

Employment

- 2021- Assistant Professor, Indian Institute of Science, Bangalore, India.
- 2019-2021 Postdoctoral Fellow, National Center for Theoretical Sciences, Taipei, Taiwan.
- 2016-2019 Hans Rademacher Instructor (postdoc), University of Pennsylvania, Philadelphia, USA.

Education

- 2010-2016 PhD in Mathematics, University of Washington, Seattle, USA.  
Advisor: Ralph Greenberg
- 2006-2010 B.Tech in Engineering Physics, Indian Institute of Technology Bombay, India.

Papers and Preprints

- On Selmer groups and factoring  $p$ -adic  $L$ -functions.  
*International Mathematics Research Notices* (2018), Issue 24, December 2018, Pages 7483-7554
- Height one specializations of Selmer groups.  
*Annales de l'Institut Fourier*, Volume 69 (2019) no. 1, p. 303-334
- On free resolutions of Iwasawa modules, (54 pages).  
with Alexandra Nichifor, *Doc. Math.* 24, 609-662 (2019)
- Codimension two cycles in Iwasawa theory and elliptic curves with supersingular reduction.  
with Antonio Lei, *Forum of Mathematics, Sigma* (2019), 7, E25
- Codimension two cycles in Iwasawa theory and tensor product of Hida families.  
with Antonio Lei, accepted for publication in *Mathematische Annalen* (2020)

Conference organization

- Nov 2020 *L-values and Iwasawa theory*, online.

Graduate students supervised

- March 2018 Arizona Winter School on Iwasawa Theory, University of Arizona Tucson, USA,  
Study group guide for John Coates's study group on the Weak Leopoldt conjecture.
- Masters thesis Weichen Zhou (Spring 2018), Elliptic curves over  $\mathbb{C}$  with complex multiplication.
- Masters thesis Andrea Thevis (Summer 2017), Elliptic curves and cryptography.
- Ind. Study Yao-Rui Yeo (Fall 2017), Galois representations.

Short term visits

- May 2022 University of Warwick, UK,  
visiting Jungwon Lee.
- Oct 2019 Oberwolfach Leibniz Fellowship at MFO Oberwolfach, Germany.
- Aug 2018 Research in Pairs at MFO Oberwolfach, Germany.  
with Marc Masdeu and Chris Williams
- June 2018 Universität Duisburg-Essen, Germany.  
visiting Andreas Nickel
- Mar 2018 Université Laval, Canada.  
visiting Antonio Lei

Teaching at the University of Pennsylvania

- Math 104: Calculus I, Fall 2018, Fall 2016.  
(Volumes of revolution, Integration techniques, Taylor series)
- Math 240: Calculus III , Fall 2018, Spring 2017.  
(Introduction to Linear algebra and ODEs)
- Math 312: Linear Algebra, Spring 2018.
- Math 350: Undergraduate Number Theory, Spring 2019.
- Math 420: Ordinary differential equations, Fall 2016.
- (graduate) Math 620: Algebraic Number Theory, Fall 2017.

(graduate) **Math 621: Algebraic Number Theory (Good Teaching Award),** *Spring 2018.*

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## Teaching at the University of Washington

**Math 307: Ordinary differential equations (Instructor),** *Spring 2016.*

**Math 308: Matrix Algebra with applications (Instructor),**  
*Summer 2015, Winter 2015, Spring 2014, Winter 2014.*

**Math 300: Introduction to mathematical reasoning (Instructor),** *Summer 2013.*

Teaching assistant for various undergraduate calculus courses.

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## Invited Talks

April 2022	<b>Science Seminar,</b>	<i>Azim Premji University, India.</i>
January 2022	<b>Number Theory Seminar,</b>	<i>Indian Institute of Science, India.</i>
Sept 2021	<b>Philadelphia Area Number Theory Seminar,</b>	<i>Bryn Mawr, USA.</i>
Dec 2020	<b>Seminar on Geometry and Arithmetic,</b>	<i>UC Santa Barbara, USA.</i>
August 2020	<b>Algebra and Combinatorics Seminar,</b>	<i>Indian Institute of Science, India.</i>
July 2020	<b>Colloquium,</b>	<i>Tata Institute of Fundamental Research (Mumbai) India.</i>
Feb 2020	<b>Number Theory seminar,</b>	<i>Seoul National University, South Korea.</i>
Jan 2020	<b>Galois seminar,</b>	<i>University of Pennsylvania, USA.</i>
Nov 2019	<b>Taipei Postdoc seminar,</b>	<i>Academia Sinica / NCTS, Taiwan.</i>
July 2019	<b>Algebra and Number Theory seminar,</b>	<i>Universität des Saarlandes, Germany.</i>
Apr 2019	<b>Pizza seminar for graduate students,</b>	<i>University of Pennsylvania, USA.</i>
Apr 2019	<b>AMS Sectional Meeting,</b>	<i>University of Connecticut (Hartford), USA,</i>
	<u>Special session on Special values of <math>L</math>-functions and arithmetic invariants in families.</u>	
Mar 2019	<b>Algebra-Number Theory seminar,</b>	<i>University of Maryland, USA.</i>
Mar 2019	<b>Columbia-CUNY-NYU Joint Number Theory Seminar,</b>	<i>Courant Institute, USA.</i>
Oct 2018	<b>Number theory seminar,</b>	<i>Université Laval, Canada.</i>
June 2018	<b>Oberseminar,</b>	<i>Universität Duisburg-Essen (Essen), Germany.</i>
May 2018	<b>The Bielefeld Arithmetic Geometry Seminar,</b>	<i>Universität Bielefeld, Germany.</i>
May 2018	<b>Workshop: Iwasawa Theory and Related Topics,</b>	<i>University of Heidelberg, Germany.</i>
May 2018	<b>Number theory seminar,</b>	<i>University of Illinois (Chicago), USA.</i>
Nov 2017	<b>Quebec Vermont Number theory seminar,</b>	<i>Concordia University, Canada.</i>
Sept 2017	<b>Number theory seminar,</b>	<i>University of British Columbia, Canada.</i>
Sept 2017	<b>Algebra seminar,</b>	<i>University of Pennsylvania, USA.</i>
Mar 2017	<b>Number theory seminar,</b>	<i>Université Laval, Canada.</i>
Jan 2017	<b>Philadelphia Area Number Theory Seminar,</b>	<i>Bryn Mawr, USA.</i>
Jun 2016	<b>Workshop: New Directions in Iwasawa theory,</b>	<i>Banff Research Center, Canada,</i>
	Video link: <a href="https://goo.gl/EksZ2s">https://goo.gl/EksZ2s</a> .	
Apr 2016	<b>Galois seminar,</b>	<i>University of Pennsylvania, USA.</i>
Jan 2016	<b>Number theory seminar,</b>	<i>University of California Los Angeles, USA.</i>
Nov 2015	<b>Number theory seminar,</b>	<i>University of Arizona, USA.</i>
Oct 2014	<b>Number theory seminar,</b>	<i>University of Washington USA.</i>
Sept 2014	<b>Number theory seminar,</b>	<i>IIT Bombay, India.</i>

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## Contributed Talks

Mar 2021	<b>Spring Day 2021,</b>	<i>NCTS, Taiwan.</i>
Sept 2020	<b>CRM Members seminar,</b>	<i>CRM, Canada.</i>
June 2020	<b>Spring Day 2020,</b>	<i>NCTS, Taiwan.</i>
Oct 2018	<b>Maine/Québec Number theory conference,</b>	<i>Université Laval, Canada.</i>
Oct 2016	<b>Maine/Québec Number theory conference,</b>	<i>Université Laval, Canada.</i>
Mar 2016	<b>30th Automorphic forms workshop,</b>	<i>Wake Forest University, USA.</i>
Oct 2015	<b>Midwest Number theory conference,</b>	<i>University of Illinois Chicago, USA.</i>
Sept 2015	<b>Boston-Keio workshop,</b>	<i>Boston University USA.</i>