

Siddharth Mahendraker

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Canadian citizen

RESEARCH INTERESTS

- Local and global representation theory, automorphic representations
- Relative Langlands program, relative trace formulas, periods and L -functions
- Endoscopy and the stabilization of relative trace formulas

EDUCATION

Boston College, Chestnut Hill, MA 2020–2026

Ph.D. Mathematics

Advisors: Spencer Leslie and Solomon Friedberg

University of Toronto, Toronto, ON 2019–2020

M.Sc. Mathematics

Advisor: Michael Groechenig

University of Toronto, Toronto, ON 2015–2019

B.Sc. Mathematics; B.Sc. Computer Science

Graduated with high distinction

PUBLICATIONS AND PREPRINTS

1. “**The Relative Trace Formula for Galois Periods**”, preprint (56 pages), 2025
available online [arXiv:2511.16873](#)

In Progress

2. “**Endoscopy for the Galois Period on SL_2 : Local Results**”, joint with
Spencer Leslie

TEACHING EXPERIENCE

Teaching Fellow (Instructor of Record), Boston College

Finite Probability and Applications (MATH 1004) Spring 2025

Teaching Assistant, Boston College

Calculus II (MATH 1101) Spring, Fall 2023

Multivariable Calculus (MATH 2202) Fall 2021

Calculus I (MATH 1100) Fall 2020; Spring 2021

Teaching Assistant, University of Toronto

Analysis II (MAT 257) Fall 2019; Winter 2020

Calculus I B (MAT 136) Summer 2018; Winter 2019

Calculus I A (MAT 135) Fall 2017; Fall, Winter 2018

INVITED TALKS

(Upcoming) AMS Special Session on Automorphic Forms (Boston) 2026

AMS Special Session on Automorphic Forms, Arithmetic and Applications I (Omaha): “Fourier-Jacobi Coefficients of Classical Theta Series Restricted to $SU_{2,1}$ ”	2023
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New Connections in Number Theory and Physics (Newton Institute, UK): “Multiplicity Free Actions and Classical Invariant Theory”	2022
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CONTRIBUTED TALKS

GIST Student Seminar, Boston College: “An Introduction to the Weil Representation and Theta Functions”	2025
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GIST Student Seminar, Boston College: “ $H^1(F, G)$ ”	2024
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GIST Student Seminar, Boston College: “The Failure of Poincaré Duality for Singular Varieties”	2024
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Relative Langlands Seminar, Harvard University: “Abelian Examples: Hilburn-Raskin on Tate’s Thesis in the deRham Setting”	2023
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Relative Langlands Seminar, Harvard University: “Some Number Theory”	2023
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Feng-Yun-Zhang Learning Seminar, Boston College: “Moduli of Unitary Shtukas and Special Cycles”	2022
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GIST Student Seminar, Boston College: “Expander Graphs, and Connections to Number Theory”	2022
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Geometry of Local Arthur Packets, Fields Institute Course: “Explicit Computations with Nearby and Vanishing Cycles”	2022
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GIST Student Seminar, Boston College: “The Polynomial Method”	2022
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GIST Student Seminar, Boston College: “An Introduction to Hecke Algebras, Kazhdan-Lusztig Polynomials and Categorification	2021
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GIST Student Seminar, Boston College: “The HOMFLY Polynomial of an Algebraic Link and the Topology of Punctual Hilbert Schemes”	2021
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SERVICE, EQUITY AND OUTREACH

Seminars Organized

- Boston College graduate student seminar (GIST), joint with Matthew Zevenberg (2023)
- Learning seminar on Sakellaridis-Venkatesh (2023)
- Online learning seminar on Eisenstein series (2022)

Developing Exemplary Mathematics Teacher Leaders for High-Need Schools, (Graduate Student Participant)	<i>2022 – 2023</i>
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- Participated as a graduate student in an NSF-funded program focused on improving mathematics education in the greater Boston area, by creating a professional development network for exceptional mathematics teacher-leaders working at high-needs schools.
- Met monthly to discuss mathematics and teaching, with a strong focus on mathematical content, pedagogy and equity.

CONFERENCE AND WORKSHOP ATTENDANCE

Trace Formulas, 7th Nisyras Conference on Automorphic Representations	2025
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Geometric Approaches to the Local Langlands Program (University of Maryland)	2025
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Relative Langlands Duality Summer School and Workshop (University of Minnesota)	2024
Arithmetic Quantum Field Theory (CMSA)	2023
AMS Special Session on Automorphic Forms, Arithmetic and Applications I	2023
New Connections in Number Theory and Physics (Newton Institute, UK)	2022
IHES Summer School on the Langlands Program	2022
Arizona Winter School on Automorphic Forms Beyond GL_2	2022
CIRM Workshop on Periods, Functoriality and L -functions (online)	2022
Bill Casselman 80th Birthday Conference, BIRS (online)	2021
Canadian Undergraduate Mathematics Conference	2018, 2019
Facets of Algebraic Geometry (Ann Arbor)	2019

AWARDS AND DISTINCTIONS

Boston College Dissertation Fellowship	2025
NSERC Undergraduate Student Research Award	2019
University of Toronto Excellence Award	2017
Coxeter Scholarship in Mathematics	2017
Galois Award in Mathematics	2017, 2018, 2019
Louis Savlov Scholarship	2016
Dean's List Scholar	2016, 2017, 2018, 2019

ADDITIONAL INFORMATION

- Native English speaker, also fluent in French
- Extensive experience programming in a variety of languages: Python, Julia, Rust, C, C++, Objective-C, Javascript and PHP.