

# tylerchen

Tufts University  
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## EDUCATION

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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: 3.95), Deans List (all semesters)
- Relevant courses: Abstract Algebra I/II, Real Analysis I/II, Complex Variables, Abstract Linear Algebra, Advanced Modern Experimental Physics, Problem-Solving by Computer, Electricity and Magnetism, Electronics, Mechanics, Differential Equations, Calculus II/III

## EXPERIENCE

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### 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*

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

### 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 guests with large format printing, recording, digitization equipment and software.

### Tufts Physics Department

*Lab Teacher's Assistant*

Medford, MA

January 2016 - May 2016

- Supervise and run weekly lab session for the Electronics lab course.

### Tufts Mathematics Department

*Grader*

Medford, MA

September 2014 - Present

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

### 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

## SKILLS

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### Programming Languages and Packages

- Proficient: Mathematica, LaTeX (TikZ/pgfplot), HTML/CSS/Javascript, python (PIL, numpy), C
- Developing: C, C++, Bash, Powershell, Tasker, ns3

### Other Skills

- git, slurm, Adobe Creative Cloud (Illustrator, Photoshop, InDesign)