

Adam Jussila

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EDUCATION

Physics Major, Oberlin College, Class of 2018

Templeton High School, Class of 2014 – General STEM Certification

TECHNICAL SKILLS

- Python, Java, Mathematica, MATLAB
- LaTeX
- Igor Pro
- Familiar with AUTOCAD
- Familiar with Linux/Unix systems
- Familiar with Git
- Microsoft Office

RESEARCH EXPERIENCE

Oberlin College – Research Assistant for Professor Dan Stinebring Nov. 2015 - Present
Researcher

- Wrote code to process and analyze the structure of the secondary spectra of pulsar data.
- Made remote observations on Arecibo Telescope over a 10-week period, for further analysis of scintillation arcs on a well-documented pulsar within NANOgrav data sets.
- Currently contributing to a paper discussing the prevalence of scintillation arcs in secondary spectra of low dispersion pulsars within the NANOgrav data set.

University of Manchester – Research Assistant for Dr. Rene Breton Summer 2016
Summer Undergraduate Researcher (PIRE Grant)

- Spent 10 weeks working with Dr. Rene Breton to write code for the Lovell Telescope to optimize its viewing time.
- Wrote code in Python, designing the program largely on my own with input from Dr. Breton.
- Ended the summer with a basic framework for the code, with intent to have the project completed by Dr. Breton, me, or subsequent students.

NANOgrav Conference- Urbana, Illinois October, 2016
Conference Attendee

- Sent to the weeklong Fall 2016 NANOgrav (North American Nano-Hertz Gravitational Wave Observatory) meeting.
- Attended lectures and participated in working group discussions related to more focused aspects of the field of pulsar timing arrays.

International Pulsar Timing Array Conference- Stellenbosch, South Africa June 18-July 3, 2016
Conference Attendee

- Sent to the 2016 IPTA Conference, hosted by the European Pulsar Timing Array, as one of a handful of undergraduate students.
- Participated in a Student Workshop, learning about the science of pulsar timing arrays and the usage of TEMPO 2, a program for processing pulsar data.
- Attended the conference week, and learned about the most prominent research of the previous year in pulsar timing arrays (PTAs), and the future of PTAs in the international astrophysics community.

WORK EXPERIENCE

Oberlin College – Intro Electricity and Magnetism Lab Assistant

January 2017 - Present

Teaching Assistant

- TA to Professor John Scofield, assisting with grading and instruction of the introductory Electricity and Magnetism lab sections.
- Helping students relate weekly lab experiments to the lecture part of the Intro Electricity and Magnetism course.

Oberlin College – Grader for Intro Electricity and Magnetism

January 2017 - Present

Grader

- Grading problem sets for Professor Jason Stalknaker for the Introductory Electricity and Magnetism course.

Oberlin College – Observatory and Planetarium

Sept. 2015 - Present

Observatory and Planetarium Helper

- Guide Introductory Astronomy students and the general public in learning constellations and stars.
- Help run observing sessions for the general public, aligning telescopes for people to look at various astronomical objects, while also providing information about the objects of interest.

Wilson Engineering- Assistant to Gary Wilson, Electrical Engineer

Nov. 2013 – Aug. 2014

Assistant

- Learned how to use AUTO CAD to proofread and draw electrical plan sets.
- Edited the sets of past projects, as well as current projects being submitted for approval to the county.

RELATED EXPERIENCE

Oberlin College – Physics Department Student Representative

May. 2016 - Present

Student Representative

- Currently leading a student group to help in the vetting and interviewing of candidates visiting campus to be considered for a professor position in the Astrophysics department.
- Attend bi-monthly departmental meetings, participating on behalf of the students, and giving input on issues concerning all physics majors.
- Organize student events, gathering student input, and working to increase communications between professors, upperclassmen, and underclassmen within the department.

DISTINCTIONS

- John F. Oberlin Scholarship recipient
- NSF PIRE Grant recipient
- Class of 2018 Physics Honors Candidate

CURRENT COURSEWORK

- Physics Honors Project with Professor Stinebring
- Computer Science 241, Systems Programming
- Physics 321, Introduction to General Relativity
- Art History 349, Art, Politics, and Religion in 16th Century Italy

COMPLETED COURSEWORK

In-Major Courses

- Physics 314, Intermediate Lab
- Physics 312, Quantum Mechanics
- Physics 311, Electricity and Magnetism
- Physics 310, Classical Mechanics
- Physics 242, Electronics
- Physics 212, Modern Physics
- Physics 111, Electricity and Magnetism
- Physics 110, Mechanics
- Math 234, Differential Equations
- Math 231, Calculus 3
- Math 134, Calculus 2
- Astrophysics 302, Galaxies and Cosmology
- Astrophysics 301, Stars and Planets

Outside of Major Courses

- Computer Science 151, Data Structures
- Computer Science 150, Introduction to Computer Science, Python
- Neuroscience 201, Introduction to the Brain,
- Astronomy 100, Introduction to Astronomy
- Economics 101, Principles of Economics
- Religion 270, Islam
- History 277, African Environmental History
- History 163, Modern South Asia
- Art History 150, Approaches to Western Art

June 22, 2017