

# William M. Wolf

## Address

School of Earth and Space Exploration  
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## EDUCATION

*Doctor of Philosophy, Physics* September 2017  
University of California, Santa Barbara, Santa Barbara, CA  
Advisors: Lars Bildsten and Andy Howell  
Thesis: Supersoft Emission from Thermonuclear Burning on Hydrogen-Accreting White Dwarfs

*Master of Arts, Physics* April 2013  
University of California, Santa Barbara, Santa Barbara, CA  
Advisors: Lars Bildsten and Andy Howell

<i>Bachelor of Science, Physics</i>	<i>Bachelor of Arts, Mathematics</i>	May 2010
Eastern Illinois University, Charleston, IL	Eastern Illinois University, Charleston, IL	
University Honors; Summa Cum Laude	University Honors; Summa Cum Laude	
Summer 2009 REU at U. of Rochester	Departmental Honors	
<ul style="list-style-type: none"><li>• Advisor: Eric Blackman</li><li>• Topic: Astrophysical Jets</li></ul>	<ul style="list-style-type: none"><li>• Advisor: Leo Comerford</li><li>• Thesis: Conjugacy in Hyperbolic Groups</li></ul>	

## ACADEMIC EXPERIENCE

*Postdoctoral Research Associate* September 2017 – Present  
School of Earth and Space Exploration, Arizona State University

*Adjunct Professor* August 2018 – Present  
Chandler-Gilbert Community College  

- Taught AST 111, AST 112, AST 113, and AST 114 (Fall 2018)

*Graduate Research Assistant* June 2011 – September 2017  
Department of Physics, UC Santa Barbara

*Graduate Teaching Assistant* September 2010 – May 2016  
Department of Physics, UC Santa Barbara  

- Served as an instructor for lab sections and aide in open lab time for the following courses:
  - PHYS 134: Observational Astrophysics (Spring 2012)
  - PHYS 3L: Introductory Physics for Engineers Lab (Fall 2011, Fall 2010)
- Served as a facilitator for discussion sections for the following courses:
  - PHYS 1: Introductory Physics for Engineers (Winter 2012)
  - ASTRO 2: Introductory Cosmology (Spring 2011)
  - ASTRO 1: Introductory Astronomy (Winter 2011)
- Helped with instruction of the graduate course PHYS 232: Stellar Structure as a resource for students in using the 1D stellar evolution software instrument MESA `star` (Fall 2013) and as a guest lecturer (Spring 2016).

*Mentor* June 2013 – June 2015  
Department of Physics, UC Santa Barbara  

- Closely mentored a visiting undergraduate student, Timothy Cunningham, on a project that would later become his Masters' thesis. Taught concepts of radiative transfer and stellar structure as well as more general skills like figure design and academic writing. Timothy is now a doctoral student at the University of Warwick.

**SERVICE***MESA Users List* 2012 – Present

- Ask and answer questions relating to the installation and use of the MESA software instrument.
- See archive of contributions here: <https://bit.ly/2EC3CR8>

*Teaching Assistant, MESA Summer School* Summers 2012 – Present

- Helped to organize and execute laboratory exccerics for the annual MESA summer school.
- Assisted the following lecturers and topics:
 

– Pablo Marchant: Stellar Rotations in Binary Systems	August 2017
– Jim Fuller: Wave Transport in Stars	August 2016
– Craig Wheeler: Massive Star Explosions	August 2015
– Lars Bildsten: Stellar Response to Mass Loss	August 2014
– Lars Bildsten: Helium Core Burning	August 2013
– Lars Bildsten: Accreting White Dwarfs	August 2012

*Referee, Astrophysical Journal* 2014 – Present

- Refereed four articles for publication in the Astrophysical Journal

*Webmaster, UCSB Astronomy and Astrophysics* 2014 – 2017

- Completely redesigned website and kept it up to date, accounting for changes in faculty, postdocs, and students. Implemented selected research, faculty search, automatic “recent papers on the arxiv” features.
- <http://www.physics.ucsb.edu/~astrogroup>

**COMPUTER SKILLS**

- Programming Languages: Ruby, Python, Mathematica, IDL, and Fortran 95
- Markup Languages: L<sup>A</sup>T<sub>E</sub>X, Markdown
- Internet Tools: HTML5, CSS3, Javascript (jQuery, CoffeeScript), Bootstrap, Ruby on Rails (RSpec, Cucumber)
- Scientific Packages: Numpy, Scipy, Matplotlib, Tioga
- Scientific Software Instruments: MESA, Cloudy
- Operating Systems: Mac, Unix/Linux.
- Version Control Systems: Git

**CODING PROJECTS**

Here are several tools I’ve written to aid in the use of MESA and analyzing the data it produces. All are open source and available through Github. Most of these are detailed on the “Projects” section of my web page: <http://wmwolf.github.io/projects/>.

*MesaTestHub*

- Web app ([testhub.mesastar.org](http://testhub.mesastar.org)) for tracking MESA test suite status
- Ruby on Rails app deployed through Heroku
- Used with `mesa.test`
  - Ruby gem
  - Installs and tests MESA revisions; submits results to web app

*MesaScript*

- Powerful domain-specific language for creating complex inlists
- Written in Ruby
- <http://wmwolf.github.io/MesaScript/>

*MesaReader*

- Eases access to MESA output for plotting or analysis
- Python: [http://wmwolf.github.io/py\\_mesa\\_reader/](http://wmwolf.github.io/py_mesa_reader/)
- Ruby/Tioga: [http://wmwolf.github.io/MESA\\_Reader/](http://wmwolf.github.io/MESA_Reader/)

*Mesa CLI*

- Command line interface for automating many common tasks in MESA
- Written in Ruby
- [http://wmwolf.github.io/mesa\\_cli/](http://wmwolf.github.io/mesa_cli/)