Naomi Gluck

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Education

Stony Brook University — Stony Brook, NY
Bachelor of Science in Physics; Bachelor of Science in Astronomy; Minor in Music — *Aug. 2017 – May 2021*

Publications

Royal Astronomical Society Main Journal | ref MN-19-3879-MJ.R4 — April 2020

- Work title: *Enhanced mass-loss rate evolution of stars with mass greater than 18 $M_{\odot}$, and missing optically-observed type II supernovae*

Research Experience

Undergraduate Research — September 2019 – Present
Stony Brook University — *Stony Brook, NY*

- Studied Uncertainty Quantification for 1 $M_{\odot}$ following the MESA open source code to determine the validity and bounds of two different wind parameters.
- Used Gnuplot for data extraction to visually see the affects caused by changes in the wind parameter values.

Undergraduate Research — July. 2019 – April 2020
Technion Institute of Technology — *Haifa, Israel*

- Research conducted at the Technion Institute of Technology in Israel.
- Used MESA (Modules for Experiments in Stellar Astrophysics) open source code to simulate the evolution of several different progenitor stars with variations on wind and mass loss parameters, and Matlab for data analysis and calculations.

Presentations

URECA: Undergraduate Research Symposium — May 2020
Stony Brook University — *Stony Brook, NY*

- Poster and live presentation on research conducted at the Technion Institute in Israel.

Work Experience

Business Partnership — May 2020 – Present
Online Startup — *Oyster Bay, NY*

- Established online custom graphics art company.
- Use Procreate on iPad to design all custom artwork for merchandise including face masks, pillows, and blankets, specifically partnering with Stony Brook University Hillel, SUNY Geneseo Hillel, and Ohio State Hillel.

Paid Research Position — May 2020 – August 2020
Stony Brook University — *Stony Brook, NY*

- Funded for the Uncertainty Quantification study of the evolution of $1M_{\odot}$ stars with the MESA open source stellar evolution code to quantify the effect of epistemic uncertainty in the stellar winds.
- Analysed simulation results to extract data to quantify and visually assess the effects of uncertainty in the winds.
- Learned and applied Parallel Computing techniques by performing suites of MESA simulations on our campus cluster SeaWulf.

StandWithUs Emerson Fellowship — August 2019 – May 2020
Stony Brook University — *Stony Brook, NY*

- Partnered with other clubs and organizations at SUNY Stony Brook to create 12 Israel-related events that impacted approximately 150 students.
- Participated in the StandWithUs conference in January 2020 in Los Angeles, to enhance critical thinking, networking, and public speaking skills.

Leadership Roles and Activities

Stony Brook Hillel Board of Directors August 2020 – Present
Stony Brook University *Stony Brook, NY*

- Discuss the changes necessary to adapt Hillel events, including holiday services, to the limitations of an online-only platform.
- Representative of the student-body to clarify to board members what will work more effectively to capture a student's interest.

Seawolves for Israel | President August 2018 – Present
Stony Brook University *Stony Brook, NY*

- Organize and lead weekly general and executive body meetings to educate others about Israel's history, culture, and international relations. This includes working together with other student-led groups on campus, like the College Republicans, The Environmental Club, Hillel, and the Iranian Jewish Club to broaden interactions between students.
- Previously served on the Executive Board as Secretary, and Vice President.
- Launched and taught a Hebrew 101 class over zoom (July - August 2020).

University Orchestra | Principle Oboe August 2017 – Present
Stony Brook University *Stony Brook, NY*

Technical Skills

Computational Science: Techniques of parallel computing including parallelization by both threads (OpenMP) and message passing (MPI), job submission with Slurm, and software management with Modules.
Languages: Python/Jupyter, C/C++, MESA, LaTeX, Matlab, Mathematica
Libraries: pandas, NumPy, Matplotlib, rebound
Software Skills: Microsoft Office, Pages, Numbers, Keynote, Procreate, Photoshop, Pixelmator, iMovie, LTSpice, Sibelius
Operating Systems: Linux, MacOS, Windows

For More Information

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Humans of Hillel: https://tinyurl.com/y3b53rf8