Ilana Bromberg

isbromberg@gmail.com
ilanabromberg.com

Purdue University, *West Lafayette, IN*
PhD Student, Fall 2021 – Present
Department of Physics

Stony Brook University, *Stony Brook, NY*
Bachelor of Science, Cum Laude, May 2020
Women in Science & Engineering Honors Program
Majors: Physics and Astronomy, Minor: Art History
GPA: 3.62

RESEARCH EXPERIENCE

Dr. Lucy Flesch Geophysics Group
Purdue University, West Lafayette, IN
PhD Student, Fall 2021 – present
- Finite element modeling of the Basin and Range region in COMSOL multiphysics software to examine long-term geophysical processes present in the area
- Pre- and post-processing large sets of geophysical data in Matlab and Python

Science Undergraduate Laboratory Internship
Brookhaven National Labs, Upton, NY
Research Intern, Aug 2020 – May 2021 (Virtual)
- Finite element modeling of different magnet setups in CST for electron beamline experiments as part of Dr. Navid Vafaei-Najafabadi's plasma physics group
- Presented results at an end-of-program symposium

Radiological Accelerator Research Facility (RARAF)
Nevis Labs, Irvington, NY
Research Experiences for Undergraduates Intern, Summer 2019
- Collaborated with a team of physicists, biologists, and engineers to run experiments on the biological effects of neutron radiation
- Designed physical collimation shielding in MCNP to block neutron radiation exposure on specific areas of mice

WORK & OUTREACH EXPERIENCE

Women in Science & Engineering (WISE)
Stony Brook, NY
Student Mentor, Sept. 2019 – May 2020
- Mentored and advised three freshmen in the WISE program with declared physics/astronomy majors
- Familiarized mentees with coding concepts, assisted with classes and scheduling, and gave professional, personal, and academic advice

Vanderbilt Planetarium
Centerport, NY
Astronomy Educator/Console Operator, Dec. 2019 – July 2021
- Operated the Konica Minolta and Digital Sky hybrid planetarium system
- Created educational programming
- Gave star talks to the general public at various levels of complexity

SKILLS

Computational
- Python for plotting, data analysis, and machine learning (highly proficient)
- Matlab (proficient), Github (proficient), Java (intermediate), C++/ROOT (intermediate), Fortran (working knowledge)
- Finite element modeling - MCNP, COMSOL, CST (highly proficient)
- Microsoft Office (highly proficient)
- Experience with data analysis and visualization
- Accustomed to working with large data sets

Other
- Competence with photoshop and other image editing programs
- Creation and maintenance of websites using HTML and CSS
- Public speaking and science communication experience from the Alan Alda Center for Communicating Science & the Vanderbilt Planetarium
- Skilled presenter of scientific concepts
- Intermediate Mandarin Chinese speaker

AWARDS AND HONORS

- **Purdue Graduate School Travel Grant,** *Fall 2023*, for travel to AGU 2023
- **Women in Science Program (WISP) Travel Grant,** *Fall 2023*, for travel to AGU 2023
- **Indiana Space Grant Consortium Doctoral Fellowship,** *Fall 2022 – Spring 2023*, NASA-affiliated graduate fellowship for STEM research
- **Presidential Scholarship,** *2016 – 2020*, full academic scholarship at Stony Brook University
- **CAS Dean's Excellence Scholarship,** *2016*, merit-based scholarship
- **Dean's List,** Fall 2016, Spring 2017, Fall 2017, Spring 2018, Spring 2019, Fall 2019
- **Graduation Honors,** *2020*
  - Cum Laude
  - Departmental Honors in Physics
  - WISE Mentor of the Year