




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

- Conducting independent mathematical research in additive number theory under the guidance of Professor Hùng Việt Chu
- Studying the properties of Schreier sets, with a focus on the counts of the second-order Schreier sets, extending the work *The Fibonacci Sequence and Schreier-Zeckendorf Sets*

Student Researcher | Polymath Jr. REU

Jun 2024 - Aug 2024

- Conducted mathematical research in Diophantine equations under the supervision of Professor Hùng Việt Chu
- Studied the unique nonnegative solutions to a pair of Diophantine equations with varying Fibonacci coefficients, extending the work *Representation of $\frac{1}{2}(F_N - 1)(F_{N+1} - 1)$ and $\frac{1}{2}(F_N - 1)(F_{N+2} - 1)$*
- Designed and implemented programs to identify such solutions
- Met weekly with mentors to explore new approaches and analyze emerging patterns in the data

Research Assistant

Jun 2020 - Aug 2020

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

PAPERS AND PREPRINTS

- 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

Directed Reading Program | Mentor: Seewoo Lee

Spring 2025 – Present

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

Upper-Level Number Theory | Supervisor: Dr. Zeyu Liu

Spring 2025

- Studied p -adic number theory based on Fernando Q. Gouvêa's *p -adic Numbers* and Alain M. Robert's *A Course in p -adic Analysis*
- Participated in biweekly discussions with Dr. Zeyu Liu

Directed Reading Program | Mentor: Connor Halleck-Dubé

Fall 2024

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

Directed Reading Program | Mentor: Victor Ginsburg

Fall 2023

- Studied *Graph Theory and Additive Combinatorics* by Yufei Zhao
- Participated in weekly discussions with graduate student mentor

INDEPENDENT STUDY

Participant <i>Preliminary Arizona Winter School</i>	Fall 2025
<ul style="list-style-type: none">Studied the analysis and implementation of algorithms in number theory under the guidance of Thomas Bouchet and Professor Juanita Duque-Rosero	
Participant <i>Preliminary Arizona Winter School</i>	Fall 2024
<ul style="list-style-type: none">Studied local fields under the guidance of Thomas Browning and Professor Catherine Hsu	

TEACHING AND MENTORING

Mentor <i>Math and Physical Sciences (MPS) Scholars</i>	Fall 2024 - Present
<ul style="list-style-type: none">Currently meeting biweekly with mentees to review key mathematical concepts and help navigate courseworkLead collaborative discussions on mathematical concepts and problem-solving techniquesProvided guidance on academic and campus resources and offered personalized advice	
Reader <i>Math 185 (Introduction to Complex Analysis)</i>	Fall 2025 - Present
<ul style="list-style-type: none">Graded problem sets while providing feedback	
Reader <i>Math 113 (Introduction to Abstract Algebra)</i>	Spring 2025
<ul style="list-style-type: none">Graded problem sets while providing feedback	
Reader <i>Math 128A (Numerical Analysis)</i>	Fall 2024
<ul style="list-style-type: none">Graded problem sets and exams while providing feedback	
Academic Intern <i>Computer Science, Data Science Course Staff</i>	Spring 2022 - Spring 2023
<ul style="list-style-type: none">Helped Teaching Assistant lead a group of 30 students in lab sectionsAssisted and led discussions in data structures, computer programs, and foundations of data science	

SELECTED COURSEWORK

MATH 254A - Graduate Algebraic Number Theory <i>Prof. Sug Woo Shin</i>	Fall 2025
<ul style="list-style-type: none">Graduate-level algebraic number theory course using Serre's <i>Local Fields</i> and Neukirch's <i>Algebraic Number Theory</i>	
MATH 196 - Honors Thesis <i>Dr. Zeyu Liu</i>	Fall 2025
<ul style="list-style-type: none">Currently writing an expository paper discussing the modularity theorem	
MATH 143 - Elementary Algebraic Geometry <i>Prof. Hannah Larson</i>	Spring 2025
<ul style="list-style-type: none">Upper-level algebraic geometry course using Fulton's <i>Algebraic Curves</i>	
MATH 250B - Graduate Commutative Algebra <i>Prof. Peter Haine</i>	Spring 2025
<ul style="list-style-type: none">Graduate-level commutative algebra course using Matsumura's <i>Commutative Ring Theory</i>	
MATH 274 - Topics in Algebra <i>Prof. Christian Gaetz</i>	Fall 2024
<ul style="list-style-type: none">Graduate topics course in the combinatorics of Coxeter groups	
MATH 250A - Graduate Algebra <i>Prof. Richard Borcherds</i>	Fall 2024
<ul style="list-style-type: none">Graduate-level abstract algebra course using Lang's <i>Algebra</i>	
MATH H185 - Honors Introduction to Complex Analysis <i>Prof. Tony Feng</i>	Spring 2024
<ul style="list-style-type: none">Honors-level complex analysis course	
MATH 115 - Introduction to Number Theory <i>Prof. Owen Barrett</i>	Fall 2023
<ul style="list-style-type: none">Introductory number theory course using Ireland and Rosen's <i>A Classical Introduction to Modern Number Theory</i>	

CONFERENCES

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

RELEVANT SKILLS

Programming Languages: Python, Java, MATLAB, Assembly (x86-64, Z80)	
Software: VS Code, Visual Studio, IntelliJ IDEA, L ^A T _E X	
Languages: Korean (native), English (fluent), Mandarin (fluent)	
Libraries: pandas, NumPy, Matplotlib	