

# Matthew Portman

## Contact

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github.com/  
MatthewPortman

## Programming Languages

Bash  
LaTeX  
Python  
Fortran  
MATLAB  
OpenMP/MPI/CUDA

## Education

- 2017–Pres. Ph.D. Candidate in Computational Science GPA: 3.77  
San Diego State University & University of California, Irvine  
*Relevant Coursework*
- Problems in Computational Science
  - Advanced Computational PDE
  - Research Ethics Seminar
  - Scientific Computing
  - Parallel Computing
  - Machine Learning
  - Optimization
- 2012–2016 B.S. in Physics GPA: 3.65  
University of Texas at Dallas

## Research Experience

- 2019–Pres. **Research Assistant** under Dr. Wayne Hayes University of California, Irvine  
*Modeling Galaxies*
- Utilize optimization methods to model galactic light profiles via GALFIT.
  - Develop an algorithm to pipe results from spiral arm detection algorithm, SpAR-cFiRe, into GALFIT in order to automate galactic structure parameterization.
- 2017–2019 **Research Assistant** under Dr. Fridolin Weber San Diego State University  
*Neutron Star Simulation*
- Simulated complex physical interactions inside Neutron Stars using Fortran.
- 2015 **Undergraduate Research Assistant** under Dr. Benjamin Sargent Rochester Institute of Tech  
*Research Experience for Undergraduates (REU)*
- Developed a classification algorithm to find stars in photometry of galaxies.

## Work Experience

- 2019–Pres. **Teaching Assistant** University of California, Irvine  
*Intro to Coding - Python*
- Taught and developed interactive coding assignments in Python.
  - Evaluated student success and.
- 2017 **Adjunct Faculty** Collin County Community College  
*Mathematics Professor*
- Taught and developed interactive course material.
  - Assessed student success and modified course curricula.

## Publications and Awards

- 2019 **URA Visiting Scholar Program/Award** Fermilab  
Award granted to perform collaborative research with Fermilab.
- 2019, 2021 **Proceedings: ACCESS Conference** San Diego State University  
Poster presentation of research done with Dr. Wayne Hayes.
- 2016 **Proceedings: 227<sup>th</sup> AAS Conference** Kissimmee Florida  
Poster presentation of research done for REU.
- 2017–2019 **Graduate S-STEM Fellowship.** San Diego State University
- 2012–2016 **Academic Excellence Scholarship** University of Texas at Dallas