Tristan Chaang

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Education

Massachusetts Institute of Technology, Cambridge, MA
- Candidate for Bachelor of Science in Electrical Engineering and Computer Science
- Candidate for Bachelor of Science in Mathematics
- Candidate for a minor in Physics
- Relevant Coursework: Algorithms, Machine Learning, Electronics, Analysis, Abstract Algebra, Quantum Physics, Linguistics

September 2027
GPA (N/A)
(Freshman)

Sunway College, Kuala Lumpur, Malaysia
- Valedictorian, "Top in the World" and "Best Across Four Subjects" Award
- Cambridge GCE A-Levels: 4 A*   SAT: 1550   IELTS: 8
- Coursework: Mathematics, Further Mathematics, Physics, Economics

December 2022

Experience

UROP, Department of Earth, Atmospheric, and Planetary Sciences, MIT
GPS/GNSS Jupyter Notebook Interface for Time Series Analysis
- Develop a Jupyter Notebook that allows users to utilize time position series data
- Integrate data from various GPS organizations into a user-friendly interface for easier access
- Outline patterns and correlations from time series data to understand changes of Earth's surface

Spring 2024

Undergraduate Teaching Assistant (UTA), Department of Physics, MIT
UTA for 8.011 (Physics I / Classical Mechanics)
- Help students during group activities
- Grade problem sets on a weekly basis

Spring 2024

Undergraduate Research Opportunities Program (UROP), Department of Mathematics, MIT
Investigating the Motion of Pilot-Wave Walkers in a Circular Corral
- Study the behavior of droplets bouncing on a vibrating oil bath
- Demonstrate the consistency of pilot-wave dynamics with quantum mechanics
- Use MATLAB to model droplet dynamics and compare with experimental results

Winter 2024

Youth Stem Cup 2023, Malaysia
Head of Problem Selection Committee (PSC)
- Organize the first ever student-led national science Olympiad in Malaysia
- Lead the PSC to: Invite problem setters, produce the exam paper, cross-check validity etc.
- Successfully run the physical event with ~ 1200 participants from all over the country

Summer 2023

IMO Committee Malaysia, Malaysia
Trainer and Problem Selection Committee Member
- Train students in the IMO Selection Camp of Malaysia
- Write handouts and set problems for camp tests and IMO shortlist proposals

2021-2023

Academic Department, Kuen Cheng High School, Malaysia
Math Team Trainer, Math Presenter, Peer Learning Program Volunteer
- Trained and led the school team to win national first places in multiple large-scale contests
- Give talks and interactive presentations to foster mathematical interest
- Help students in academic need in math, physics and chemistry to fulfil graduation requirement

2018-2023

Activities & Extracurriculars

Swimming Club, Sunway College, Malaysia   2021-2023
- Help the committee run pool activities and teach beginners breaststroke and freestyle

Science Week Opening Ceremony, Kuen Cheng High School, Malaysia   2019
- Plan and execute a large-scale performance for the annual science week
- Successfully performed a huge elephant toothpaste demonstration

Awards & Accomplishments

William Lowell Putnam Mathematical Competition by MAA   2023-2024
- Honorable Mention (Top 100)

International Mathematical Olympiad   2018-2022
- Bronze Medals (2020, 2022) and Honorable Mentions (2018, 2019, 2021)

Malaysian Physics, Computational Linguistics, and Economics Olympiads   2020-2022
- Silver and Bronze Medals

Chen Jing-Run Cup Math Contest by Xiamen University Malaysia   2017-2020
- National Champion for 4 consecutive years

Skills & Interests

Languages: Fluency in English, Mandarin Chinese, Cantonese and Malay

Software: Familiarity with Python, C++, LaTeX, MATLAB, Mathematica, Adobe (Ps, Pr, Ae, Ai)

Books: "Techniques for High School Mathematics Contests" (on Google Books)

Interests: Abstract Algebra, Topology, Quantum Physics, AI, Programming, Linguistics