

Thang Pang Ern

📍 Singapore

✉️ therayagrowthopia@gmail.com

👤 Thang Pang Ern

👤 TheRayaGT

Education

BSc.	National University of Singapore	Aug 2024 -
	<ul style="list-style-type: none">▷ 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
	<ul style="list-style-type: none">▷ Exchange student▷ Coursework: Non-linear Programming, Stochastic Processes, Algebraic Geometry, Linear Optimisation	
A-Level	Nanyang Junior College	Feb 2020 - Dec 2021
	<ul style="list-style-type: none">▷ 88/90 rank points, 6 distinctions▷ Coursework: H2 Mathematics, H2 Further Mathematics, H3 Mathematics	

Experience

Algorithm Engineer	Oct 2025-
<ul style="list-style-type: none">▷ Working on knee biomechanics problems	
Teaching Assistant	Jul 2025-Dec 2025
<ul style="list-style-type: none">▷ 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
<ul style="list-style-type: none">▷ 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
<ul style="list-style-type: none">▷ Organised a faculty-wide Mathematics competition titled Problematic 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

Nov 2025

19th MME Staff and Graduate Student Colloquium

Apr 2025

18th MME Staff and Graduate Student Colloquium

Nov 2024

p -adic Geometry

Nov 2024

Ramanujan: A Century of Inspiration

Sept 2024

Computational Aspects of Thin Groups

Jun 2024

17th MME Staff and Graduate Student Colloquium

Apr 2024

Talks

The Life and Legacy of Srinivasa Ramanujan

Oct 2025

- ▷ Part of a series of undergraduate Mathematics seminars

The Art and Analysis of Assumptions

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

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, L^AT_EX, Mathematica

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

Contributions to the Online Encyclopedia of Integer Sequences (OEIS)

A342316: Decimal expansion of $\frac{\pi}{2} - \log 2$. Contributed the integral representation

Feb 2026

$$\int_1^{\infty} \log \left(1 + \frac{1}{x^2} \right) dx.$$

<https://oeis.org/A342316>

A392834: Time taken to get n people from one side of a bridge to the other where (a) the only flashlight must be carried when crossing; (b) at most three people may cross at the same time; (c) a group crosses at the speed of the slowest member; and (d) the k^{th} person requires k seconds to cross the bridge.

Jan 2026

With Gerard Sayson

<https://oeis.org/A392834>

A392835: Number of ordered pairs (i, j) with $1 \leq i, j \leq n$ such that $\gcd(i + j, ij) = \gcd(i, j)$

Jan 2026

With Loh Wei Xuan Ryan and Malcolm Tan Jun Xi

<https://oeis.org/A392835>