

# Dongho Tommy Kim

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## EDUCATION

### University of California, Berkeley

Berkeley, CA

Aug 2021 - Dec 2025 (Expected)

GPA: 3.77/4.00

• **B.A. in Mathematics** | *College of Letters and Sciences*

Math Major GPA: 3.80/4.00

• **B.A. in Computer Science** | *College of Computing, Data Science, and Society*

## RESEARCH

### Independent Research

May 2025 - Present

- Conducted independent mathematical research on a problem proposed from Professor Hùng Việt Chu
- Studied the properties of Schreier Sets and their counts, specifically for the second-order Schreier family

### Student Researcher | *Polymath Jr. REU*

Jun 2024 - Aug 2024

- Conducted mathematical research under the supervision of Professor Hùng Việt Chu
- Met weekly with mentors to discuss possible approaches and progresses on solutions to Diophantine equations involving Fibonacci numbers

### Research Assistant

Jun 2020 - Aug 2020

- Conducted mathematical research under the supervision of Professor Chih-Wen Weng
- Met bi-weekly to discuss research in Hamiltonian graphs and triangulated graphs

## PAPERS AND PREPRINTS

1. A Pair of Diophantine Equations Involving the Fibonacci Numbers (with X. Chen, H. V. Chu, F. K. Kesumajana, L. Li, S. J. Miller, J. Yang, and C. Yao). *Fibonacci Quart.* 63 (2025), no.3, 542–553 [\[pdf\]](#), [\[journal\]](#)

## DIRECTED READING

### Upper-Level Number Theory

Spring 2025

- Studied  $p$ -adic number theory based on Gouvêa's  *$p$ -adic Numbers*
- Participated in biweekly discussions with Dr. Zeyu Liu

## INDEPENDENT STUDY

### Mentee | *Math Directed Reading Program*

Spring 2025 – Present

- Studied *A First Course in Modular Forms* by Fred Diamond and Jerry Shurman
- Participated in weekly hour discussions with a graduate student mentor, Seewoo Lee

### Participant | *Preliminary Arizona Winter School*

Fall 2025

- Studied under the supervision of Thomas Bouchet and Professor Juanita Duque-Rosero, exploring the analysis and implementation of algorithms in number theory

### Mentee | *Math Directed Reading Program*

Fall 2024

- Studied *Representation Theory: A First Course* by William Fulton and Joe Harris
- Participated in weekly hour discussions with a graduate student mentor, Connor Halleck-Dubé
- Presented in semester-end conference. [pdf](#)

### Participant | *Preliminary Arizona Winter School*

Fall 2024

- Studied under the supervision of Thomas Browning and Professor Catherine Hsu, exploring the theory of local fields

### Mentee | *Math Directed Reading Program*

Fall 2023

- Studied *Graph Theory and Additive Combinatorics* by Yufei Zhao
- Participated in weekly hour discussions with a graduate student mentor, Victor Ginsburg

## TEACHING AND MENTORING

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<b>Reader</b>   <i>Department of Mathematics, Math 185 (Introduction to Complex Analysis)</i>	Fall 2025
• Graded student assignments while providing feedback on problem sets	
<b>Reader</b>   <i>Department of Mathematics, Math 113 (Introduction to Abstract Algebra)</i>	Spring 2025
• Graded student assignments while providing feedback on problem sets	
<b>Reader</b>   <i>Department of Mathematics, Math 128A (Numerical Analysis)</i>	Fall 2024
• Graded student assignments and exams while providing feedback on problem sets	
<b>Mentor</b>   <i>Math and Physical Sciences (MPS) Scholars</i>	Fall 2024 - Present
• Currently mentoring two students, meeting multiple times per month to support their transition into college life	
• Provided guidance on academic and campus resources and offered personalized feedback	
<b>Academic Intern</b>   <i>Computer Science, Data Science Course Staff</i>	Spring 2022 - Spring 2023
• Helped Teaching Assistant lead a group of 30 students in lab sections	
• Assisted and led discussions in data structures, computer programs, and foundations of data science	

## SELECTED COURSEWORK

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<b>MATH 254A - Graduate Algebraic Number Theory</b>	Fall 2025
• Graduate-level algebraic number theory course using Serre's <i>Local Fields</i> and Neukirch's <i>Algebraic Number Theory</i>	
<b>MATH 196 - Honors Thesis</b>	Fall 2025
• Wrote an expository paper, under the guidance of Dr. Zeyu Liu, discussing the modularity theorem	
<b>MATH 143 - Elementary Algebraic Geometry</b>	Spring 2025
• Upper-level algebraic geometry course using Fulton's <i>Algebraic Curves</i> with Professor Hannah Larson	
<b>MATH 250B - Graduate Commutative Algebra</b>	Spring 2025
• Graduate-level commutative algebra course using Matsumura's <i>Commutative Ring Theory</i> with Professor Peter Haine	
<b>MATH 274 - Topics in Algebra</b>	Fall 2024
• Graduate topics course in the combinatorics of Coxeter groups with Professor Christian Gaetz	
<b>MATH 250A - Graduate Algebra</b>	Fall 2024
• Graduate-level abstract algebra course using Lang's <i>Algebra</i> with Professor Richard Borcherds	
<b>MATH H185 - Honors Introduction to Complex Analysis</b>	Spring 2024
• Honors-level complex analysis course with Professor Tony Feng	
<b>MATH 115 - Introduction to Number Theory</b>	Fall 2023
• Introductory number theory course using Ireland and Rosen's <i>A Classical Introduction to Modern Number Theory</i> with Professor Owen Barrett	

## CONFERENCES

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<b>Combinatorial and Additive Number Theory</b>	May 2025
<b>Joint Mathematics Meeting</b>	Jan 2025
<b>43rd Bay Area Discrete Math Day</b>	Dec 2024
<b>Modern Math Workshop</b>	Oct 2024

## RELEVANT SKILLS

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**Programming Languages:** Python, Java, MATLAB  
**Software:** VS Code, IntelliJ IDEA,  $\text{\LaTeX}$   
**Languages:** Korean (native), English (fluent), Mandarin (fluent)  
**Libraries:** pandas, NumPy, Matplotlib