

Bharathwaj Palvannan

✉ bharathwaj@iisc.ac.in
📁 [pbharathwaj.github.io](https://github.com/pbharathwaj)

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

- Oct 2019 **Oberwolfach Leibniz Fellowship**, *MFO Oberwolfach, Germany*.
- Aug 2018 **Research in Pairs**, *MFO Oberwolfach, Germany*.
with Marc Masdeu and Chris Williams
- June 2018 **Algebraic geometry and Arithmetic group**, *Universität Duisburg-Essen, Germany*,
visiting Andreas Nickel.

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*.

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.

Invited Talks

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

Contributed Talks

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