

# Zeeve Rogoszinski

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## Skills

✓ CLUSTER/SUPER COMPUTING

✓ REPORTING AND PROPOSAL WRITING

✓ DATA MINING AND VISUALIZATION

**Programming Languages (proficient):** Python, C, L<sup>A</sup>T<sub>E</sub>X, Mathematica, shell scripting

**Programming Languages (novice):** HTML/CSS

**Tools & Software:** Numpy, Matplotlib, Pandas, Scikit-learn, SciPy, Seaborn  
Git, Jupyter Notebook, Microsoft Office, Slurm, Unix/Linux

**Spoken Languages:** English (native), Hebrew (advanced)

## Experience

### University of Maryland

College Park, MD

ANN G. WYLIE DISSERTATION FELLOW/NASA EARTH AND SPACE SCIENCE FELLOW/GRADUATE STUDENT

2014-present

- Responsible for model development, execution, and visualization of C based simulations for the evolution of planetary spin-states via spin-orbit resonances, gas accretion, and collisions.
- Developed Python post-processing tools for data aggregation (up to 1-10 TB), visualization, and statistical analysis.
- Repurposed an N-body simulator using a Python wrapper to calculate the evolution of satellite orbits after 100s of collisions.
- Published a novel explanation for Uranus's and Neptune's tilts that both reduces the mass and number of subsequent impacts, and preserves the planets' spin periods. Reprints and additional information can be found on my website.
- Presented my findings at several national and divisional meetings in the US and abroad.
- Volunteered with the GRAD-MAP program by assisting with outreach, and helping to plan the Winter Workshop. GRAD-MAP is a diversity initiative and graduate student led organization by the Astronomy and Physics departments dedicated to sustaining ties between UMD and other minority serving institutions. For more information, visit: [www.umdgradmap.org](http://www.umdgradmap.org)

### NASA Goddard Space Flight Center

Greenbelt, MD

SUMMER INTERN

2014

- Developed a Python image processing and analysis script to study cosmic ray origins in supernova remnants.

### Vassar College

Poughkeepsie, NY

SENIOR THESIS

2013-2014

- Analyzed elliptical galaxy data to find correlations between structure and star formation rates.

### Williams College

Williamstown, MA

KECK NORTHEAST ASTRONOMY CONSORTIUM SUMMER RESEARCH FELLOW

2013

- Processed and analyzed raw images from the 2012 transit of Venus to explain the black-drop effect.

## Education

### University of Maryland

College Park, MD

PH.D. IN ASTRONOMY

Aug 2020 (expected)

Advisor: Dr. Douglas Hamilton

M.S. IN ASTRONOMY

Dec 2016

### Vassar College

Poughkeepsie, NY

B.A. IN ASTRONOMY & PHYSICS (GRADUATED WITH DEPARTMENTAL AND GENERAL HONORS, SIGMA XI)

Jun 2014

Senior Thesis Advisor: Dr. Debra Elmegreen

## Teaching

### Astronomy 101 TA

U Maryland

SUPERVISORS: GRACE DEMING, DR. DOUGLAS HAMILTON, DR. LEE MUNDY, DR. ELIZA KEMPTON

2014-2016, Fall 2019

### Academic Astronomy Intern

Vassar College

SUPERVISOR: DR. DEBRA ELMEGREEN

2013-2014

### Teaching Assistant

Williams College Planetarium

SUPERVISOR: DR. JAY PASACHOFF

Summer 2013