

Evan H. Anders

GRADUATE STUDENT — ASTROPHYSICAL AND PLANETARY SCIENCES

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Education

University of Colorado – Boulder (CU Boulder)

Boulder, CO

PH.D IN ASTROPHYSICAL AND PLANETARY SCIENCES · EXPECTED MAY 2020

Aug. 2014 - Present

M.S. IN ASTROPHYSICAL AND PLANETARY SCIENCES · DECEMBER 2016

Whitworth University

Spokane, WA

B.S. IN PHYSICS; MINORS IN COMPUTER SCIENCE & MATH · CUMULATIVE GPA 4.0/4.0

Aug. 2010 - May 2014

Research Experience

CU Boulder & Laboratory for Atmospheric and Space Physics (LASP)

Boulder, CO

GRADUATE RESEARCH ASSISTANT

May 2015 - Present

- Working to understand the fundamental heat transport properties of stratified convection.
- Performing large-scale numerical simulations on NASA Pleiades.

Laser Interferometer Gravitational-Wave Observatory (LIGO)

Hanford, WA

NSF SURF FELLOW

Summer 2013

- Developed a tool in Python to analyze calibration lines in LIGO's power spectrum.
- Analyzed the consistency between input and output channels in LIGO's photon calibration system.

Pacific Northwest National Laboratory (PNNL)

Richland, WA

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Summer 2012

- Optimized functions in GAI_N, a Python module which applies PNNL's Global Arrays parallel programming toolkit to the NumPy Python module.
- Designed new parallel algorithms for the GAI_N 'reduce' function and developed the foundation of the GAI_N 'master-slave' interface.

Relevant Publications

Anders, E.H., Brown, B.P, and Oishi, J. S. "Accelerated evolution of convective simulations.". 2018. Phys. Rev. Fluids 3, 083502.

Anders, E.H. and Brown, B.P. "Convective heat transport in stratified atmospheres...". 2017. Phys. Rev. Fluids 2, 083501.

Conference Talks & Posters

Foreign Conferences

Compressible Convection Conference 2017, 25-minute talk. "Convective heat transport...".

Lyon, France

Domestic Conferences

American Astronomical Society's 233rd Meeting, Poster. "Accelerating the evolution...".

Seattle, Washington

APS Division of Fluid Dynamics 2018, 10-minute talk. "Predicting the Rossby number...".

Atlanta, Georgia

APS Division of Fluid Dynamics 2017, 10-minute talk. "The effects of Mach number...".

Denver, Colorado

APS Division of Fluid Dynamics 2016, 10-minute talk. "Sustained shear flows...".

Portland, Oregon

AAS Solar Physics Division 2016, Poster. "The structure and evolution of boundary layers...".

Boulder, Colorado

Awards & Honors

2018-	NASA Earth And Space Science Fellowship – Heliophysics , providing full research funding	NASA
2015-18	George Ellery Hale Graduate Fellowship , providing funding for three years of graduate research	CU Boulder / NSO
2016	High Pass , for defense of publication-ready research on CU APS Comprehensive Exam II	CU Boulder
2016	Carl Hansen Graduate Fellowship , awarded to a graduate student studying stellar interiors	CU Boulder
2014	President's Award for Outstanding Academic Achievement , for graduating with a 4.0 GPA	Whitworth U.
2013	Johnston-Hansen Foundation Scholarship , awarded to a Physics student	Whitworth U.
2012	Carl Hansen Pre-Engineering Scholarship , awarded to an Engineering student	Whitworth U.
2012	Math / Comp. Sci. Departmental Scholarship , awarded to a student in the Math / Comp. Sci. department	Whitworth U.
2011	Carl Hansen Pre-Engineering Scholarship , awarded to an Engineering student	Whitworth U.
2010	Mind & Heart Scholarship , awarded to an entering undergraduate to assist with four years of tuition	Whitworth U.

Service

2018-19	Member , Graduate admissions committee	<i>CU Boulder</i>
2018	Graduate Student Member , Exam committee for CU APS Comprehensive Exam 1	<i>CU Boulder</i>
2017-18	Member , Graduate admissions committee	<i>CU Boulder</i>
2016-17	Member , Hiring committee for director of Fiske Planetarium	<i>CU Boulder</i>
2016	Graduate Student Member , Exam committee for CU APS Comprehensive Exam 1	<i>CU Boulder</i>
2016	Chair , Graduate student committee for NSO/CU faculty appointment	<i>CU Boulder</i>
2015	Member , Graduate student committee for three-year NSO/CU appointment	<i>CU Boulder</i>

Teaching Experience

CU Boulder

Boulder, CO

GRADUATE PART-TIME INSTRUCTOR FOR ASTR 2600

Summer 2017

- Co-instructor of record for an introductory course in Python programming
- Developed curriculum including lectures, tutorials, homework, and the final exam.

GRADUATE TEACHING ASSISTANT FOR ASTR 1010

August 2014 - December 2015, Fall 2017

- Delivered mini-lectures to familiarize students with lab material.
- Held office hours and helped staff the Astronomy Help Room (AHR).

LEAD GRADUATE TEACHER

August 2016-May 2017

- Led video consultations with Graduate Teaching Assistants
- Coordinated and ran orientation for new Teaching Assistants in the department.

Whitworth University

Spokane, WA

COMPUTATIONAL PHYSICS TEACHING ASSISTANT

January 2014

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

PHYSICS TUTOR

Fall 2012 - May 2014

- Reviewed basic concepts with students to help improve problem-solving skills.
- Provided supplemental instruction to clarify course material for students.

PHYSICS LAB TEACHING ASSISTANT

August 2011 - May 2012

- Instructed students through the completion of laboratory activities.

Outreach

(CU STARS) CU Boulder Science, Technology, and Astronomy RecruitS

Boulder, CO

GRADUATE COORDINATOR

August 2016-Present

- Guided undergraduate students in designing hands-on high school-level lessons to teach basic concepts in astronomy and astrophysics.
- Ensured middle/high school visits across Colorado ran smoothly.