

tylerchen

Tufts University
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Tufts University

Bachelor of Science: Mathematics, Physics, Minor: Studio Art

Medford, MA
August 2013 - May 2017

- GPA: 3.89, (Mathematics GPA: 4.00/Physics GPA: 3.96), Deans List (all semesters)
- Relevant courses: Graduate Algebra, Mathematical Modeling, Abstract Algebra I/II, Real Analysis I/II, Complex Variables, Abstract Linear Algebra, Advanced Modern Experimental Physics, Problem-Solving by Computer, Quantum Theory, Electricity and Magnetism, Electronics, Mechanics, Differential Equations, Calculus II/III

Soft Matter Theory

Undergraduate Researcher

Medford, MA
April 2015 - Present

- Optimize Monte Carlo simulations written in C used to explore the behavior of rigid balls constrained to the surface of ellipsoids under various conditions and constraints
- Rewrote an $O(N^2)$ algorithm to an equivalent $O(N)$ algorithm. This decreased the runtime of high particle number simulations to under 3% of the original code

Research in Industrial Projects for Students (Hong Kong)

Participant, ePropulsion group

Hong Kong
May 2016 - August 2016

- Participate in IPAM sponsored funded International Research Experience for Students (IRES) at Hong Kong University of Science and Technology
- Design and implement a communication protocol for short range underwater acoustic communication

Tufts Physics Department

Lab Teacher's Assistant

Medford, MA
January 2016 - Present

- Develop, supervise, and run weekly lab session for the Electronics lab course.

Tufts Mathematics Department

Grader

Medford, MA
September 2014 - May 2016

- Grade written homework assignments for undergraduate math courses at Tufts
- Courses graded: Discrete Math, Differential Equations, and Calculus III

Tisch Library Digital Design Studio

Student Supervisor

Medford, MA
August 2014 - Present

- Provide supervision to student workers
- Staff front desk at the Digital Design Studio, assist patrons with large format printing, recording, digitization equipment, and software.

Tufts Conference and Events Services

Registrar, Facilitator

Medford, MA
May 2014 - Present

- Coordinate and assist clients with logistical details relating to conferences, perform supervisory role overseeing and training new staff, schedule employee shifts (implemented a VBA/excel system to automate much of this process), prepare individualized printed materials for upcoming conferences
- Staff 24-7 welcome desk directing and assist guests as needed
- Assist with occasional academic year events

Programming Languages, Packages, and Software

- Proficient: Mathematica, LaTeX (TikZ/pgfplot), HTML/CSS/Javascript, python (PIL, scipy, sympy), Adobe Creative Cloud (Illustrator, Photoshop, InDesign), GIMP, Inkscape
- Developing: C, C++, git, slurm, MATLAB, Bash, Powershell, Tasker, vim

Other Skills

- I can ride a bike