

Ravi Fernando

CONTACT INFORMATION	Ravi Fernando c/o Department of Mathematics University of Illinois Urbana-Champaign 214 Harker Hall 1305 W. Green Street Urbana, IL 61801	ravif@illinois.edu (510) 883-3439
RESEARCH INTERESTS	The de Rham-Witt complex and its saturated variant, crystalline cohomology, prismatic cohomology, and other p -adic cohomology theories	
EDUCATION	University of California, Berkeley Ph.D. in Mathematics, May 2023 <ul style="list-style-type: none">• Advisor: Martin Olsson• Dissertation: <i>Saturated de Rham-Witt complexes with unit-root coefficients</i> Stanford University B.S. in Mathematics, June 2014 <ul style="list-style-type: none">• With university distinction• Minor in computer science	
EMPLOYMENT	2023–present: University of Illinois Urbana-Champaign , J. L. Doob Research Assistant Professor.	
PAPERS	<ol style="list-style-type: none">1. Dimensional vanishing of the saturated de Rham–Witt complex. Submitted. Available at https://arxiv.org/abs/2507.22314.2. Saturated de Rham-Witt complexes with unit-root coefficients (Ph.D. thesis). Submitted. Available at https://arxiv.org/abs/2406.02922.3. Restrictions on Weil polynomials of Jacobians of hyperelliptic curves (joint with Edgar Costa, Ravi Donepudi, Valentijn Karemaker, Caleb Springer, and McKenzie West). In <i>Arithmetic geometry, number theory, and computation</i> (Simons Symposia); also available at https://arxiv.org/abs/2002.02067.4. On an Inequality of Dimension-like Invariants for Finite Groups (undergraduate research), available at https://arxiv.org/abs/1502.00360.	
TEACHING AT ILLINOIS	(4×) Fall	Fundamental Mathematics (introduction to proofs) <ul style="list-style-type: none">• Honors lecture in Spring and Fall 2025• Merit lecture (more active learning style) in Spring 2025 2024 Abstract linear algebra
TEACHING AT BERKELEY	Summer Fall Fall (6×) Spring Fall (3×)	2015 Instructor, Calculus II 2017 Instructor, Putnam exam seminar 2021 Teaching assistant, Calculus I Teaching assistant, Calculus II 2023 Teaching assistant, Multivariable calculus 2015 Teaching assistant, Linear algebra and differential equations Teaching assistant, Discrete math

AWARDS AND HONORS	(4×)	UIUC List of Teachers Ranked as Excellent by Their Students <ul style="list-style-type: none"> • Named 4 out of 4 semesters, for 5 out of 6 courses
	2015–16 2017	UC Berkeley Outstanding Graduate Student Instructor award Invited by a student to the TAAP scholars Professors Dinner <ul style="list-style-type: none"> • Scholarship program for low-income, first-generation, and underrepresented students
ACTIVITIES ORGANIZED	2024–25	Illinois algebraic geometry seminar
	Spring 2023	Arithmetic geometry RTG workshop, UC Berkeley
	Spring 2021	Arithmetic geometry RTG workshop (Jennifer Balakrishnan working session), UC Berkeley (online)
	Fall 2020	Berkeley Undergraduate Number Theory Conference (online)
	Spring 2019	UC Berkeley student number theory seminar
	Spring 2018	Arithmetic geometry RTG workshop (Max Lieblich working session), UC Berkeley
	Spring 2016	UC Berkeley student arithmetic geometry seminar
CONFERENCES AND WORKSHOPS ATTENDED	Fall 2025	AMS Fall Central Sectional, Saint Louis University
	Fall 2023	Western Algebraic Geometry Symposium, WUSTL
	Summer 2021	PCMI session on number theory informed by computation (online)
	Spring 2021	Arithmetic geometry RTG workshop, UC Berkeley (online)
	Spring 2020	Arizona Winter School, University of Arizona
	Summer 2019	Explicit methods in arithmetic geometry in characteristic p (AMS MRC), Rhode Island
	Spring 2019	Western Algebraic Geometry Symposium, UC Berkeley
	Spring 2019	Arizona Winter School, University of Arizona
	Summer 2018	Witt vectors, deformations, and absolute geometry, UVM
	Spring 2018	Arithmetic geometry RTG workshop, UC Berkeley
	Spring 2018	Arizona Winter School, University of Arizona
	Spring 2017	Arizona Winter School, University of Arizona
	Summer 2016	Higher Dimensional Algebraic Geometry, University of Utah
	Spring 2015	Western Algebraic Geometry Symposium, UC Davis
OUTREACH	2019– 2018–19	Mathematical advisor, PrimeGrid (distributed computing project) Volunteer, Julia Robinson Mathematics Festival
	2018	Presenter, Celebration of Mind (recreational math festival)
	2017	Graduate assistant, Cornell SPUR (undergraduate research) <ul style="list-style-type: none"> • Generating sequences of finite groups, assisting Keith Dennis
SUMMER WORK EXPERIENCE	2011–12, 2014	Counselor, Ross Mathematics Program
	Spring 2025	Developing software to find arithmetic progressions of primes <ul style="list-style-type: none"> • Informally continued in Fall 2025
INDEPENDENT STUDY ADVISED	Spring 2016	Finite group representations and permutation groups
PUTNAM EXAM	2011	N1 (8th place)
	2013	N2 (23rd place), part of Stanford’s 3rd place team
	2017	Deputy organizer (under Olga Holtz) for Berkeley’s 7th place team; wrote Berkeley’s mock Putnam exam
LANGUAGES		English (native), Spanish (intermediate), French (can read mathematical writing)