

Carlo Francisco “Paco” E. Adajar

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Research Interests

Number theory, especially analytic and elementary. Currently studying questions about the distribution of additive and multiplicative arithmetic functions.

Education

University of Georgia

Ph.D. Mathematics January 2021–May 2026
Advisor: Paul Pollack
Dissertation: *Three Problems In Analytic And Algebraic Number Theory*

University of the Philippines Diliman

M.S. Mathematics June 2013–December 2020
July 2016
Advisor: Richell O. Celeste
Thesis: *On odd near-perfect and deficient-perfect numbers with k distinct prime divisors*

Ateneo de Manila University

B.S. Applied Mathematics, Major in Mathematical Finance March 2013

Work Experience and Positions Held

University of Georgia

Graduate Teaching Assistant January 2021–May 2026

Ross Mathematics Foundation

Counselor, Ross Mathematics Program 2023, 2024, 2025

Mathematical Society of the Philippines

Test Development Committee, Philippine Mathematical Olympiad 2016–2025
Observer B, Philippine Team to the International Mathematical Olympiad 2018
Deputy Team Leader, Philippine Team to the International Mathematical Olympiad 2020

University of the Philippines Diliman

Lecturer, Institute of Mathematics August 2020–December 2020
Instructor, Institute of Mathematics August 2016–July 2020

PAREF Southridge School

Consultant, Mathematics Department November 2013–March 2015

Mathematics Trainers’ Guild of the Philippines

Trainer, Mathematical Olympiad Summer Training Program April 2012–May 2012

Ateneo de Manila High School

Student Trainer, Department of Mathematics August 2011–January 2012

Ateneo de Manila Grade School

Student Trainer, Department of Mathematics August 2010–January 2011

Teaching Experience

University of Georgia

2021–2026
Math 1113: Precalculus Fall 2021
Math 1113: Precalculus ($\times 2$) Spring 2022
Math 2250: Calculus I Fall 2022
Math 2250: Calculus I Spring 2023
Math 2250: Calculus I Fall 2023
Math 1113: Precalculus ($\times 2$) Spring 2024
Math 2250: Calculus I Fall 2024
Math 1113: Precalculus ($\times 2$) Spring 2025
Math 1113: Precalculus ($\times 2$) Fall 2025
Math 2250: Calculus I Spring 2026

David A. Galewski Outstanding Teaching Award 2024

UGA Center for Teaching and Learning Outstanding Teaching Assistant Award 2024

University of the Philippines Diliman

	2016–2020
Math 17: Algebra and Trigonometry ($\times 3$) (discussion class)	1st Semester 2016-2017
Math 53: Elementary Analysis I ($\times 2$) (discussion class)	1st Semester 2016-2017
Math 100: Introduction to Calculus (discussion class)	2nd Semester 2016-2017
Math 53: Elementary Analysis I ($\times 2$) (discussion class)	2nd Semester 2016-2017
Math 54: Elementary Analysis II	Midyear 2017
Math 17: Algebra and Trigonometry (discussion class)	1st Semester 2017-2018
Math 54: Elementary Analysis II ($\times 2$) (discussion class)	1st Semester 2017-2018
Math 53: Elementary Analysis I ($\times 3$) (discussion class)	2nd Semester 2017-2018
Math 21: Elementary Analysis I ($\times 2$) (discussion class)	1st Semester 2018-2019
Math 54: Elementary Analysis II ($\times 2$) (discussion class)	1st Semester 2018-2019
Math 22: Elementary Analysis II ($\times 4$) (discussion class)	2nd Semester 2018-2019
Math 55: Elementary Analysis III (taught for 1/3 of the semester)	2nd Semester 2018-2019
Math 100: Introduction to Calculus	Midyear 2019
Math 22: Elementary Analysis II	Midyear 2019
Math 23: Elementary Analysis III (discussion class)	1st Semester 2019-2020
Math 30: Intermediate Analysis and Applications	1st Semester 2019-2020
Math 54: Elementary Analysis II	1st Semester 2019-2020
Math 21: Elementary Analysis I	1st Semester 2020-2021
Math 23: Elementary Analysis III	1st Semester 2020-2021

Papers

Orders in the Euclidean court. (*with K. J. McGown, P. Pollack, and E. Treviño*)
Submitted.

Extensions of the Furstenberg-Sárközy theorem via the arithmetic level- d inequality (*with R. Agrawal, M. R. Choudhuri, C. Y. Chuah, S. Fan, S. Hegde, A. Lott, K. Nandakumar, and N. R. Pongandla*)
Available on the arXiv as [arXiv:2605.16216](https://arxiv.org/abs/2605.16216)

Books

Institute of Mathematics, University of the Philippines Diliman. *Mathematics 21: Elementary Analysis I Course Module*. (2018) (editor)

E. P. Bautista and I. J. L. Garces. “Mathematical Excursions: A Problem-Solving Primer for Trainers and Olympiad Enthusiasts.” C&E Publishing. (2010) (proofreader)

Selected Talks and Presentations

Euclid’s algorithm in orders in number fields Graduate Student Seminar, UGA	February 2025
On the distribution of $v_p(\sigma(n))$ 2025 Combinatorial and Analytic Number Theory, CUNY Graduate Center	May 2025
On the distribution of $v_p(\sigma(n))$ 2025 INTEGERS Conference	May 2025
On the distribution of $v_p(\sigma(n))$ AMS Spring Eastern Sectional Meeting	April 2025
Counting monogenic biquadratic fields Graduate Student Seminar, UGA	February 2025
Unit Fraction Representations Over \mathbf{Q} and $\mathbf{F}_q(t)$ UGA Mathematics Club, UGA	September 2024
Ehrhart theory Graduate Student Seminar, UGA	September 2023
Denser Egyptian fractions Graduate Student Seminar, UGA	September 2022
On statistical properties of prime-divisor counting functions Mock AMS, UGA	August 2022

The worst way to find the area of a circle Graduate Student Seminar, UGA	March 2022
Perfectly imperfect: on odd near-perfect, deficient-perfect, and spoof-perfect numbers Graduate Student Seminar, UGA	February 2021
On odd near-perfect and deficient-perfect numbers ZetaValue2019, Wako, Saitama, Japan	March 2019
Perfect, near-perfect, and deficient-perfect numbers 2016 MSP-NCR First Lecture Series	September 2016
On odd near-perfect and deficient-perfect numbers with k distinct prime divisors Poster presented at: 2016 Asian Mathematical Conference	July 2016
On odd near-perfect and deficient-perfect numbers with k distinct prime divisors 2016 MSP Annual Convention	May 2016

Conferences and Research Schools Attended

- 2025 Combinatorial and Analytic Number Theory
CUNY Graduate Center, New York, NY
May 20–23, 2025
- INTEGERS 2025
University of Georgia, Athens, GA
May 14–17, 2025
- 2025 AMS Spring Eastern Sectional Meeting
University of Connecticut Convention Center, Hartford, CT
April 5–6, 2025
- PANTS XXXVII
University of Georgia, Athens, GA
December 9–10, 2023
- PANTS XXXVI
Clemson University, Clemson, SC
October 21–22, 2023
- INTEGERS 2023
University of Georgia, Athens, GA
May 17–20, 2023
- CTNT 2022
University of Connecticut, Storrs, CT
June 6–12, 2022
- 100 Years of Mock Theta Functions: New Directions in Partitions, Modular Forms, and Mock Modular Forms
Vanderbilt University, Nashville, TN
May 22–23, 2022
- CIMPA School on Group Actions in Arithmetic and Geometry
Universitas Gadjah Mada, Yogyakarta, Indonesia
February 17–28, 2020
- Value Distribution of Zeta and L-Functions and Related Topics
Riken, Wako, Saitama, Japan
March 22–26, 2019
- VIASM Summer School in Number Theory
Vietnam Institute for Advanced Study in Mathematics, Hanoi, Vietnam
June 18–24, 2018
- SEAMS School 2017 Manila: Topics on Elliptic Curves
University of the Philippines Diliman, Quezon City, Philippines
July 16–25, 2017
- 2016 Asian Mathematical Conference
Bali, Indonesia
July 25–29, 2016

2016 MSP Annual Convention
Cebu, Philippines
May 30–31, 2016

Mentoring

Thesis (co-)adviser (at University of the Philippines Diliman)

Allan James Acong (*with J. T. Dimabayao*) (B.S. Mathematics, 2019)
Mark Joshua Bricenio (*with J. T. Dimabayao*) (B.S. Mathematics, 2019)

Undergraduate mentoring (through the UGA Department of Mathematics Directed Reading Program)

Nicholas Follo (Fall 2021)
Cooper Clickner (Spring 2022)
Maximilian Bennett (Summer and Fall 2022)
Abbie Ottosen (Spring and Fall 2023)
Oliver Sima (Fall 2023)
Alyssa Lovern (Spring 2024)
Nayeong Kweon (Spring 2024)
Stella Sweeney (Fall 2024)
Marley Walter (Fall 2024)
Desmond Yoon (Spring 2025)
Harini Senthil (Fall 2025)
Cash Roberson (Spring 2026)

Service and Extension

Co-organizer and question writer for the UGA High School Math Tournament from 2021–2025.

Co-organizer of the Mathematics Directed Reading Program (DRP) at UGA from Summer 2022–Spring 2026.

Volunteer at the Math Circle at the Athens-Clarke Public Library from Spring 2025–Spring 2026.

Peer mentor for first-year graduate students at UGA from 2022–2024.

Secretary of the AMS Graduate Student Chapter at UGA from 2021–2022.

Co-organized the SEAMS School Manila: Topics on Elliptic Curves held at the University of the Philippines Diliman in 2017.