Kam Chuen (Alex) Tung (alex20030199@gmail.com)

Personal website: https://alex20030190.netlify.app

Proficient in math, programming, and research. Lover of challenges. Organized thinker. Learner for life.
Above all, a keen observer with a sharp eye for inconsistencies and inefficiencies.

Professional Experience

(2025-current) Quantitative Systematic Trader, Options Trading, Susquehanna, Sydney office

Education

(2019-2025) PhD in Computer Science, University of Waterloo, Canada

(2015-2019) BSc in Mathematics, The Chinese University of Hong Kong (First Class Honors), Hong Kong

(2009-2015) La Salle College, Hong Kong

Analytical Background

Quantitative Research

- Main duty at Susquehanna: **improving systematic execution for APAC Options Trading**
- Skill sets: study design, backtesting and validation, systems design, data engineering and manipulation
- Foundation knowledge: probability and statistics, optimization, machine learning, AI

Computer Science Research

- PhD research concentration: spectral graph theory
- Research involves randomized algorithms, graph theory, convex optimization, etc.
- Three papers accepted to top conferences

Mathematics

- Rigorous undergraduate curriculum in pure mathematics with a few applied mathematics courses
- **Sharp and tenacious problem solver** from participation in math competitions

Programming Background

Competitive Programming

- Active 2011-2021, main language **C++**
- IOI (2013, 2014, 2015), ACM-ICPC World Finals (2016, 2017), Google Code Jam (top 100 three times)
- Codeforces: alex20030190 (rating: 2718)

Scientific Programming

- **MATLAB**, **Python, C++** for running experiments
- **LaTeX** for writing up results and research papers

Front-end and Back-end Programming (pre-LLM)

- Trivia quiz web app using **HTML/JavaScript/CSS**
- Computer graphics course assignments using **OpenGL**
- User management (in progress) with **PostgreSQL** and **Express.js**
- Programming homework grader, with **Bash**, **Python** and **C++**

Products

Through The Ages (unofficial) Trivia Quiz

- Play through a Mario World-style map, generated randomly from 80 history topics and 1000 challenging questions spanning millennia, and with a meticulously calibrated difficulty gradient

Personal Life Dashboard

- A private, desktop-only dashboard application that brings together your planner, journal, time log, finances and more, carefully designed to make it easier and less stressful to keep life organized

Other Activities

Hong Kong Olympiad in Informatics

- Authorship of 80+ OI problems for the selection and training of IOI candidates for Hong Kong
- Development, verification, and implementation of solutions
- Design and teaching of algorithms class

Teaching in Mathematics and Computer Science

- 9 years of experience
- Explanation of difficult concepts through simple cases and examples

Other Awards and Honors

David R. Cheriton Graduate Scholarship (2023-24)
Go-bell Scholarship (2019-21)
Dean's Honors List (2015-18)
Simon Marais Mathematics Competition, 2/161 and 3/268 (2017, 2018)
Professor Charles K. Kao Research Exchange Scholarship (2018)
International Mathematics Olympiad, Honorable Mention (2015)
Hang Lung Mathematics Awards, Honorable Mention (2014)

Hobbies

Puzzles, board games, writing, choir singing, piano

Languages

English, Cantonese, Mandarin Chinese (intermediate), French (B1+), Japanese (beginner)