

EVAN H. ANDERS

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EDUCATION

University of Colorado Boulder, CO, U.S.A.

Ph. D. in Astrophysical and Planetary Sciences · Entry Date: August 2014

Selected Coursework:

Core Courses Atomic & Molecular Processes · Mathematical Methods · Intro Fluid Dynamics (IP) · Observations & Statistics (IP)

Electives Cosmochemistry · Intro Plasma Physics (IP)

(IP) signifies course is in progress during Spring 2015 semester

Whitworth University Spokane, WA, U.S.A.

Bachelor of Science in Physics with Mathematics and Computer Science minors · Graduated May 2014

Cumulative GPA: 4.00/4.00

EXPERIENCE

University of Colorado - Boulder (August 2014 - Present)

ASTR 1010 Teaching Assistant · Lab (Fall 2014) · Lab & Lecture (Spring 2015)

- Teach important laboratory concepts in short mini-lectures
- Assist students individually in reaching laboratory goals
- Provide conceptual help to interested students by holding office hours
- Grade weekly assignments and provide feedback

LIGO (Laser Interferometer Gravitational-Wave Observatory) Hanford Observatory (Summer 2013)

NSF SURF Fellow · Project: Spectral Line Monitoring Tool (SLM)

- Analyzed calibration data for LIGO using Fast Fourier Transforms by developing a new Python routine
- Studied the behavior of the Discrete Fourier Transform when applied to signals buried in Gaussian noise
- Researched past LIGO data to determine photon calibration consistency between input and output channels

Pacific Northwest National Laboratory (PNNL) (Summer 2012)

DOE SULI Intern · Project: Global Arrays in NumPy (GAiN)

- Optimized existing functions in GAiN, a Python module which applies PNNL's Global Arrays parallel programming toolkit to the NumPy Python module
- Designed new parallel algorithms for the GAiN 'reduce' function
- Developed foundation of GAiN 'master-slave' interface
- Benchmarked GAiN's functions, comparing their performance to an MPI-based NumPy implementation

Whitworth University (2011 - 2014)

Computational Physics Teaching Assistant (January 2014)

- Assisted students in translating mathematical operations into numerical algorithms
- Guided students in designing computational models of physical phenomena

Physics Lab Teaching Assistant (Fall 2011 - Spring 2012)

- Instructed students through the completion of laboratory activities
- Reviewed and graded students' notebooks to help improve laboratory practices

Physics Tutor (Fall 2012 - May 2014)

- Reviewed basic concepts with students to help improve problem-solving skills
- Provided supplemental instruction to assist students in the clarification of course material

Mathematics Grader (Spring 2012 - Spring 2013)

- Reviewed and corrected homework assignments, leaving feedback to clarify concepts
- Graded for the following courses: Discrete Mathematics, Calculus I, and Calculus II

Class Projects

- **Electricity and Magnetism:** Designed and constructed an experiment for measuring atmospheric ozone content with visible light. An insulated pod with a small fan for airflow contained an integrating sphere which was used to measure the intensity of red and green light. Using recorded voltages and the absorption cross-sections of the various constituents of air, the content of ozone is determinable; unfortunately, due to unfavorable launch conditions and rushed construction, no meaningful data was acquired.

SKILLS

- Experienced in software development in Python, C++, Java, MATLAB, Mathematica
- Familiarity with L^AT_EX, Microsoft Excel, Wavemetrics Igor Pro, Microsoft Visual Studio.NET, Vim, Emacs
- Familiarity with Unix Bash shell (Linux Ubuntu, Scientific Linux) and Windows 7 & 8

HONORS AND AWARDS

- Awarded the President's Award for Outstanding Academic Achievement from Whitworth University in 2014
- Awarded the Johnston-Hansen Foundation Scholarship from Whitworth University in 2013
- Awarded the Carl Hansen Pre-Engineering Scholarship from Whitworth University in 2011 and 2012
- Awarded the Mathematics/Computer Science Departmental Scholarship from Whitworth University in 2012
- Member of the Dean's Honor Roll and Laureate Society for all completed semesters at Whitworth University