Tyson C. George

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LinkedIn: Tyson George
Website: tysongeorge.github.io

Education

Virginia Tech **Fall 2023 – Present**

Mathematics, MS
Advisor: Dr. Yingda Cheng

University of Massachusetts, Dartmouth **Fall 2022 – Spring 2023**

Physics, MS GPA 3.857/4.0
Advisor: Dr. Scott Field

University of Massachusetts, Dartmouth **Fall 2018 – Spring 2022**

Physics with Astrophysics concentration, BS GPA 3.8/4.0
Advisor: Dr. Robert Fisher
Summa Cum Laude

Fellowships and Scholarships

AccEL S-STEM **Fall 2022 – Spring 2023**

NASA Space Grant **Summer 2019/22/23, Fall 2020/21, Spring 2022**

Robert A. Melendes Memorial Merit Scholarship **June 2020**

Experience

Math Graduate Teaching Assistant **August 2023 – Present**

Help facilitate student learning and engagement in Introductory Calculus sequence via active learning and office hours

Physics Graduate Teaching Assistant **September 2022 – May 2023**

Lead introductory Physics Lab(s) and Recitation

Society of Physics Students **September 2020 – May 2022**

Treasurer, Vice President

Math Teaching Assistant/Tutor **September 2020 – May 2022**

Calculus I–III

Undergraduate Research Assistant **Spring 2020**

Worked towards resolving the optical properties and efficiency of quantum dots and explored the catenary problem.

Office Aide/Clerical Assistant **Fall 2019 – Spring 2020**

Assistant to the secretary of the Physics Department

Research Projects

Building Numerical Relativity Surrogate Models with Neural Networks **June 2022 – Present**
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**
Dr. Caroline Ummenhofer, WHOI

Analyze whaling ship logbooks from 18^{th}–20^{th} century to gather data on wind and pressure patterns.

Building Models for Ringdown Waveforms **August 2021 – May 2022**
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**
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

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

Skills/Workflow

LaTeX, git, vim, bspwm/riverwm, bash/zsh

Languages

C, Java, Julia, Python

Operating Systems

GNU/Linux, Windows 10

Certifications

Microsoft Excel 2016 **Spring 2016**
OSHA 10-hour General Industry Safety and Health **June 2016**