

# ETHAN SAVITCH

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## EDUCATION

### University of Rochester

December 2020

B.S. in Physics & Astronomy with a Minor in Mathematics

*Cum Laude* with High Distinction

Overall GPA: 3.73/4.00

## RESEARCH INTERESTS

Large scale numerical computation and astrophysics; including cosmology, galaxies, and accretion

## RESEARCH EXPERIENCE - UNIVERSITY OF ROCHESTER

### Research Assistant

*Supervisors: Prof. Adam Frank and Dr. Jonathan Carroll-Nellenback*

January 2019 - Present

Rochester, NY

#### · Project

January 2019 - March 2021

Triggering A Climate Change Driven “Anthropocene”: Is It Common Among Exocivilizations?

- Coupled an Energy Balance Model written in Fortran to a modified predator prey model to investigate the theory that Anthropocenes are common among intelligent civilizations.

#### · Project

March 2020 - Present

Improving the Probability Distribution of Interstellar Probes in a Galactic Context

- Improving their numerical model for the settlement of a galaxy by space-faring civilizations by making variables such as the probe ranges/velocities normally distributed rather than constant.

## JOURNAL ARTICLES

[1] **E. Savitch**, A. Frank, J. Carroll-Nellenback, J. Haqq-Misra, A. Kleidon, and M. Alberti, *Triggering a Climate Change Dominated “Anthropocene”: Is It Common Among Exocivilizations?*, The Astronomical Journal, vol. 162, no. 5, 2021, p. 196, doi:10.3847/1538-3881/ac1a71

## PRESENTATIONS

[1] **E. Savitch**, A. Frank, J. Carroll-Nellenback, and J. Haqq-Misra, *Climate Change Driven “Anthropocenes”: Are They Common Among Exo-Civilizations?*; Presented at the TechnoClimes meeting; 2020 Aug 3-7, published online at <https://doi.org/10.1002/essoar.10503860.4> (poster)

[2] **E. Savitch**, A. Frank, J. Carroll-Nellenback, and J. Haqq-Misra, *Climate Change Driven “Anthropocenes”: Are They Common Among Exo-Civilizations?*; Presented at the University of Rochester Journal Club, November 2020.

## WORK EXPERIENCE

### University of Rochester

September 2017 - May 2020

*Teaching Assistant (TA)*

Rochester, NY

· CSC 171: Introduction to Computer Science (September 2017 - December 2017)

· PHY 122: Electricity and Magnetism (September 2019 - December 2019)

· PHY 121: Mechanics (January 2020 - May 2020)

### C.E.K Mees Observatory

June 2017 - June 2020

*Student Tour Guide*

Rochester, NY

- Led free tours of Mees Observatory to help foster community outreach
- Trained in proper operation of the 24-inch computerized Cassegrain telescope

## COMPUTER/HARDWARE SKILLS

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|---------------------------|--|
| <b>Computer Languages</b> | Java, Python, Fortran 77/90, Mathematica, UNIX shell scripting (bash)        |
| <b>Hardware</b>           | PC assembly and basic mechanical fabrication                                 |
| <b>Document Editing</b>   | L <sup>A</sup> T <sub>E</sub> X, Microsoft Office, Google Docs/Sheets/Slides |
| <b>Operating Systems</b>  | Windows 10, Linux  |
| <b>Tools</b>              | Vim, Emacs   |

## PROFESSIONAL MEMBERSHIPS

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- American Astronomical Society (AAS)
- American Physical Society (APS)
- Sigma Pi Sigma, National Physics Honor Society ( $\Sigma\Pi\Sigma$ )

## EXTRACURRICULAR ACTIVITIES

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|---|---|
| <b>University of Rochester DJ Club</b><br><i>Executive Board: Secretary</i> | January 2017 - January 2020<br><i>Rochester, NY</i> |
|---|---|

- Led efforts to fund and to organize DJ workshops for all students.
- Managed DJ Club Sound Cloud page to promote club's brand and to publicize club's services

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| <b>University of Rochester Ice Hockey Team</b><br><i>Student Athlete</i> | September 2016 - January 2019<br><i>Rochester, NY</i> |
|--|---|

- Played forward for our university's club ice hockey team
- Competed in Upstate New York Club Hockey League (UNYCHL)

### Miscellaneous Interests

- Volunteer projects include children's camp in Costa Rica, coastal clean-up in Australia, and packing and distribution of free meals to the elderly in Pennsylvania
- Enjoy listening/playing/producing music, snowboarding and stargazing/astrophotography
- PADI certified for open water SCUBA