Liza Matrecito

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EDUCATION

Rochester Institute of Technology (RIT)   2019 – Present
- *Ph.D. Candidate, Astrophysical Sciences and Technology*
- *M.S. Astrophysical Sciences and Technology*   2022

Northern Arizona University (NAU)   2014 – 2018
- *B.S. Physics and Astronomy*
    - Study Abroad: Orvieto, Italy   2015

EMPLOYEMENT

Strasenburgh Planetarium, Rochester, NY   2022 – Present
Planetarium Show Presenter
- Develop planetarium content and deliver live astronomical presentations for 100+ daily guests using Digistar 7 Software

RIT School of Physics and Astronomy (SOPA), Rochester, NY   2023
Adjunct Professor
- Developed and implemented curriculum for 55 students in PHYS106: Solar System Astronomy in the form of lectures, science demonstrations, homework, and exams

Wegmans Food Markets, Penfield, NY   2021 – 2022
Bakery Customer Service
- Produced a range of baked goods while delivering exceptional customer service

Sephora, Henrietta, NY   2019 – 2021
Beauty Advisor
- Exceeded sales targets by delivering personalized beauty consultations

RIT Center for Detectors, Rochester, NY   2019
Graduate Research Assistant
- Designing a cryostat for a far-infrared Fourier Transform Spectrometer using SOLIDWORKS

Lowell Observatory, Flagstaff, AZ   2017 – 2019
Public Program Educator
- Led tours, developed and delivered engaging presentations on astronomy-related topics, and operated telescopes, such as the 24-in Clark Refractor for 250+ daily guests

RESEARCH

RIT Lab for Multiwavelength Astrophysics (LAMA), Rochester, NY   2020 – Present
Runaway Monsters: A Search for Recoiling Supermassive Black Holes
- Utilizing machine learning techniques to identify supermassive black hole recoil candidates in the Sloan Digital Sky Survey Data Release 16 Quasar Catalog
- Advisor: Dr. Andrew Robinson

Fermi National Accelerator Laboratory (Fermilab), Batavia, IL   2023
Investigating the Effects of Garolite in ArgonCube
- Discovery of a non-reducible background radiation source for the Deep Underground Neutrino Experiment prototype, ArgonCube
- Advisor: Dr. Louise Suter

RIT LAMA, Rochester, NY   2020 – 2022

Unveiling Buried AGN in OH Megamaser Galaxies (OHMGs)
- Determined the dominant source of dust and gas heating and its relation to OH maser emission for a subsample of OHMGs
- The dominant source of heating does not agree with the optical classification in most of the systems, suggesting buried AGN in 7/9 OHMGs studied
- Advisor: Dr. Andrew Robinson

NAU Planetary Exploration Lab, Flagstaff, AZ   2018
Alteration Mineralogy Observed in Terra Cimmeria, Mars
- Performed a spectral analysis on CRISM data to observe peculiar signatures of minerals
- Advisor: Dr. Mark Salvatore

University of Arizona Eller College of Management, Tucson, AZ   2016
STEMulating Equality
- Created a non-profit proposal that aims to increase the number of female minorities pursuing a STEM degree
- Advisor: Dr. Matt Mars

PRESENTATIONS AND POSTERS

ASNY 2023 Fall Meeting, Siena College, NY   2023
Accepted Talk: *Runaway Monsters – A Search for Recoiling Supermassive Black Holes*

RIT AST Research Jamboree, Rochester, NY   2023
Presentation: *Runaway Monsters – A Search for Recoiling Supermassive Black Holes*
- Award: Best Senior Student Presentation

GEM Annual Board Meeting and Conference, Philadelphia, PA   2023
Poster: *Investigating the Effects of Garolite in ArgonCube*

Fermilab, Batavia, IL   2023
Poster: *Investigating the Effects of Garolite in ArgonCube*

RIT AST Research Jamboree   2021, 2022
Presentation: *Hunting for Monsters, OHMG!*

MENTORING

RIT SOPA, Rochester, NY   2024
REU Mentor, Student: Kristina Mannix
- Project: Constraining the Spectral Properties of Recoiling Supermassive Black Holes

RIT SOPA, Rochester, NY   2022
REU Mentor, Student: Ricardo Encarnacion
- Project: Finding the Most Massive Black Holes

RIT SOPA, Rochester, NY   2019 – 2020
Teaching Assistant
- Vibrations and Waves, Classical Mechanics

Dorrance Scholarship Program, Flagstaff, AZ   2019
Summer Bridge Peer Mentor

NAU, Flagstaff, AZ   2016 – 2017
Teaching Assistant

- Introduction to Astronomy, Life in the Universe

OUTREACH, VOLUNTEER, AND DEI

A Glowing Halo: The Quest for Truth in the Heavens, Rochester, NY	2024
Expert Panelist - Q&A	
AfteRIT, Rochester, NY	2024
Panelist: How to Succeed in Graduate School	
GEM GRADLab, Rochester, NY	2023
Panelist: Why and how to go to Graduate School	
Conferences for Undergraduate Women in Physics, Ithaca, NY	2022
Booth Exhibitor: Astrophysical Sciences and Technology Graduate Program	
ImagineRIT, Rochester, NY	2022
FIRST Robotics, Flagstaff, AZ	2016 – 2019
Habitat for Humanity, Veles, Macedonia	2015

AWARDS AND HONORS

GEM Fellow, *The National GEM Consortium*, $20,000	2023
Catalyst Fellowship, *NASA NY Space Grant Consortium*, $15,000	2022
Space Grant, *NASA NY Space Grant Consortium*, $3,500	2020
Dorrance Scholarship, *Dorrance Scholarship Program*, $100,000	2014

TECHNICAL SKILLS

Computer Languages: *Python, MATLAB, LaTeX*
Spoken Languages: *Native Bilingual – Spanish and English*
Software: *Fusion 360*
Developer Tools: *GitHub, Unix, Linux*