

Vera Berger

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EDUCATION

University of Cambridge

August 2024

MPhil in Scientific Computing

Focus: computational fluid dynamics, stellar dynamo

Pomona College

May 2023

BA in Mathematics; BA in Physics—Astronomy

GPA: 3.95

Mathematics thesis: Searching for stellar similarity: distance measures and clustering for time series

Physics thesis: Line-dominated emission and temperature distribution of flares in low-mass stars

RESEARCH APPOINTMENTS

OSTEM Intern, NASA Goddard Space Flight Center

06/2023 - 08/2023

Neural network for stellar flare detection in short-cadence TESS data

Advisors: Dr. Christina Hedges, Dr. Nicole Schanche

Combinatorial Mathematics Researcher, Pomona College

03/2020 - 12/2022

Fibres, cutsets, and antichains in partially ordered sets

Advisor: Dr. Shahriar Shahriari

NSF REU Fellow, University of Hawai'i at Mānoa

05/2022 - 08/2022

Detection and temperature evolution of stellar flares with *GALEX*

Advisor: Dr. Benjamin Shappee

CASSI Intern, Observatories of the Carnegie Institution for Science

05/2021 - 08/2021

Spectroscopic analysis of low-luminosity hosts of Type Ia supernovae from ASAS-SN

Advisor: Dr. Thomas Holoién

HONORS AND AWARDS

National

NSF Graduate Research Fellowship (declined)

03/2023

Churchill Scholarship

01/2023

National Merit Scholarship

04/2019

Departmental

Frank Parkhurst Brackett, Jr., and Davida Wark Brackett Prize

05/2023

For excellence in advancing the field of astronomy.

Bruce Jay Levy Prize in Mathematics

05/2023

For an outstanding senior in mathematics.

Moncrieff Astronomy Award

04/2021

For the top student in the introductory astronomy course.

College-wide

Senior Service Award

05/2023

For significant contributions to Pomona College and its programs.

Co-Curricular Conference Grant

11/2022

For presentation of research at an academic conference.

Pomona College Scholar for Outstanding Academic Performance

Four semesters

Top 25% of class, awarded semesterly.

President's Sustainability Grant

11/2020

To address infrastructural sustainability challenges on campus.

PUBLICATIONS

“Examining the Properties of Low-Luminosity Hosts of Type Ia Supernovae from ASAS-SN.”

[View here](#)

Holoien, T. W. -S., **Berger, V. L.**, et al., 2023, *ApJ*.

“Stellar Flares Are Far-Ultraviolet Luminous”

Berger, V. L., Hinkle, J., Tucker, M., Shappee, B., et al., 2023, *submitted to MNRAS*.

TEACHING ASSISTANTSHIPS, POMONA COLLEGE

Advanced Introductory Astronomy

Spring 2022

Galaxies and Cosmology

Spring 2021

Real Analysis I

Spring 2021

Honors Calculus II

Fall 2020

1-2-1 Math Bridge Program

Summer 2020, 2021

STEM OUTREACH

Member, American Physical Society Inclusion, Diversity, and Equity Alliance

01/2023 - 05/2023

Liason, Pomona College Department of Mathematics & Statistics

08/2022 - 05/2023

Student Member, Pomona College Trustee Educational Quality Committee

08/2021 - 05/2022

Congressional Visits Day Representative, American Astronomical Society

05/2022

LEADERSHIP, POMONA COLLEGE

Student Body President

05/2022 - 05/2023

Co-Vice Chair, Board of Trustees Student Affairs Committee

05/2022 - 05/2023

Chair, Judicial Council

05/2021 - 05/2022

Commissioner of Facilities and Environment, Student Senate

08/2020 - 05/2021

Sponsor, Housing & Residence Life

08/2020 - 05/2021

Mentor, Queer and Questioning Mentorship Program

08/2020 - 05/2021

CONTRIBUTED TALKS AND POSTERS

Summer Symposium, NASA Goddard Astrophysics Science Division, August 8, 2023

NASA Transiting Exoplanets Survey Satellite Group, August 7, 2023

NASA Exoplanets and Stellar Astrophysics Laboratory Meeting, August 4, 2023

241st Meeting of the American Astronomical Society, January 10, 2023

[View poster](#)

SURE Undergraduate Research Symposium, University of Hawai'i at Mānoa, July 29, 2022

[View poster](#)

IfA REU Presentations, University of Hawai'i at Mānoa, July 28, 2022

[View presentation](#)

240th Meeting of the American Astronomical Society, January 9, 2022

[View poster](#)

Intensive Summer Research Symposium, Pomona College, September 15, 2021

Carnegie Summer Student Research Symposium, August 20, 2021

[View presentation](#)