Curriculum Vitae

Keerthi Madapusi

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(a) Professional Preparation

Yale University, New Haven, CT; Mathematics; B.S., 2005
University of Chicago, Chicago, IL; Mathematics; M.S., 2007
University of Chicago, Chicago, IL; Mathematics; Ph.D., 2011
Harvard University, Cambridge, MA; NSF Postdoctoral Research Fellow; 2012-14
University of Chicago, Chicago, IL; NSF Postdoctoral Research Fellow; 2014-2015

(b) Appointments

2021–now: **Associate Professor**, Boston College, Chestnut Hill, MA

2017–2021: **Assistant Professor**, Boston College, Chestnut Hill, MA

2014–2017: **Assistant Professor**, University of Chicago, Chicago, IL

2011–2014: **Benjamin Peirce Assistant Professor**, Harvard University, Cambridge, MA

(c) Teaching at BC

Fall 2024: **Algebra I, 3311**

Spring 2024: **Algebra II, 8807** (Graduate)

Fall 2023: **Number theory I, 8821** (Graduate) **Introduction to Analysis, 3320**

Spring 2023: **Number theory II, 8822** (Graduate)

Fall 2022: **Complex variables, 4460 Algebra I, 8806** (Graduate)

Spring 2022: **Complex variables, 4460 Number theory II, 8822** (Graduate)

Fall 2021: **Number theory I, 8821** (Graduate)

Spring 2021: **Algebra II, 3312**

Fall 2020: **Algebra I, 3311 Algebra I, 8806** (Graduate)

Spring 2020: **Algebra II, 3312**

Fall 2019: **Algebra I, 3311 Linear algebra, 2210**

Fall 2018: **Graduate Number Theory I**, p-adic Hodge theory

Spring 2018: **Complex Variables, 4460**

Fall 2017: **Graduate Number Theory I**, Class field theory

(d) Grants

2022–2025: **NSF grant DMS 2200804**, Boston College, Chestnut Hill, MA

2018–2022: **NSF grant DMS 1802169**, Boston College, Chestnut Hill, MA

2015–2018: **NSF grant DMS 1502142**, University of Chicago, Chicago, IL

(e) Publications

1. **Madapusi, K. Ordinary loci: a stack theoretic perspective, *in preparation***
2. **Lee, S.-Y., Madapusi, K. p-Isogenies with G-structure and their applications, *in preparation***
3. **Madapusi, K., Mondal, S. Finite flat group schemes and F-gauges, *in preparation***
4. **Garcia, L., Madapusi, K., Sankaran, S. Arithmetic special cycle classes on Shimura varieties, *in preparation***
5. **Gardner, Z. Madapusi, K. An algebraicity conjecture of Drinfeld and the moduli of p-divisible groups, *submitted***
6. **Madapusi, K. Derived special cycles on Shimura varieties, *on the arXiv*.**
7. **Howard, B., Madapusi, K. Kudla's modularity conjecture on integral models of GSpin Shimura varieties, *submitted*.**
8. **Madapusi Pera, K. The irreducibility of the moduli of polarized K3 surfaces in finite characteristic, *submitted*.**
9. **Kisin, M., Shin, S.-W., Madapusi Pera, K. Honda-Tate theory for Shimura varieties of Hodge type, *Duke Math. J.*, Volume 171, Issue 7, pp. 1559–1614**
10. **Howard, B., Madapusi Pera, K. The arithmetic of Borcherds products. *Astérisque*, 421 (2020), pp. 187–297**
11. **Madapusi Pera, K. Erratum to appendix to '2-adic integral canonical models'. *Forum of Math., Sigma*, Paper No. e14 (2020), 11pp.**
12. **Boxer, G., Calegari, F., Emerton, M., Levin, B., Madapusi Pera, K., Patrikis, S. Compatible systems of Galois representations associated to the exceptional group E_6. *Forum of Math., Sigma*, Volume 7 (2019), e4, 29pp.**
13. **Madapusi Pera, K. Toroidal compactifications of integral models of Shimura varieties of Hodge type. *Annales d'Ecole Norm. Sup.*, Fascicule 2 (2019), Tome 52, pp. 393–514.**
14. **Andreatta, F., Goren, E., Howard, B., Madapusi Pera, K. Faltings heights of abelian varieties with complex multiplication. *Annals of Math.*, Volume 187 (2018), Issue 2, pp. 391–531.**
15. **Andreatta, F., Goren, E., Howard, B., Madapusi Pera, K. Height pairings on orthogonal Shimura varieties. *Compos. Math.*, Volume 153, Issue 3 (2017), pp. 474–534.**
16. **Madapusi Pera, K. Appendix to 'Level structures on abelian varieties and Vojta's conjecture' by D. Abramovich and A. Várilly-Alvarado. *Compos. Math.*, Volume 153, Issue 2 (2017), pp. 387–394.**
17. **Kim, W., Madapusi Pera, K. 2-adic integral canonical models, *Forum of Math., Sigma*, Volume 4 (2016), e28, 34pp.**
18. **Madapusi Pera, K. Integral canonical models for Spin Shimura varieties, *Compos. Math.*, Volume 152, Issue 4 (2016), pp. 769–824**
19. **Madapusi Pera, K. The Tate conjecture for K3 surfaces in odd characteristic, *Invent. Math.*, Volume 201 (2015), pp. 625–668**

(f) Synergistic Activities

1. **AIM workshop on Canonical integral models for local and global Shimura varieties**, March 2026: Co-organizer with George Pappas (Michigan State), Si Ying Lee (Stanford) and Alex Youcis (National University of Singapore)
2. **AIM workshop on Arithmetic intersection theory on Shimura varieties**, January 2020 (virtual) and 2024 (in person): Co-organizer with B. Howard (Boston College), W. Zhang (MIT) and C. Li (Columbia) of workshop devoted to recent advances in arithmetic intersection theory on Shimura varieties.
3. **Committee work:** Member of the BC Pre-Health Committee, 2021-24. Served on post-doctoral hiring committe in 2018-19, 2020-21 and 2023-24, on graduate admissions committee in 2019-20 and 22-24, self-study steering committee, 2023-24, and on tenure track hiring committee in 2021-22.
4. **Mentorship:** I have three graduate student: Zachary Gardner, who is completing his thesis on $\mathcal{O}$-linear analogues of constructions from our joint work proving some conjectures of Drinfeld (available on the arXiv); Arieh Zimmerman; and August Schmidt.

(g) Invited Talks

1. *A new perspective on p-Hecke correspondences and Rapoport-Zink spaces*
    - Automorphic forms and arithmetic geometry, Columbia University (January 2025)
    - Number theory Webinar, Feza Gürsey Center for Physics and Mathematics / Institute for Research in Fundamental Sciences (February 2025)
    - Number theory seminar, Stanford University (May 2025)
2. *Heights of CM abelian varieties and special cycles*, International Congress of Basic Science, Beijing (July 2024)
3. *Another perspective on special cycles on Shimura varieties*, Arithmetic theta series and p-adic modular forms, Cetraro, Italy (June 2024)
4. *Truncated (G, μ)-displays and conjectures of Drinfeld*
    - Geometric Langlands seminar, University of Chicago (May 2024)
    - Number theory seminar, Institute of Advanced Study, Princeton (February 2024)
5. *Derived special cycles on Shimura varieties*
    - Workshop on derived special cycles and Kudla's modularity conjecture, University of Darmstadt (March 2025): This was a three day workshop dedicated to understanding my paper on derived cycles and my prior work with Ben on modularity of cycles in higher codimensions.
    - Group, Lie and Number Theory Seminar, University of Michigan (March 2024)
    - Number Theory Seminar, Harvard University (March 2023)
    - Number Theory Seminar, Michigan State University (February 2023)
    - Arithmetic of Shimura varieties, Oberwolfach, Germany (February 2023)
    - AIM special session at the Joint Mathematical Meetings, Boston (January 2023)
    - Rencontres arithmétiques de Caen, Caen, France (May 2022)
    - MIT Number Theory Seminar (March 2022)
    - Arithmetic of Shimura varieties over global fields, Cetraro, Italy (August 2021)
6. Existence of CM lifts for points on Shimura varieties, Harvard Number Theory Seminar (March 2021)

7. *Modularity of generating series of cycles on GSpin Shimura varieties*, Joint Mathematical Meetings, Denver, Colorado (January 2020)
8. *The ordinary locus of the moduli of polarized abelian varieties*, Braids, Resolvent Degree and Hilbert's 13th Problem, IPAM, UCLA (February 2019)
9. *Lectures on the averaged Colmez conjecture*, Workshop on Galois representations and Heights, Alpbach, Austria (June 2018)
10. *The arithmetic of Weierstrass curves*, Boston University Number Theory Seminar (April 2018)
11. *Ekedahl-Oort strata and p-adic period maps*, Algebraic Geometry and Number Theory conference, Indian Statistical Institute, Bangalore (December 2017)