Ezra Brooker

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EDUCATION

FLORIDA STATE UNIVERSITY

Ms/PhD in Computational Science
Expected May 2019/ May 2022 | Florida, FL
Cum. GPA: 3.857

BS in Physics and Astrophysics
May 2015 | Tallahassee, FL
Conc. in Computational Astrophysics
College of Science and Art
Cum. GPA: 3.27 / 4.0
Major GPA: 3.20 / 4.0

LINKS

Website:// **ebrooker**
Github:// **ebrooker**
LinkedIn:// **Ezra Brooker**

COURSEWORK

GRADUATE

Scientific Programming
Applied Computational Science I w/ Lab
Elementary Oceanography (Teaching Asst)
Applied Comp. Sci. II w/ Lab (Spring)
Validation and Verification (Spring)

UNDERGRADUATE

Nuclear Astrophysics
Physics of Stars
Special and General Relativity
Hydrodynamics in Astrophysics
Computational Astrophysics
Electricity and Magnetism I/II
Quantum Theory of Matter A/B
Classical Mechanics I/II

SKILLS

PROGRAMMING

Languages:
Python • C • C++ • FORTRAN 90/95
Learning: Bash • LaTeX
Platforms:
Windows XP, 7, 10 • Linux centOS, Redhat, Mint, OpenSUSE

EXPERIENCE

FSU: EARTH, OCEAN AND ATMOSPHERIC SCIENCE DEPT | Graduate Teaching Assistant

Aug 2017 – Dec 2017 | Tallahassee, FL

- Online Elementary Oceanography course, worked under **Kevin Speer**
- Exam proctoring, homework assistance, and email correspondence w/ students.

FSU: PHYSICS DEPARTMENT | Summer Research Assistant

May 2015 – July 2015 | Tallahassee, FL

- Worked under **David Collins** on large stellar formation Enzo datasets.
- Python: YT, AstroDendro, astropy, numpy, and pyFits.
- Wrote scripts to calculate polarization angles of interstellar dust-scattered light to determine local magnetic field orientations relative to mean IC fields.
- Routines implemented to function as analysis tools analogous to observational astronomy data collection and analysis methods.

FSU: PHYSICS DEPARTMENT | Undergrad Learning Assistant

Aug 2014 – May 2015 | Tallahassee, FL

- General Physics B w/ Lab: Electricity, Magnetism, Circuits, Optics
- Worked under **Paul Cottle** and two Graduate Teaching Assistants.
- Socratic style class, assisted in class and lab sessions two days a week.

RESEARCH

FLORIDA ST UNIVERSITY SCIENTIFIC COMPUTING DEPT | Graduate Researcher

Sept 2017 – Present | Tallahassee, FL
Worked with **Tomasz Plewa** . Developing doctoral thesis project most likely to be focused on double degenerate binary supernova progenitor systems.

FLORIDA ST UNIVERSITY ASTRO GROUP | Undergraduate Researcher

Sept 2013 - May 2015 | Tallahassee, FL
Worked with **David Collins** . **Honors Thesis** completed and submitted to Florida State University Libraries Digital Repository. Python scripts written to isolate proto-stellar cores in data and calculate local magnetic field angles relative to the mean cloud field. Attempted to find trends between local and mean field orientations as a function of mean field strength.

FLORIDA ST UNIVERSITY SCIENTIFIC COMPUTING DEPT | Undergraduate Researcher

Sept 2012 – May 2013 | Tallahassee, FL
Worked with **Tomasz Plewa** . Gained experience in research methodology, programming in FORTRAN 90/95, using the astrophysics software Mesa.

AWARDS/THESES

2015	3rd Place	The Lanutti Award for Undergraduate Research, FSU Dept of Physics **Poster Session** .
2015	Honors Thesis	**Magnetic Field Angles in Collapsing Molecular Clouds**