

# Matthew Portman

## Contact

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## Programming Languages

C  
IDL  
Perl  
Bash  
LaTeX  
Python  
Fortran  
MATLAB  
OpenMP/MPI/CUDA

## Education

2017–Pres. **Ph.D. Candidate** in Computational Science  
San Diego State University & University of California, Irvine  
*Relevant Coursework*

Current GPA: 3.77

- Problems in Computational Science
- Advanced Computational PDE
- Research Ethics Seminar
- Scientific Computing
- Parallel Computing
- Machine Learning
- Optimization

2012–2016 **B.S.** in Physics  
University of Texas at Dallas

Total GPA: 3.65

## Research Experience

2019–Pres. **Research Assistant** under Dr. Wayne Hayes  
*Modeling Galaxies* University of California, Irvine

- 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  
*Neutron Star Simulation* San Diego State University

- Simulated complex physical interactions inside Neutron Stars using Fortran.

2015 **Undergraduate Research Assistant** under Dr. Benjamin Sargent  
*Research Experience for Undergraduates (REU)* Rochester Institute of Tech

- Developed a classification algorithm to find stars in photometry of galaxies.

## Work Experience

2017 **Adjunct Faculty**  
*Mathematics Professor* Collin County Community College

- Taught and developed course material.
- Assessed student success and modified course curricula.

2014–2016 **Tutor → Supervising Tutor**  
*Mathematics Tutor* University of Texas at Dallas

- Assisted students and moderated discussion of course material.
- Organized meetings with professors and conducted reviews for exams.
- Expanded tutoring program functionality as supervisor through workshops, self-assessments, and social events.

## Publications and Awards

2019 **Proceedings: ACCESS Conference**  
Poster presentation of research done with Dr. Wayne Hayes. San Diego State University

2018 **Proceedings: ACCESS Conference**  
Poster presentation of research done with Dr. Fridolin Weber. San Diego State University

2016 **Proceedings: 227<sup>th</sup> AAS Conference**  
Poster presentation of research done for REU. Kissimmee Florida

2017 – 2019 **Graduate S-STEM Fellowship.** San Diego State University

2012 – 2016 **Academic Excellence Scholarship** University of Texas at Dallas