

ALLEN LIN

ADDRESS	Department of Mathematics University of California, Los Angeles Los Angeles, CA 90095		
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WEBSITE	https://math.ucla.edu/~allenlin/		
RESEARCH INTERESTS	Analytic and algebraic number theory; harmonic analysis; Fourier analysis; modular forms and L -functions; Boolean functions; randomized algorithms.		
EDUCATION	University of California, Los Angeles		Los Angeles, CA
	Ph.D. in Mathematics		expected Jun 2031
	Massachusetts Institute of Technology		Cambridge, MA
	S.B. in Mathematics		May 2026
	S.B. in Computer Science and Engineering		May 2026
PUBLICATIONS	Undergraduate advisors: Bjorn Poonen, Michael Sipser		GPA: 5.0/5.0
	Research Papers		
	3. S. Lepsveridze and A. Lin, “Optimal thresholds for monotone non-Boolean functions,” <i>Combin. Probab. Comput.</i> , 1–13, 2026. https://doi.org/10.1017/s0963548326100510 .		
	2. R. Edwin and A. Lin, “The Gauss Circle Problem and Fourier Quasicrystals,” <i>Int. Math. Res. Not. IMRN</i> 2025 (19): 1–32, 2025. https://doi.org/10.1093/imrn/rnaf293 .		
	1. D. Lanphier and A. Lin, “Values of certain Dirichlet series and higher derivative formulas of trigonometric functions,” <i>Int. J. Number Theory</i> 20 (4): 995–1016, 2024. https://doi.org/10.1142/S1793042124500519 .		
TALKS	Preprints		
	1. D. Lanphier and A. Lin, “Counting the Number of Peaks and Descents of Permutations Using Values of Dirichlet-Type Series.”		
	Conferences		
	12. “Modular and Automorphic Forms.” 31 Jan 2025. Directed Reading Program, Department of Mathematics, at the Massachusetts Institute of Technology, Cambridge, MA.		
	11. “The Gauss Circle Problem and Fourier Quasicrystals.” 2 Aug 2024. Summer Program in Undergraduate Research, Department of Mathematics, at the Massachusetts Institute of Technology, Cambridge, MA.		
	10. “Analysis of Boolean Functions.” 3 Feb 2023. Directed Reading Program, Department of Mathematics, at the Massachusetts Institute of Technology, Cambridge, MA.		
	9. “Values of Dirichlet Series.” 1 Apr 2022. Kentucky Section of the Mathematical Association of America Annual Meeting 2022.		
	8. “Properties of Pólya’s Circular Symmetrization.” Kentucky Section of the Mathematical Association of America Annual Meeting 2022.		
	7. “Values of Dirichlet Series.” 25 Feb 2022. 41st Annual Mathematics Symposium at Western Kentucky University, Bowling Green, KY.		

6. “Properties of Pólya’s Circular Symmetrization.” 25 Feb 2022. 41st Annual Mathematics Symposium at Western Kentucky University, Bowling Green, KY.
5. “Make Your Own Fractal.” 25 Feb 2022. 41st Annual Mathematics Symposium at Western Kentucky University, Bowling Green, KY.
4. “Properties of Pólya’s Circular Symmetrization.” 6 Aug 2021. 38th Annual Session of the Research Science Institute at the Massachusetts Institute of Technology.
3. “Values of Dirichlet Series.” 9 Apr 2021. Student Research Conference at Western Kentucky University, Bowling Green, KY.
2. “Values of Dirichlet Series.” 26 Mar 2021. Kentucky Section of the Mathematical Association of America Annual Meeting 2022.
1. “Values of Dirichlet Series.” 20 Feb 2021. 40th Annual Mathematics Symposium at Western Kentucky University, Bowling Green, KY.

AWARDS	Alumni Fellowship , University of California, Los Angeles	2026
	Tau Beta Pi , Massachusetts Institute of Technology	2026
	Associate Advisor Award , Office of the First Year, Massachusetts Institute of Technology	2023
	Community Scholar, Honors with Distinction , Gatton Academy of Mathematics and Science	2022
	Gates Scholar , Bill and Melinda Gates Foundation	2022
	National Merit Scholar , National Merit Scholarship Corporation	2022
	3rd Place Award at the SIAM Session of the 41st Annual Mathematics Symposium , Western Kentucky University	2022
	Jack Kent Cooke College Scholarship Semifinalist , Jack Kent Cooke Foundation	2022
	Research Science Institute Scholar , Research Science Institute, Center for Excellence in Education	2021
	RESEARCH EXPERIENCE	Massachusetts Institute of Technology
Department of Mathematics		
Undergraduate Researcher		Jun 2025–Aug 2025
Proved tight $O(1/\log n)$ bound on the sharp threshold result of monotone symmetric non-Boolean functions with Saba Lepsveridze, improving the previous bound of $O(\log \log n/\log n)$ of Prof. Elchanan Mossel and Prof. Gil Kalai.		
Summer Program in Undergraduate Research (SPUR)		Jun 2024–Aug 2024
Proved upper, lower, and average bounds on the number of points of a Fourier quasicrystal in a ball of radius r with Roni Edwin and Dr. Lior Alon.		
Undergraduate Researcher		Jun 2023–Dec 2023
Studied the bounds and gaps of Weyl sequences under the direction of Alex Ortiz and Prof. Larry Guth.		
Undergraduate Researcher		Jan 2023–May 2023
Studied the arithmeticity of odd zeta values of the Riemann zeta function and algorithms to evaluate infinite series under the direction of Prof. Henry Cohn.		

	Western Kentucky University	
	Department of Mathematics	
	Undergraduate Researcher	Sep 2020–May 2022

Proved closed forms on certain types of Dirichlet series and infinite series, as well as transcendentalty of these values and closed forms of certain combinatorial numbers with Prof. Dominic Lanphier.

Massachusetts Institute of Technology
Department of Department of Mathematics

Research Science Institute Jun 2021–Aug 2021
Reproved the perimeter reduction property of Pólya’s circular symmetrization algorithm using methods from analysis and geometry with Dr. Sarah Tammen.

TEACHING

University of California, Los Angeles
Department of Mathematics

Teaching Assistant, Math 170E: Introduction to Probability and Statistics 1: Probability Fall 2026

Massachusetts Institute of Technology
Department of Mathematics

Teaching Assistant, 18.781: Theory of Numbers Spring 2026
Grader, 18.031: System Functions and the Laplace Transform IAP 2026

Massachusetts Institute of Technology
MIT International Science and Technology Initiatives (MISTI)

Global Teaching Labs Intern, Hong Kong International School Jan 2026

Massachusetts Institute of Technology
Department of Electrical Engineering and Computer Science

Lab Assistant, 6.191: Computation Structures Fall 2025
Lab Assistant, 6.191: Computation Structures Spring 2025

Massachusetts Institute of Technology
Department of Mathematics

Grader, 18.031: System Functions and the Laplace Transform IAP 2025
Grader, 18.901: Introduction to Topology Fall 2024
Grader, 18.901: Introduction to Topology Spring 2024

MENTORSHIP

Massachusetts Institute of Technology
Department of Mathematics

Mentor, Menezes Challenge PRIMES Circle Feb 2026–May 2026
Last Week Teaching Assistant, Research Science Institute Jul 2023–Aug 2023

Symbiotic STEM

Mentor Feb 2023–May 2023

SERVICE AND
OUTREACH

Massachusetts Institute of Technology
Department of Mathematics

Counselor, $\sqrt{\text{mathroots}}$ Jul 2026
Captions Editor, Simons Lecture Series Jun 2023–May 2026

	Massachusetts Institute of Technology Office of the First Year	
	Associate Advisor	Aug 2023–May 2026
	Head Counselor, Discover Math First-Year Pre-Orientation Program	Feb 2025–Aug 2025
	Counselor, Discover Math First-Year Pre-Orientation Program	Jun 2023–Aug 2025

	Massachusetts Institute of Technology Educational Studies Program	
	Subdirector, Spring HSSP 2024	Feb 2024–Apr 2024
	Subdirector, Spark 2024	Feb 2024–Mar 2024
	Subdirector, Splash 2023	Jul 2023–Nov 2023
	Director, Summer HSSP 2023	May 2023–Aug 2023

	Harvard University and Massachusetts Institute of Technology Harvard-MIT Math Tournament	
	Integration Bee Committee	Nov 2023
	Problem-Writing Committee	Sep 2022–May 2023
	Integration Bee Committee	Feb 2023

	Massachusetts Institute of Technology Department of Mathematics	
	Chair, Math Mentorship Program, Undergraduate Math Association	Feb 2023–May 2023
	Chair, Diversity, Inclusion, and Equity Committee, Undergraduate Math Association	Feb 2023–May 2023

	Gatton Academy of Mathematics and Science	
	Peer Tutor	Sep 2020–May 2022

	Western Kentucky University	
	Audience Assistant, Hardin Planetarium	Aug 2020–May 2022
ORGANIZATIONS	Mathematical Reviews , American Mathematical Society	Dec 2025–
	Educational Studies Program , Massachusetts Institute of Technology	Sep 2022–May 2024
	Harvard-MIT Math Tournament , Harvard University and Massachusetts Institute of Technology	Sep 2022–May 2023
	Undergraduate Math Association , Massachusetts Institute of Technology	Sep 2022–May 2023
	Society for Industrial and Applied Mathematics , Western Kentucky University	Sep 2020–May 2022
LICENSES AND CERTIFICATIONS	Wolfram Mathematica Student Certification Level I , Wolfram	2021