Cheuk Fung (Joshua) Lau

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Education

University of Oxford — **United Kingdom**
DPhil in Mathematics — *2025–Current*
Supevisor: James Maynard
Research Interests: Analytic Number Theory, in particular applying sieve methods and automorphic forms to problems relating to the distribution of prime numbers.

University of Oxford — **United Kingdom**
MMath in Mathematics — *2021–2025*

Wa Ying College — **Hong Kong**
Hong Kong Diploma of Secondary Education (HKDSE) — *2015–2021*

Preprints

[1] Cheuk Fung Lau. Residue class patterns of consecutive primes, 2024.

[2] Cheuk Fung Lau. Simultaneously small fractional parts of polynomials, 2024.

[3] Cheuk Fung Lau. Smoothed shifted convolutions of generalised divisor functions, 2025.

[4] Cheuk Fung Lau. On the number of prime factors of consecutive integers, 2026.

Funding, Scholarships and Awards

Finalist's Scholarship Award — **United Kingdom**
University College, Oxford — *July 2025*

Oxford-Croucher Scholarship — **United Kingdom & Hong Kong**
University of Oxford & Croucher Foundation — *2025–2028*

Gibbs Prize for Best Mathematical Dissertation — **United Kingdom**
Mathematical Institute, Oxford — *July 2025*

Scholarship Award — **United Kingdom**
University College, Oxford — *October 2024*

Scholarship Award — **United Kingdom**
University College, Oxford — *January 2024*

Exhibition Award — **United Kingdom**
University College, Oxford — *December 2022*

Hong Kong Scholarship for Excellence Scheme — **Hong Kong**
Education Bureau — *2021–2025*

Undergraduate Research Projects

Part C Dissertation — **United Kingdom**
University of Oxford — *2024–2025*
Title: Applications of Automorphic Forms in Analytic Number Theory
Supervisors: Jori Merikoski and Lasse Grimmelt

Summer Research — **United Kingdom**
University of Oxford — *Summer 2024*
Title: Distribution of Prime Gaps
Supervisor: Jori Merikoski

Part B Extended Essay — **United Kingdom**
University of Oxford — *2023–2024*
Title: Equidistribution Estimates and Fractional Parts of Polynomials
Supervisor: James Maynard

Summer Project — **United Kingdom**
University of Oxford — *Summer 2023*
Title: Geometric Methods for Hyperbolic PDEs
Supervisor: Qian Wang

Talks, Teaching and Mentorship

Marker — **United Kingdom**
University of Oxford — *Hilary 2026*
Course: Part C Additive Number Theory

Junior Number Theory Seminar — **United Kingdom**
University of Oxford — *December 2025*
Title: Shifted Convolutions of Generalised Divisor Functions

Teaching Assistant — **Hong Kong**
Chinese University of Hong Kong — *August 2023, 2024*
Course: Number Theory and Cryptography (EPYMT)

Mathematical Olympiad Instructor — **Hong Kong**
Wa Ying College — *September 2022*

Student Mentor — **Hong Kong**
Access Abroad — *2022–2023*