

Tristan Larkin

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Education

The University of New Mexico (UNM)

Bachelor of Science in Physics – Phys GPA 3.96

Bachelor of Science in Computer Science – CS GPA 3.88

Minor in Mathematics – Math GPA 3.83

Designation in Honors

- Overall GPA 3.93 — Expected Graduation May 2024

(All GPAs are converted from UNM's 4.33 standard to a 4.0 standard)

Albuquerque, NM

Fall 2020 - Present

Relevant Work Experience

Sandia National Laboratories

R&D Year-Round Intern in Concentrating Solar Power (Org. 8923)

- Writing a Python library for the simulation, analysis, and development of concentrating solar systems, particularly raytracing heliostats.
- Research heliostat metrology using different methods.
- Used multiprocessing to parallelize code to speed up the time it takes to raytrace a system of heliostats.

Albuquerque, NM

July 2022 - Present

The University of New Mexico

Student Researcher

- Researched the practicality of using convolutional neural networks in identifying instances of the Migdal effect.
- Explored a variety of machine-learning models using Tensorflow.
- Studied the Migdal effect to explore the different ways the model could pick up information from simulations.

Albuquerque, NM

June 2022 - July 2022

Extracurriculars

Society of Physics Students: UNM Chapter

- As president, I planned events and ran weekly meetings. Helped organize UNM Physics Day 2022 and the spring 2022 physics demo show.

2020 - Present

Boy Scouts of America

- Planned events and coordinated with a troop of over 60 scouts for weekly meetings and monthly events. Learned teamwork and leadership.

2012-2020

Honors and Scholarships

Rayburn Scholarship - Award to fund summer research

Summer 2022

UNM Dean's List

Fall 2020 - Present

UNM Regents Scholarship

Fall 2020 - Spring 2024

BSA Eagle Scout

April 2020

Skills and Interests

Programming Languages: Python • Java • Haskell • C • MATLAB • Bash • Julia

Programming Skills: Machine Learning • Slurm • Scientific Computing • Unix • Functional Programming

Publications

- [1] Randy C. Brost, Anthony Evans, Kevin Good, Luis Garcia Maldonado, and Tristan Larkin. Variation in Reflected Beam Shape and Pointing Accuracy Over Time and Heliostat Field Position. Presented in *SolarPACES 2023*, October 2023. Also submitted to *SolarPACES 2023 Proceedings*; in review.
- [2] Randy Brost, Braden Smith, Madeleine Hwang, Tristan Larkin. *Dual-Image Color Normalization to Enable High-Performance Concentrating Solar Optical Metrology*. LDRD Project 230942 Final Report. Sandia Technical Report SAND2023-09657R, September 2023.