GRAEME **STROUD**

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EDUCATION

SEPTEMBER 2019 – PRESENT

MMath. UNIVERSITY OF WATERLOO

- Under the supervision of Anna Lubiw.
- Research Areas: Computational Geometry, Algorithms, Combinatorics.
- GPA: 3.98 / 4.0

SEPTEMBER 2015 – JUNE 2019

Honours B.Sc. UNIVERSITY OF TORONTO

- Computer Science Specialist. Math Minor.
- GPA: 3.97 / 4.0
- Relevant Courses: Enriched Data Structures, Advanced Algorithms, Computability and Logic, Computational Complexity.

RESEARCH & WORK EXPERIENCE

MAY 2020 – AUGUST 2020

Teaching Assistant, UNIVERSITY OF WATERLOO

- Marking TA for CS 240: Data Structures and Data Management.

JANUARY 2020 – APRIL 2020

Teaching Assistant, UNIVERSITY OF WATERLOO

- Marking TA for CS 341: Algorithms.

SEPTEMBER 2019 – DECEMBER 2019

Teaching Assistant, UNIVERSITY OF WATERLOO

- Marking TA for CS 246: Object-Oriented Software Development.

JANUARY 2019 – APRIL 2019

Teaching Assistant, UNIVERSITY OF TORONTO

- TA for CSC263: Data Structures and Analysis.
- Wrote multiple choice and data structure questions for the midterm and final exams.
- Marked exam papers.

SEPTEMBER 2018 – DECEMBER 2018

Course research: CSC494 project researcher, UNIVERSITY OF TORONTO

- Computer Science Course project in Discrepancy Theory.
- Explored various geometric discrepancy approximation algorithms.

- Explored modifications for an algorithm for computing discrepancy of half-spaces in order to improve time complexity.
- Produced lower bounds to a sub-procedure of this algorithm, establishing there is little room for improvement for the algorithm.

MAY 2018 – AUGUST 2018

Undergraduate researcher, UNIVERSITY OF TORONTO

- Received a NSERC research award to work on a project in parallel program synthesis.
- Analyzed problems where current parallelization techniques did not work well.
- Deduced fundamental structural issues as to when a search-based parallelizing algorithm fails to find a solution.
- Enhanced an algorithm to synthesize parallel programs for loops, allowing more problems with complicated code structures to work with a fast syntax-guided algorithm.
- Significantly reduced computation time for these problems, up to 100x faster.

SEPTEMBER 2015 – JUNE 2016

Mathematics tutor, DANFORTH COLLEGIATE & TECHNICAL INSTITUTE

- Worked with students (Grades 9-12) to improve their understanding of math concepts
- Explained/taught concepts to students using appropriate grade level course materials as well as relevant examples from the real world.

CLUBS

SEPTEMBER 2016 – APRIL 2017

General Events Manager UNDERGRADUATE THEORY GROUP

- Organized and attended information and social events (undergraduate-level talks and pub nights).
- Planned and hosted group study sessions for undergraduate theory courses at UofT.
- Researched and shared relevant topics of discussion/problems with study session participants. Answered questions and explained concepts, as needed, to participants.

AWARDS

- Anna And Alex Beverly Memorial Fellowship (2019)
- University of Toronto Scholar – Beatty (2018)
- Louis Savlov Scholarships In Sciences And Humanities At University College (2016/2017)
- NSERC Undergraduate Student Research Award (Summer 2018)
- Dr. James A. & Connie P. Dickson Scholarship In Science & Mathematics (2018)
- President's Entrance Scholarships (2015)