Tianqi Feng

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Education

The University of Melbourne Mar 2020 — Nov 2024

Master of Science in Mathematics and Statistics (Pure Mathematics) — WAM: 93.9

- Master's Thesis: Split Polynomials and the Sullivan Conjecture. Supervised by Diarmuid Crowley

Bachelor of Science in Mathematics and Statistics (Statistics/Stochastic Processes) — WAM: 95.6

Diploma in Languages (Japanese) — WAM: 85.3 (WAM = Weighted Average Mark)

Monash University Feb 2019 — Dec 2019

Monash University Extension Program

Scotch College Feb 2014 — Dec 2019

Dux of 2019 — ATAR: 99.95 (ATAR = Australian Tertiary Admission Rank)

Seminar Participation

Geometric Topology Reading Group 2024

Co-organiser and speaker

- Topics: Topological K-theory, Bott Periodicity, Poincaré Duality

Awards

Daniel Curdie Scholarship 2023

The University of Melbourne

E.R. Love Prize 2023

The University of Melbourne

Dean's Honours List — Bachelor of Science 2020 & 2021 & 2022

The University of Melbourne

John Macfarland Exhibition 2021

The University of Melbourne

Melbourne Chancellor's Scholarship 2020

The University of Melbourne

Dux of 2019 2019

Scotch College

Premier's VCE Awards 2019 & 2020

Mathematical Methods (2019), Top All-Round VCE High Achiever (2020)

Teaching Experience

Private Tutoring Feb 2020 — Present

VCE subjects, individual tutoring online and face-to-face

Languages

English	Mandarin Chinese	Japanese	Latin
Native	*Native*	*Proficient*	*Familiar*

Programming Experience

C, C++, Rust, Haskell, Python, TEX & LATEX, JavaScript (familiar)

Projects

Monte Carlo Path Tracer – CUDA/C++

GPU based path tracer implementing the Monte Carlo algorithm to simulate light transport.
Supports diffuse and specular reflection/transmittance, translucent materials, and multiple importance sampling.

Image Decomposition using Colour Unmixing – Python

Implementation of colour unmixing algorithm that decomposes images into monochromatic layers.
Based on 10.1145/3429341.3429354 and 10.1145/3072959.3002176