

Algebraic Varieties and Their Moduli, Pisa, Italy, May 2015.

Three-Day Workshop in Homotopy Theory: Goodwillie Calculus, Caesaria, Israel, May 2015.

Arizona Winter School, Tucson, March 2015.

Workshop on Fundamental Groups and Periods, IAS, Princeton, October 2014.

Spring School on Classical and p -adic Hodge Theories, Rennes, France, May 2014.

Arizona Winter School: Arithmetic Statistics, Tucson, March 2014.

Hot Topics: Perfectoid Spaces and Applications, MSRI, Berkeley, February 2014.

Joint Mathematics Meetings, Baltimore, January 2014.

Fundamental Groups in Arithmetic and Algebraic Geometry, Pisa, Italy, December 2013.

Cohomology of Arithmetic Groups, Chicago, May 2013.

Arizona Winter School: Modular Forms and Modular Curves, Tucson, March 2013.

Joint Mathematics Meetings, San Diego, January 2013.

Joint Mathematics Meetings, Boston, January 2012.

GRADUATE
COURSEWORK

Math 229x (Harvard): Analytic Number Theory	Dr. Arul Shankar
18.715: Representation Theory	Prof. Pavel Etingof
Math 268 (Harvard): Pure Motives and Rigid Local Systems	Dr. Stefan Patrikis
18.786: Number Theory II: Galois Representations	Prof. Sug Woo Shin
18.726: Algebraic Geometry II	Prof. François Charles
Math 255x (Harvard): Topics in Diophantine Geometry (audit)	Dr. Arul Shankar
18.S097: Special Subject in Mathematics: Etale Homotopy	Dr. Tomer Schlank
18.787: Topics in Number Theory: Rational Points on Algebraic Varieties	Prof. Bjorn Poonen
18.915: Graduate Seminar in Topology	Prof. Mark Behrens
18.965: Geometry of Manifolds	Prof. Paul Seidel
18.769: Topics in Lie Theory: D-Modules (audit)	Prof. Pavel Etingof
MA843 (BU): Advanced Number Theory: Shimura Varieties (audit)	Prof. Jared Weinstein

TALKS GIVEN

From Quadratic Reciprocity to the Langlands Program, MIT PUMGRASS, March 2016.

Beyond the Etale-Brauer Obstruction (Research Talk), Universität Duisburg-Essen, January 2016.

Mumford's On Equations Defining Abelian Varieties II, MIT STAGE, November 2015.

Nilpotent Thickenings and Differential Calculus, MIT PUMGRASS, November 2015.

Surjectivity of Adelic Galois Representations Associated to Elliptic Curves (Research Talk), Bar Ilan University, May 2015.

Fontaine's Il n'y a pas de variété abélienne sur \mathbb{Z} Part 3, MIT STAGE, April 2015.

The Mysterious Relationship Between Number Theory and Topology, MIT PUMGRASS, February 2015.

Reduction of Brown's Proof, MIT STAGE, Fall 2014.

The de Rham Period Ring I, Learning seminar on p -adic Hodge theory, Fall 2014.

Milnor K-Theory, Seminar on higher dimensional class field theory, Fall 2014.

Survey of Algebraic K-Theory, Seminar on higher dimensional class field theory, Fall 2014.

Topological aspects of the fundamental group of the projective line minus three points, MIT STAGE, Fall 2014.

Purity Theorem Implies Target Theorem, MIT STAGE, Spring 2014.

Henniart's Proof of Local Langlands, BU Seminar on Local Langlands, Spring 2014.

The Nisnevich Site, MIT Juvitop, Spring 2014.

Admissible p -adic Representations, BU Seminar on Local Langlands, Spring 2014.

Etale Homotopy Theory, 18.915: MIT Graduate Seminar in Topology, Fall 2013.

Topological K-Theory, 18:915: MIT Graduate Seminar in Topology, Fall 2013.

Valuation Spectra, MIT STAGE, Fall 2013.

Cohomology of Eilenberg-MacLane Spaces, 18.915: MIT Graduate Seminar in Topology, Fall 2013.

Model Theory and the Ax-Grothendieck Theorem, Princeton University Undergraduate Math Colloquium, Fall 2012.

Introduction to Riemann Surfaces, Canada/USA Mathcamp, Summer 2009.

TEACHING
EXPERIENCE

HCSSiM Junior Counselor, Hampshire College, 2016.

Taught and assisted in classes for advanced high school students at the Hampshire College Summer Studies in Mathematics (HCSSiM).

Recitation Instructor, MIT, 2016.

Teaching a recitation at MIT for the course 18.03: Differential Equations.

PRIMES Mentor, MIT, 2016.

Mentoring a high school student on a research project in number theory.

MIT Splash, MIT, 2015.

Taught five diverse math classes for high school students over the course of a weekend.

PRIMES Mentor, MIT, 2015.

Mentoring a high school student on a research project in number theory.

Directed Reading Program Mentor, MIT, January 2015.

Directing one student in learning p -adic zeta functions during MIT's Independent Activities Period (IAP).

SPUR Mentor, MIT, Summer 2014.

Mentored MIT undergrads on research projects in mathematics.

PRIMES-USA Mentor, MIT, 2014.

Mentored a high school student long-distance on a research project in number theory.

Directed Reading Program Mentor, MIT, January 2014.

Directed two students in learning class field theory during MIT's Independent Activities Period (IAP).

PROMYS Counselor, Boston University, Summer 2013.

Counseled high school students in the Program in Mathematics for Young Scientists (PROMYS) program at BU.

Course Assistant for Commutative Algebra, Princeton University, Fall 2012.

Ran weekly problem sessions for students in commutative algebra taught by Dr. Kevin Tucker at Princeton.

SUMMER PROGRAMS
ATTENDED

Emory Research Experience for Undergraduates, Emory University, 2012.

Participated in the REU at Emory University led by Prof. Ken Ono under the supervision of Prof. David Zureick-Brown.

Kupcinet-Getz Undergraduate Summer Program, Weizmann Institute of Science, 2011.

Learned mathematics under Prof. Stephen Gelbart.

Grader and Problem Writer, Art of Problem Solving Foundation, 2009-2010.

Gave students feedback on problems written for AoPS online classes and helped write problems for their alcumus system.

Canada/USA Mathcamp, 2007-2009.

Spent three summers as a camper.

OTHER
EMPLOYMENT

Summer Intern, SolidWorks, Summer 2011.

Worked as a summer undergrad intern for the software company SolidWorks.

CONTEST AWARDS

Putnam Exam

Honorable Mention, 2012.

USA Mathematical Olympiad

Three-time qualifier, 2006-2008.

Score of 15, 2008.

US Physics Team

Two-time semifinalist, 2008-2009.

National French Exam

First place, 2006, 2008.

UNDERGRADUATE
COURSEWORK

MAT 518: Philosophy of Cusp Forms	Prof. Nicolas Templier
PHY 208: Principles of Quantum Mechanics	Prof. Shivajhi Sondhi
MAT 569: Topics in Knot Theory: Knot Floer Homology	Prof. Zoltán Szabó
MAT 547: Arithmetic Algebraic Geometry (attended without credit)	Prof. Nicholas Katz
PHI 327: Philosophy of Physics	Professors Hans Halvorson and Adam Elga
Senior Thesis on Galois Representations Associated to Modular Forms	Prof. Chris Skinner
Multizétas et groupe fondamental (Jussieu Paris VI))	Prof. Francis Brown
Géométrie diophantienne (Jussieu Paris VI)	Prof. Daniel Bertrand
Variétés abéliennes (Jussieu Paris VI)	Prof. Daniel Bertrand
Junior Paper on Complex Multiplication	Prof. Chris Skinner
MAT 326: Algebraic Topology	Prof. Zoltán Szabó
PHY 523: General Relativity	Prof. Frans Pretorius
Junior Paper on Serre's Open Image Theorem	Dr. David Geraghty
MAT 332: Integration Theory and Hilbert Space	Prof. Alex Ionescu
PHY 304: Advanced Electromagnetism	Prof. Peter Meyers
MAT 424: Representation Theory	Prof. Manjul Bhargava
MAT 416: Algebraic Geometry	Prof. János Kollár
PHY 207: Mechanics and Waves	Prof. Hermann Verlinde
MAT 424: Class Field Theory	Prof. Chris Skinner
MAT 218: Analysis in Several Variables	Prof. Robert Gunning
MAT 453: Algebraic Number Theory	Prof. Chris Skinner
MAT 331: Complex Analysis	Prof. Elias Stein

REFERENCES

Prof. Bjorn Poonen Department of Mathematics Massachusetts Institute of Technology Cambridge, Massachusetts USA 02139 poonen@math.mit.edu	Prof. Tomer Schlank Einstein Institute of Mathematics Hebrew University of Jerusalem Jerusalem Israel 9190401 tomer.schlank@mail.huji.ac.il
Prof. David Zureick-Brown Department of Mathematics Emory University Atlanta, Georgia USA 98195 dzb@mathcs.emory.edu	Prof. Daniel Bertrand Institut de mathématiques de Jussieu Université Pierre et Marie Curie Paris France 75005 bertrand@math.jussieu.fr