ohio State University</i> <ul style="list-style-type: none">Curated chapter profiles on 3 platforms: Twitter, Instagram, FacebookPromoted opportunities for scholarships, internships, research positions, & jobsCollaborated with chapter members to share stories about their research, work-life balance, & the lived experience of underrepresented minorities in STEM	Aug. 2017 – May 2019 <i>Columbus, OH</i>
Volunteer, Physical Sciences Gallery <i>St. Louis Science Center</i> <ul style="list-style-type: none">Trained for over 195 hours to operate plasma globes, Van de Graaff generators, Tesla coils, & liquid nitrogenPerformed Amazing Science Demonstrations for up to 100 visitors at a time	May 2017 – May 2019 <i>St. Louis, MO</i>

AWARDS, FELLOWSHIPS, & SCHOLARSHIPS

Sloan Scholar <i>University Center of Exemplary Mentoring, University of Illinois</i> <ul style="list-style-type: none">To broaden participation in advanced engineering, physical and mathematical science careers	Aug. 2020 – Aug. 2022 <i>Urbana, IL</i>
Graduate College Fellow <i>University of Illinois</i> <ul style="list-style-type: none">To increase the enrollment of outstanding students from populations that have been historically underrepresented in graduate study	Aug. 2020 – Aug. 2022 <i>Urbana, IL</i>

Morrill Distinction Scholarship

Office of Diversity & Inclusion, The Ohio State University

- For actively engaging in diversity-based leadership, social justice and service

Aug. 2016 – May 2020

Columbus, OH

REU NSF Grant Award

Department of Physics & Astronomy, The University of Utah

- To represent the REU site in the Physics Division at the NSF's Council on Undergraduate Research

Aug. 2019

Salt Lake City, UT

Tuttle Scholarship in Astronomy

Department of Astronomy, The Ohio State University

- For demonstrating strong academic performance in astronomy & astrophysics

Jan. 2019

Columbus, OH

SACNAS Bound Buckeye Travel Grant

College of Arts & Sciences, The Ohio State University

- To support attendance at the 45th National Diversity in STEM Conference

Oct. 2018

Columbus, OH

TEACHING

Teaching Assistant, 1102: From Planets to the Cosmos

Department of Astronomy, The Ohio State University

Instructor: Rachel Patton

- Tutored students during weekly virtual office hours
- Graded homework, quizzes, & exams for 79 students

May 2020 – Aug. 2020

Columbus, OH

Teaching Assistant, 1141: Life in the Universe

Department of Astronomy, The Ohio State University

Instructor: Dr. Stephan Frank

- Facilitated breakout room activities during live online course lectures
- Tutored students during weekly virtual office hours
- Graded homework, labs, & exams for 55 students

May 2020 – July 2020

Columbus, OH

Instructional Aide, 1101: From Planets to the Cosmos

Department of Astronomy, The Ohio State University

Instructors: Dr. Todd Thompson & Dr. Wayne Schlingman

- Taught material during laboratory section
- Graded labs for 20 students
- Collaborated with instructors to modify content for online learning

Jan. 2020 – Apr. 2020

Columbus, OH

OTHER COMMUNITY INVOLVEMENT

Speaker, "Sick Burn: The Story Behind Your Sizzling Summer Nightmare"

Astronomy on Tap Champaign-Urbana

July 21, 2022

Urbana, IL

Co-chair, Journal Club Committee

Department of Astronomy, University of Illinois

Aug. 2020 – July 2021

Urbana, IL

Panelist, Undergraduate Research & Graduate School Applications

Society for Equity in Astronomy, University of Illinois

Oct. 19, 2020

Urbana, IL