

Tyler Chen

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<http://chen.pw>

Education

University of Washington *September 2017 - Present*
Ph.D. in Applied Mathematics (in progress)

University of Washington *September 2017 - December 2018*
M.Sc. in Applied Mathematics

Tufts University *August 2013 - May 2017*
B.S. Summa Cum Laude in Mathematics and Physics; Minor in Studio Art

Research

University of Washington (under Anne Greenbaum) *March 2018 - Present*
Study the behavior of communication hiding/avoiding implementations of the conjugate gradient algorithm in finite precision.

Soft Matter Theory (under Tim Atherton, Chris Burke) *April 2015 - January 2017*
Optimize Monte Carlo simulations of rigid balls constrained to the surface of deformable ellipsoids

Research in Industrial Projects for Students Hong Kong *May 2016 - August 2016*
Design and implement a short range underwater acoustic communication protocol for the Hong Kong company ePropulsion

Publications

On the Convergence Rate of Variants of the Conjugate Gradient Algorithm in Finite Precision Arithmetic. Anne Greenbaum, Hexuan Liu, **Tyler Chen**. In preparation.

Posters and Talks

Symmetric Preconditioner Refinement using Low Rank Approximations *February 2019*
Baidu Research

Teaching

TA, Probability And Statistics For Computational Finance (UW CFRM 410) *Winter 2019*

TA, Calculus with Analytic Geometry I (UW MATH 124) *Autumn 2018*

TA, Calculus with Analytic Geometry II (UW MATH 12) *Winter 2018*

TA, Calculus with Analytic Geometry II (UW MATH 125) *Autumn 2017*

Lab TA, Electronics (Tufts PHY 41) *Spring 2017*

Lab TA, Electronics (Tufts PHY 41) *Spring 2016*

Grader, Discrete Mathematics (Tufts MATH 61) *Spring 2016*

Grader, Calculus III (Tufts MATH 42) *Fall 2015*

Grader, Differential Equations (Tufts MATH 51) *Spring 2015*

Grader, Calculus III (Tufts MATH 42) *Fall 2014*

Graduate Coursework

Randomized Algorithms and Probabilistic Analysis (UW CSE 525) *Spring 2019*
Optimization: Fundamentals and Applications (UW AMATH 515) *Winter 2019*
Design and Analysis of Algorithms (UW CSE 521) *Autumn 2018*
Numerical Analysis of Time Dependent Problems (UW AMATH 586) *Spring 2018*
Inferring Structure of Complex Systems (UW AMATH 563) *Spring 2018*
Numerical Analysis of Boundary Value Problems (UW AMATH 585) *Winter 2018*
Advanced Stochastic Processes (UW AMATH 562) *Winter 2018*
Networks and Combinatorial Optimization (UW AMATH 514) *Winter 2018*
Applied Linear Algebra and Introductory Numerical Analysis (UW AMATH 584) *Autumn 2017*
Applied Complex Analysis (UW AMATH 567) *Autumn 2017*
Introduction to Probability and Random Processes (UW AMATH 561) *Autumn 2017*
Algebra 2 (Tufts MATH 216) *Spring 2017*
Algebra 1 (Tufts MATH 215) *Fall 2016*

Awards & Honors

Top Scholar Fellowship (UW) *Fall 2017*
The Audrey Butvay Gruss Science Award (Tufts) *April 2017*
Phi Beta Kappa (Tufts) *April 2017*
Sigma Pi Sigma Physics Honors Society (Tufts) *May 2016*
The Howard Sample Prize Scholarship in Physics (Tufts) *April 2015*
Dean's List (Tufts) *All Semesters*

Professional

Tufts Conference and Events Services *May 2014 - August 2017*

Reservations Manager, Registrar, Facilitator

Oversee all housing reservations at Tufts University during the summer conference season; 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

Tisch Library Digital Design Studio *August 2014 - May 2017*

Student Supervisor

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