

education	2. Massachusetts Institute of Technology, PhD in Mathematics Advisor: Wei Zhang	2019-2024
	1. Princeton University, B.A. Mathematics	2015-2019
research interests	I am interested in arithmetic aspects of the (relative) Langlands program, particularly in the role of Shimura varieties, and applications to the Beilinson–Bloch–Kato conjectures, Euler systems and Iwasawa theory.	
papers	5. First explicit reciprocity law for unitary Friedberg–Jacquet periods in preparation	2023
	4. Spherical functions on symmetric spaces of Friedberg–Jacquet type preprint	2023
	3. Spherical functions of symmetric forms and a conjecture of Hironaka preprint	2023
	2. On Howard’s main conjecture and the Heegner point Kolyvagin system Undergraduate senior thesis, preprint, https://arxiv.org/abs/1908.09197	2019
	1. A proof of Kolyvagin’s conjecture via the BDP main conjecture Undergraduate junior paper, preprint, https://arxiv.org/abs/1909.07835	2019
invited talks	2. MSRI/SLMath: Arithmetic level raising and reciprocity laws	Mar 2023
	1. JMM: On Howard’s MC and the Heegner point Kolyvagin system	Jan 2020
contributed talks	7. Introduction to compactifications of Shimura varieties	Apr 2023
	6. Iwasawa theory of elliptic curves	Nov 2022
	5. Introduction to Iwasawa theory	Nov 2022
	4. Euler system of cyclotomic units	Oct 2022
	3. Examples of Rapoport–Zink spaces	Aug 2021
	2. Formulation of RZ data	Aug 2021
conferences attended	1. p -adic modular forms à la Katz	Feb 2020
	4. AIM Workshop on analytic, arithmetic, and geometric aspects of automorphic forms	January 2024
	3. SLMATH Algebraic Cycles, L-Values, and Euler Systems	Spring 2023
	2. IHES’s Summer School on the Langlands program	July 2022
	1. Arizona Winter School Study group on Automorphic Forms and the Theta Correspondence	Mar 2022
organizing	1. Learning seminar on Euler systems https://math.mit.edu/~muriloz/seminar2022/	Fall 2022

academic awards	7. Frank and Brennie Morgan Prize (hon. mention), AMS/MAA/SIAM	2020
	Awarded for outstanding research in mathematics by an undergraduate	
	6. The Middleton Miller'29 prize	2018
	Awarded for the best independent work in mathematics	
	5. Peter A. Greenberg'77 Memorial Prize	2018
	Awarded for outstanding accomplishments in mathematics	
	4. Putnam examination	2016-2018
	N1 prize (6th-14th) in 2016 and 2018, Honorable mention in 2017	
mentorship	3. Shapiro prize for academic excellence	2017, 2018
	Award for outstanding academic achievement	
	2. The Class of 1861 prize	2017
	Awarded to the sophomore with the best record on the Putnam	
	1. International mathematics olympiad	2014-2015
	Silver medals in 2014 and 2015	
	3. High School Enrichment Program Teacher	2021-Present
	Virtual classes with students from my former high school on undergraduate-level topics in number theory	
teaching	2. MIT Directed Reading Program	Winter 2020
	Analytic Number Theory	
	1. MIT Directed Reading Program	Winter 2020
	Modular Forms and Elliptic Curves	
	8. 18.701 Algebra I	Fall 2023
	7. 18.950 Differential Geometry	Fall 2023
	6. 18.02 Multivariable Calculus	Fall 2022
	5. 18.065 Matrix Methods in Data Analysis & Machine Learning	Spring 2021
	4. 18.701 Algebra I	Fall 2021
	3. 18.700 Linear Algebra	Fall 2021
	2. 18.702 Algebra II	Spring 2020
	1. 18.100A Real Analysis	Fall 2020