Thang Pang Ern

📍 Singapore ✉ therayagrowtopia@gmail.com in Thang Pang Ern ⭘ TheRayaGT

Education

BSc.	**National University of Singapore**	Aug 2024 -

▷ Pure Mathematics

▷ Honours (Highest Distinction)

▷ **Coursework:** Discrete Mathematics, Calculus, Single and Multivariable Calculus, Linear Algebra, Real Analysis, Numerical Analysis, Probability Theory, Complex Analysis

BSc.	**EPFL — Swiss Federal Technology Institute of Lausanne**	Sept 2026-Jan 2027

▷ Exchange student

▷ **Coursework:** Non-linear Programming, Stochastic Processes, Algebraic Geometry, Linear Optimisation

A-Level	**Nanyang Junior College**	Feb 2020 - Dec 2021

▷ 88/90 rank points, 6 distinctions

▷ **Coursework:** H2 Mathematics, H2 Further Mathematics, H3 Mathematics

Experience

Algorithm Engineer	Oct 2025-

▷ Working on knee biomechanics problems

Teaching Assistant	Jul 2025-Dec 2025

▷ Teaching Assistant for MA2001 Linear Algebra I as part of the Undergraduate Teaching Opportunities Programme (UTOP)

▷ Supervised by Associate Prof. Ng Kah Loon and Assistant Prof. Charmaine Sia

▷ Facilitated consultation sessions

▷ Prepared comprehensive written solutions and video explanations to tutorial questions and responded promptly to students' queries

NUS Mathematics Society (President)	May 2025-May 2026

▷ Oversaw the running of the NUS Mathematics Society and its Cubing subcommittee

▷ Collaborated with the NUS Statistics and Data Science Society and the NUS Physics Society

▷ Initiated a film screening session 'In Pursuit of Mathematics'

▷ Initiated a series of professor sharing sessions, a platform where professors from the Department of Mathematics share their research interests and personal insights with students

▷ Advisor for the NUS Mathematics and Statistics Orientation Camp (MSOC) 2026

NUS Mathematics Society (Project Director)	Aug 2024-May 2025

▷ Organised a faculty-wide Mathematics competition titled Problemathic 2025

▷ Co-organised a faculty-wide puzzle competition titled Sudoku Contest 2025

▷ Secured speakers for a Mathematics senior-junior sharing session where senior students

shared insights on research, careers, and graduate studies

Mathematics Tutor — Feb 2024-Jun 2024

   ▷ Taught Mathematics: Analysis and Approaches (AA), Cambridge International AS & A Level Mathematics and Further Mathematics, Pearson Edexcel A Level Further Mathematics and STEP (Sixth Term Examination Paper)

Publications and Preprints

A Review of the Duffin-Schaeffer Conjecture and its Applications — Jul 2025

Joint with Loh Wei Xuan Ryan

Weyl Sums and its Applications — Jul 2025

Undergraduate Research Opportunities Programmes in Science (UROPS)

Mentored by Associate Prof. Yang Lei

On the Asymptotic Density of a GCD-based Map — Jan 2025

With Malcolm Tan Jun Xi

https://arxiv.org/abs/2506.19812 ↗

A Proof of Ramanujan's Classic π Formula — Jan 2025

Joint with Devandhira Wijaya Wangsa

https://arxiv.org/abs/2411.15803 ↗

Finding Squares in a Product of Squares — Nov 2024

https://arxiv.org/abs/2411.00012 ↗

Conferences and Seminars

20th MME Staff and Graduate Student Colloquium, National Institute of Education (NIE) — Nov 2025

19th MME Staff and Graduate Student Colloquium, National Institute of Education (NIE) — Apr 2025

18th MME Staff and Graduate Student Colloquium, National Institute of Education (NIE) — Nov 2024

p-adic Geometry, Institute of Mathematical Sciences (IMS) — Nov 2024

Ramanujan: A Century of Inspiration, Nanyang Technological University (NTU) — Sept 2024

Computational Aspects of Thin Groups, Institute of Mathematical Sciences (IMS) — Jun 2024

17th MME Staff and Graduate Student Colloquium, National Institute of Education (NIE) — Apr 2024

Talks

The Life and Legacy of Srinivasa Ramanujan (Slides) ↗ — Oct 2025

   ▷ Part of a series of undergraduate Mathematics seminars

The Art and Analysis of Assumptions (Slides) ↗ — Jul 2025

   ▷ A nice mathematical interpretation of the infinite chocolate bar trick

   ▷ Part of the Future Generations of Scientists (FGS) Camp 2025

The Prime Number Theorem (Slides) ↗ — Mar 2025

    ▷ An analysis of a classic result in Analytic Number Theory

    ▷ Part of a series of undergraduate Mathematics seminars

Bridge Crossing (Slides) ☒   Aug 2024

    ▷ An introduction to logic puzzles, with emphasis on the bridge and torch problem

    ▷ Part of the Future Generations of Scientists (FGS) Camp 2024

Simple yet Complicated Numbers (Slides) ☒   Aug 2023

    ▷ The significance of prime numbers and its connection with the Riemann hypothesis

    ▷ Part of the Future Generations of Scientists (FGS) Camp 2023

Technologies

Languages: Python, Java, R, C, HTML, CSS, MATLAB, LaTeX, Mathematica

Technologies: Microsoft Office, VEGAS Pro, Premiere Pro, After Effects, Illustrator, Photoshop, Lightroom