

# Tyson C. George

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## Education

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<b>University of Massachusetts, Dartmouth</b>	<b>Fall 2022 – Spring 2023</b>
Physics, MS	GPA 3.857/4.0
<i>Academic Advisor: Dr. Robert Fisher</i>	
<i>Research Advisor: Dr. Scott Field</i>	

<b>University of Massachusetts, Dartmouth</b>	<b>Fall 2018 – Spring 2022</b>
Physics with Astrophysics concentration, BS	GPA 3.8/4.0
<i>Advisor: Dr. Robert Fisher</i>	
<b>Summa Cum Laude</b>	

## Fellowships and Scholarships

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<b>AccEL S-STEM</b>	<b>Fall 2022 – Spring 2023</b>
<b>NASA Space Grant</b>	<b>Summer 2019/22, Fall 2020/21, Spring 2022</b>
<b>Robert A. Melendes Memorial Merit Scholarship</b>	<b>June 2020</b>

## Experience

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<b>Physics Teaching Assistant</b>	<b>September 2022 – Present</b>
Lead introductory Physics Lab(s) and Recitation	

<b>Society of Physics Students</b>	<b>September 2020 – May 2022</b>
Treasurer, Vice President	

<b>Math Teaching Assistant/Tutor</b>	<b>September 2020 – May 2022</b>
Calculus I–III	

<b>Undergraduate Research Assistant</b>	<b>Spring 2020</b>
Worked towards resolving the optical properties and efficiency of quantum dots and explored the catalytic problem.	

<b>Office Aide/Clerical Assistant</b>	<b>Fall 2019 – Spring 2020</b>
Assistant to the secretary of the Physics Department	

## Research Projects

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**Building Numerical Relativity Surrogate Models with Neural Networks**      **June 2022 – Present**  
*Supervised by: Dr. Scott Field, UMassD*

Using neural networks to optimize and speed-up overall model evaluation time of current numerical relativity surrogate models.

**Analyzing Whaling Logbooks for Climate Information**      **January 2022 – August 2022**  
*Supervised by: Dr. Caroline Ummenhofer, WHOI*

Analyze whaling ship logbooks from 18<sup>th</sup>–20<sup>th</sup> century to gather data on wind and pressure patterns.

**Building Models for Ringdown Waveforms**      **August 2021 – May 2022**  
*Supervised by: Dr. Scott Field, UMassD*

Build models to accurately depict the ringdown signals produced from gravitational events.

**Optical Property and Efficiency of Quantum Dots**      **June 2019 – November 2020**  
*Supervised by: Dr. Jianyi Jay Wang, UMassD*

Computational programming with Python; data analysis, finite difference and element method, and how to use differential equations to accurately describe the motion of particles.

## Course Work

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### Graduate:

High Performance Scientific Computation, Advanced Math Physics I, General Relativity, Computational Physics, Numerical Methods, Theoretical Mechanics (Goldstein)

### Undergraduate:

Classical Mechanics, Statistical Thermodynamics (Pathria), Quantum Mechanics I-II (Griffiths), Electricity and Magnetism I-II (Griffiths), Stellar Astrophysics, Quantum Computation, Quantum Field Theory, Differential Equations, Differential Geometry, Mathematical Physics

## Computer Knowledge

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### Skills/Workflow

L<sup>A</sup>T<sub>E</sub>X, git, vim, bspwm/riverwm, bash, zsh

### Languages

C, Java, Julia, Python

### Operating Systems

GNU/Linux, Windows 10

### Certifications

Microsoft Excel 2016

OSHA 10-hour General Industry Safety and Health

**Spring 2016**

**June 2016**