Dr. Abhiram M. Kidambi

Max Planck Institute for Mathematics in the Sciences

Email: kidambi@mis.mpg.de • **Phone**: +49-1783770813
Website: abhirammk.github.io • **Address**: MPI-MiS , Inselstraße 22, 04103 Leipzig

Research Summary

Interface of number theory, arithmetic algebraic geometry, representation theory of finite groups, computation, and physics, in particular string theory and quantum field theory.
In investigating arithmetic structures in string theory, vertex algebras, and quantum field theory, one sees hints of several aspects of the analytic and arithmetic Langlands program in mathematics. My research program is focused on formalising these hints by developing rigorous mathematical results and computational methods in order to understand arithmetic structures in physics. I study automorphic forms, $L-$ functions, arithmetic of algebraic varieties, complex multiplication and special functions from an explicit perspective and their develop their applications in BPS state counts and attractors, rational SCFTs, wall crossing and Feynman Integrals.

Scientific Appointments

Max Planck Institute for Mathematics in the Sciences *Leipzig, Germany*
Scientist *Dec. 2023 - Present*

- Research groups: Mathematical structures in physics, Numerical algebraic geometry & Computational mathematics
- Since 2025: Mathematical software development for MAGMA
- Since 2025: Lead developer of CYCluster, a planned database for arithmetic of Calabi–Yau manifolds
- Since 2025: Contributor to LMFDB

Kavli IPMU, University of Tokyo *Tokyo/Kashiwa, Japan*
Postdoctoral Fellow *Nov. 2020 - Nov. 2023*

- Research groups: Mathematics, String Theory, Quantum Field Theory

Education

Mathematical Physics

Technical University of Vienna *Vienna, Austria*
PhD in Mathematical Physics *2020*

- Dissertation: Automorphic forms in string theory: From moonshine to wall crossing
- PhD Advisor in Vienna: Dr. Timm Wrase
- Marshall Scholar and Long Term PhD Visiting Candidate (Stanford U.): Dec 2018 - Aug. 2020
- Advisor at Stanford: Prof. Shamit Kachru

LMU Munich & TU Munich *Munich, Germany*
Elite Master Program: Mathematics and Mathematical Physics *2016*

- Thesis Focus: Chern–Simons theories
- Master's Thesis: Aspects of black holes in Chern-Simons supergravity and AdS/CFT

Engineering, Semiconductor Physics and Quantum Information

University of Nottingham *Nottingham, UK*
Bachelor's + Master's in Physics (Semiconductor physics and quantum information) *2013*

- Master's Thesis: Non-equilibrium dynamics of open quantum systems
- Bachelor's Thesis: Chaotic dynamics in semiconductors and topological insulators

Bangalore Institute of Technology *Bangalore, India*
Studies of Bachelor's in Electronics and Instrumentation Engineering *2009 - 2010*

Fellowships and Grants

1. ICTP Math Section Visiting Fellowship (2024)
2. Schrödinger Fellowship, Endowed by the Erwin Schrödinger Institute (2023)
3. DAC Fellowship, Endowed by the Isaac Newton Institute for Mathematical Sciences (2023)
4. Riemann Fellowship, Endowed by the Riemann Center for Geometry and Physics (2022)
5. Marshall Fellowship, Endowed by the Austrian Marshall Plan Foundation (2019)

Invited Talks at Conferences, Workshops, and Colloquia

Math Talks

1. **Max Planck Institute for Mathematics in the Sciences** (Workshop Invite) — Leipzig, Germany
   Computer Algebra, Number Theory and More (Upcoming) — Mar. 2025
   Talk: TBD
2. **MITP, JGU Mainz** (Workshop Invite) — Mainz, Germany
   The Arithmetic of Calabi–Yau Manifolds (Upcoming) — Mar. 2025
   Talk: TBD
3. **IST, Lisbon** (Workshop Invite) — Lisbon, Portugal
   Fall String Theory Workshop — Oct. 2024
   Talk: On arithmetic statistics of weight 2 Hecke eigencuspforms
4. **Uni. Potsdam** (Colloquium Invite) — Potsdam, Germany
   Talk: Developments in computer assisted number theory and arithmetic geometry — May 2024
5. **INI Cambridge** (Workshop Invite) — Cambridge, UK
   Black Holes: Bridges Between Number Theory and Holographic Quantum Information — Oct. 2023
   Talk: An introduction to the Birch & Swinnerton-Dyer Conjecture
6. **INI Cambridge** (Workshop Invite) — Cambridge, UK
   Black Holes: Bridges Between Number Theory and Holographic Quantum Information — Oct. 2023
   Talk: $g = 2$ hyperelliptic curve invariants, Siegel modular forms and applications
7. **Simons Center for Geometry and Physics** (Workshop Invite) — Stony Brook, USA
   Workshop on Number Theory and Physics — Oct.-Nov. 2022
   Talk: Modularity and rational curve counts on $K3$ surfaces

Mixed Physics-Math Talks

(Physics topics aimed at math audiences, or vice-versa)

8. **MITP, JGU Mainz** (Workshop Invite) — Mainz, Germany
   Physics and Number Theory — Jan. 2025
   Talk: Complex Multiplication: History, Theory, Computation and Applications
9. **GGI Florence** (Conference Invite) — Florence, Italy
   Conference on Resurgence and Modularity in QFT and String Theory — Apr./May 2024
   Talk: Real analytic Eisenstein series and quadratic forms in holography
10. **Simons Center for Geometry and Physics** (Workshop Invite) — Stony Brook, USA
    Workshop on Number Theory and Physics — Oct.-Nov. 2022
    Talk: Two applications of mock modular forms in string theory
11. **Kavli IPMU** (Colloquium Invite) — Kashiwa, Japan
    Talk: Physics and the Hilbert-Pólya conjecture — Oct. 2022
12. **Riemann Center for Geometry and Physics** (Special Lecture) — Hannover, Germany
    Riemann Fellow Lecture — May 2022
    Talk: BPS Partition Functions: From physics, to number theory, to geometry

13. **Kavli IPMU/U.Tokyo** (Colloquium Invite) — Tokyo/Kashiwa, Japan
    Talk: Quantum black holes: Bridges between mathematics and physics — Oct. 2021
14. **IST Lisbon** (Workshop Invite) — Lisbon. Portugal
    Workshop on BPS Black Holes and Quantum Information — Sep. 2021
    Talk: Generalized Siegel-Weil formula, Chern-Simons invariants and $3d$-gravity
15. **Erwin Schroedinger Institute** (Workshop Invite) — Vienna, Austria
    Workshop on Moonshine — Sep. 2018
    Talk: Rademacher series for CHL models

Physics talk

(Physics topics aimed at physics audiences)

16. **IIT-Bhubaneshwar & NISER Jatani** (Conference Invite) — Bhubaneshwar, India
    Indian Strings Meetings — Dec 2025
    Talk: TBD
17. **Koc Uni. & Bogazici Uni.** (Conference Invite) — Istanbul, Turkey
    Mathematical Physics Days — Dec. 2020
    Talk: Introduction to Moonshine in String Theory
18. **IST Lisbon** (Workshop Invite) — Lisbon, Portugal
    Black Holes: BMS, BPS and Integrability — Sep. 2020
    Talk: Mock-modular black hole entropy from negative discriminant states
19. **Uni Wien & TU Wien** (Colloquium Invite) — Vienna, Austria
    Talk: Auguries of Physical Mathematics — Nov. 2018
20. **GGI Florence** (Workshop Invite) — Florence, Italy
    Supersymmetric Field Theories in the Non-perturbative Regime — Apr. 2018
    Talk: The M_{24} group and elliptic genera of $K3$ superconformal field theories

Invited Lectures and Seminars

Math seminars

1. **MPI-MIS** (Seminar Invite) — Leipzig, Germany
   Talk: Arithmetic Langlands Program and Physics — Feb. 2025
2. **JGU Mainz** (Seminar Invite) — Mainz, Germany
   Talk: Siegel modularity of enumerative invariants of $K3$ surfaces and Hilbert schemes — Dec. 2024
3. **TU Eindhoven** (Seminar Invite) — Eindhoven, Netherlands
   Talk: New trends in computational number theory — Dec. 2024
4. **ETH Zurich** (Seminar Invite) — Zurich, Switzerland
   Talk: Computational aspects of the Langlands program — Jul. 2024
5. **MPI-MIS** (Seminar Invite) — Leipzig, Germany
   Talk: Rational point counts and motives for Feynman Integrals — Mar. 2024
6. **Lehigh University** (Seminar Invite) — Bethlehem, USA
   Talk: The Hilbert-Polyá conjecture: A survey — Nov. 2022
7. **ICTP** (Seminar Invite) — Trieste, Italy
   Talk: Niemeier Lattices, and Hilbert modular forms from arithmetic of exceptional groups — Jun. 2022
8. **LU Hannover** (Seminar Invite) — Hannover, Germany
   Talk: An introduction to moonshine and vertex operator algebras — May 2022
9. **LU Hannover** (Seminar Invite) — Hannover, Germany
   Talk: An introduction to wall crossing and Stokes phenomena — Apr. 2022
10. **IST Lisbon** (Seminar Invite) — Lisbon, Portugal
    Talk: Topological modular forms, $\mathcal{N}=1$ VOA's, and Hilbert modularity of error correction codes — Dec. 2021
11. **TU Wien** (Seminar Invite) — Vienna, Austria
    Talk: Arithmetic chaos, zeroes of the Riemann $\zeta(s)$ function and topological recursions — Sep. 2019

12. **IST Lisbon** (Seminar Invite) — Lisbon, Portugal
    Talk: BPS algebras and moonshine phenomena — Oct. 2018
13. **IISc** (Seminar Invite) — Bangalore, India
    Talk: Calabi-Yau manifolds and sporadic groups — Dec. 2017
14. **IMSc** (Seminar Invite) — Chennai, India
    Talk: Calabi-Yau manifolds and sporadic groups — Dec. 2017
15. **Uni Wien** (Seminar Invite) — Vienna, Austria
    Talk: Calabi-Yau manifolds and sporadic groups — Nov. 2017

Mixed Math-Physics seminars

16. **Uni. Vienna** (Seminar Invite) — Vienna, Austria
    Talk: Characterization of Rational SCFTs via complex multiplication and mirror symmetry — Apr. 2024
17. **TU Vienna** (Seminar Invite) — Vienna, Austria
    Talk: Non-holomorphic Eisenstein series and quadratic forms in string theory — Apr. 2024
18. **ICTS Bengaluru** (Lecture Invite) — Bengaluru, India
    Lecture: Connections between number theory and physics
    Part 1: Representation theory of automorphic forms, Part 2: L-functions — Apr. 2023
19. **University of Tokyo** (Seminar Invite) — Tokyo, Japan
    Talk: Introduction to the Katz-Sarnak philosophy — Apr. 2023
20. **Kavli IPMU** (Seminar Invite) — Kashiwa, Japan
    Talk: Class numbers and Hilbert modular forms in supergravity — Jun. 2022
21. **Kavli IPMU** (Seminar Invite) — Kashiwa, Japan
    Talk: Comments on number theory and geometry in string theory — Oct. 2020
22. **TU Wien & Uni Wien** (Seminar Invite) — Vienna, Austria
    Talk: An introduction to topological modular forms, $\mathcal{N}=1$ VOA's, and error correction codes — Nov. 2021
23. **Stanford** (Seminar Invite) — Palo Alto, USA
    Talk: Comments on number theory and geometry for black holes — Mar. 2016
24. **U. Amsterdam** (Seminar Invite) — Amsterdam, Netherlands
    Talk: Number theory and geometry for negative discriminant states in string theory — Feb. 2019
25. **MPP Munich** (Seminar Invite) — Munich, Germany
    Talk: Automorphic properties of wall crossing in string theory — Nov. 2018
26. **IST Lisbon** (Seminar Invite) — Lisbon, Portugal
    Talk: $\Gamma_0(N)$, quantum black holes, and wall crossing — Oct. 2018

Physics seminars

27. **MPI Potsdam** (Seminar Invite) — Potsdam, Germany
    Talk: Modularity and L-values of BPS states — Dec. 2024
28. **L2C CNRS, Montpellier** (Seminar Invite) — Montpellier, France
    Talk: Automorphic forms, Arithmetic and String Theory — Mar. 2024
29. **MPI for Gravitational Physics** (Seminar Invite) — Berlin/Potsdam, Germany
    Talk: Automorphic forms, Arithmetic and String Theory — Feb. 2024
30. **IISc Bengaluru** (Seminar Invite) — Bengaluru, India
    Talk: Gravitational path integrals from number theory — May 2023
31. **Caltech** (Seminar Invite) — Pasadena, USA
    Talk: Gravitational path integral for $\mathcal{N}=4$ $\frac{1}{4}$-BPS black holes from Siegel modular forms — Dec. 2022
32. **Cornell** (Seminar Invite) — Ithaca, USA
    Talk: BPS States and Niemeier Lattices: An Octonionic Supergravity Story — Nov. 2022
33. **Institut Henri Poincaré** (Seminar Invite) — Paris, France
    Talk: Mock modularity from supergravity — Jun. 2022

34. **DESY** (Seminar Invite) — Hamburg, Germany
    Talk: Mock modularity from supergravity — Jun. 2022
35. **LMU Munich** (Seminar Invite) — Munich, Germany
    Talk: Mock modular black hole entropy from supergravity — Nov. 2021
36. **Kavli IPMU** (Seminar Invite) — Kashiwa, Japan
    Talk: Mock modular black hole entropy from supergravity — Oct. 2021
37. **Nagoya U** (Seminar Invite) — Nagoya, Japan
    Talk: Mock modular black hole entropy from supergravity — Oct. 2021
38. **TU Wien & Uni Wien** (Seminar Invite) — Vienna, Austria
    Talk: Generalized Siegel-Weil formula, Chern-Simons invariants, and $3d$-gravity — Aug. 2021
39. **Rutgers** (Seminar Invite) — New Brunswick, USA
    Talk: Computing $\frac{1}{4}$-BPS degeneracies and comments on instanton moduli spaces — Apr. 2020
40. **ICTP** (Seminar Invite) — Trieste, Italy
    Talk: Single center BH degeneracies in $4d, \mathcal{N} = 4$ string theory from Dabholkar–Harvey states — Jan. 2020
41. **Stanford** (Seminar Invite) — Palo Alto, USA
    Talk: Counting $\frac{1}{4}$-BPS black holes in $4d, \mathcal{N} = 4$ from $\frac{1}{2}$-BPS degeneracies — Dec. 2019
42. **TU Wien** (Seminar Invite) — Vienna, Austria
    Talk: Wall crossing and jumping in string theory and supersymmetric gauge theories — Oct. 2019
43. **ICTS** (Seminar Invite) — Bangalore, India
    Talk: Towards exact matching of black hole degeneracies from localization and number theory — Oct. 2019
44. **IISc** (Seminar Invite) — Bangalore, India
    Talk: Towards exact matching of black hole degeneracies from localization and number theory — Oct. 2019
45. **Uni Wien** (Seminar Invite) — Vienna, Austria
    Talk: Reconstruction of the Igusa cusp form from localization in supergravity — Dec. 2018
46. **Erwin Schroedinger Institute** (Seminar Invite) — Vienna, Austria
    Talk: Entanglement entropy in $U(1)$ gauge theories — Mar. 2017
47. **TU Wien** (Seminar Invite) — Vienna, Austria
    Talk: Some constraints on superconformal field theories — Oct. 2016

Publications and Preprints

In Preparation

1. Height biases in the Sato-Tate distributions of elliptic curves and arithmetic of weight 2 newforms
2. On the arithmetic and geometry of the Calabi–Yau threefold of conductor 61 (A comprehensive review, w/ M. Elmi, N. Gegelia, V. Golyshev, A. Klemm, A. Pacetti, E. Pichon-Pharabod, G. Rama, D. van Straten, G. Tornaria & J. Voight)
3. (Book) Proceedings of Murmurations workshop @ SCGP (w/ Y-H. He, K-H. Lee, & T. Oliver)
4. Automorphic symmetries and liftings of heterotic string vacua (w/ J. Leedom, N. Righi & A. Westphal)

Submitted/Published

InspireHEP Profile, Google Scholar Profile, Zentrallblatt MATH Profile
My name appears as **A. Kidambi** in scientific publications. Names are listed alphabetically. Year listed in parentheses following publication title is the year of preprint submission.

1. **Elliptic Curves in Game Theory** (2025)
   Authors: ***A. Kidambi****, E. Neuhaus, I. Portakal*
   arXiv:2501.14612
   Code repository: https://mathrepo.mis.mpg.de/elliptic_curves_game_theory/index.html

2. **Notes on Characterizations of $2d$ Rational SCFTs: Algebraicity, Mirror Symmetry and Complex Multiplication** (2024)
   Authors: ***A. Kidambi***, *T.Watari, M.Okada*
   arXiv:2408.00861, Published: Fortschr. Phys. 2024, 2400161

3. **Generalized Narain Theories Decoded: Discussions on Eisenstein series, Characteristics, Orbifolds, Discriminants and Ensembles in any Dimension** (2023)
   Authors: *M. Ashwinkumar,* ***A. Kidambi****, J.M. Leedom, M. Yamazaki*
   arXiv:2311.00699, Accepted: To appear in Advances in Theoretical and Mathematical Physics

4. **The gravitational path integral for $N = 4$ BPS black holes from black hole microstate counting** (2022)
   Authors: *G. L. Cardoso,* ***A. Kidambi****, S. Nampuri, V. Reys, M. Rossello*
   arXiv:2211.06873, Published: Annales Henri Poincaré, 24 (2023) 10, 3305-3346

5. **Octonionic Magical Supergravity, Niemeier Lattices, and Exceptional and Hilbert Modular Forms** (2022)
   Authors: *M. Günaydin &* ***A. Kidambi***
   arXiv:2209.05004, Published: Fortschr. Phys. 2024, 2300242.

6. **Towards Hodge Theoretic Characterizations of $2d$ Rational SCFTs** (2022)
   Authors: ***A. Kidambi****, M. Okada & T. Watari*
   arXiv:2205.10299

7. **Chern–Simons invariants from ensemble averages** (2021)
   Authors: *Ashwinkumar. M., Dodelson. M.,* ***Kidambi A.****, Leedom J., Yamazaki. M.*
   arXiv:2104.14710, Published: J. High Energ. Phys. 2021, 44 (2021)

8. **Dyonic black hole degeneracies in $\mathcal{N} = 4$ string theory from Dabholkar-Harvey degeneracies** (2019)
   Authors: *Chowdhury, A.,* ***Kidambi, A.****, Murthy, S., Reys, V. and Wrase, T.*
   arXiv:1912.06562, Published: J. High Energ. Phys. 2020, 184 (2020)

9. **Heterotic strings on $(K3 \times T^2)/\mathbb{Z}_3$ and their dual Calabi-Yau threefolds** (2019)
   Authors: *Banlaki, A., Chattopadhyaya, A.,* ***Kidambi, A.*** *, Schimannek, T. and Schimpf, M.*
   arXiv:1911.09697, Published: J. High Energ. Phys. 2020, 203 (2020)

10. **On Mathieu moonshine and Gromov-Witten invariants** (2018)
    Authors: *Banlaki, A., Chowdhury,* ***A., Kidambi****, A. and Schimpf, M.*
    arXiv:1811.11619, Published: J. High Energ. Phys. 2020, 82 (2020)

11. **Calabi-Yau manifolds and sporadic groups** (2017)
    Authors: *Banlaki, A., Chowdhury,* ***A., Kidambi****, A., Schimpf, M., Skarke, H. and Wrase, T.*
    arXiv:1711.09698, Published: J. High Energ. Phys. 2018, 129 (2018)

Supervision

1. PhD Project co-supervision of Mr. Felix Lotter (together with Prof. Bernd Sturmfels) on *Aspects of multiple zeta values and Hodge theory* (2025 - , Max Planck Institute for Mathematics in the Sciences)
2. Project supervision of Ms. Eleonora Svanberg on $L-$functions. (2022 - 2024, Part III Mathematical Tripos student at Cambridge University, onwards to PhD at Oxford under Prof. Xenia de La Ossa)
3. PhD Project co-supervision of Mr. Weiguang Cao (2021-2022, Kavli IPMU)
4. Mr. Soumil Maulick (MSc thesis, Joint TU Vienna-BITS Pilani, Goa Campus): Tunneling in cosmology via Coleman-de Luccia instantons (2019, Onwards to PhD at IUCAA, Pune)
5. Co-supervision of senior projects at Stanford University

Teaching

WiSe = Winter Semester, SoSe = Summer Semester

1. **(Math, Master's and PhD level)** Arithmetic Geometry of Feynman Integrals - (WiSe 2024-2025)
   Course Website: https://abhirammk.github.io/teaching/FI24/FI24
2. **(Math and Computer Science, Master's level)** Computational Number theory - (WiSe 2024-2025)
   Course Website: https://abhirammk.github.io/teaching/CNT24/CNT24
3. **(Math, Graduate Level)** Automorphic forms and $L-$functions, University of Vienna (WiSe 2023-2024)
   Course Website: https://abhirammk.github.io/teaching/MFLF24/MFLF24
4. **(Physics, Graduate Level)** Lecture series on black holes, Leibniz Universität Hannover (SoSe 2022)
   Course website: https://abhirammk.github.io/teaching/BH22/blackholesSoSe22
5. Seminar series on 'Advanced Supersymmetric gauge theories' (SoSe 18)
6. Seminar series on 'Supersymmetric gauge theories' (WiSe 2017-18)
7. Lectures on number theory and stringy black holes (38 hours, internal group lectures), TU Vienna (SoSe 2017)
8. Multiple lectures within conformal field theory (master's level course) at TU Vienna (WiSe 2016-17) + (SoSe 2017)
9. Teaching assistant: Supersymmetry and Supergravity (WiSe 2016-17) (Prof. Peter van Nieuwenhuizen)

Past Research Working Groups

1. Research level: Fractons @ Kavli IPMU (2020)
   Together with Masahito Yamazaki and Yunquin Zheng
2. Research level: Replica Wormholes @ Kavli IPMU (2020 - 2021)
   Together with Masahito Yamazaki
3. Research level: Mathematical Structures of Scattering Amplitudes @ Kavli IPMU (2022 - 2023)
   Together with Mikhail Kapranov and Todor Milanov

Workshops and conferences

Invited for collaboration/research groups (without talk). Invites with talk are listed in the Talks section above.

1. **(Invited)** Algebraicity and Transcendence for Singular Differential Equations, Vienna (Austria), Oct 2024
2. **(Invited)** Workshop on Special Functions: From Geometry to Fundamental Interactions, Munich (Germany), Aug 2024
3. **(Invited)** New connections between physics and number theory, Pollica (Italy), June 2023
4. **(Invited)** Simons Center Workshop on Supersymmetric Black Holes, Holography and Microstate Counting, Stony Brook (USA), Oct - Nov 2022
5. **(Invited)** Simons Workshop on Automorphic Structures in String Theory, Stony Brook (USA), Mar 2019
6. **(Invited)** Simons Conference on Number Theory, Geometry, Moonshine & Strings III, New York (USA), Feb 2019

Workshops and conferences organized

(S) indicates that workshop/conference/school is adopted only after competitive screening

1. **(S)** Organizer, School and Workshop on Number Theory and Physics (ICTP Trieste) (Nov 2025)
2. **(S)** Organizer, Workshop on Explicit Arithmetic Geometry (ICTP Trieste) (Jul 2025)
3. **(S)** Organizer, School on Explicit Arithmetic Geometry (ICTP Trieste) (Jul 2025)
4. Organizer, Computer Algebra, Number Theory and More (MPI-MiS Leipzig) (Mar 2025)
5. **(S)** Organizer, Simons Workshop on Murmurations in Arithmetic Geometry (Stony Brook) (Nov. 2024)
6. **(S)** Organizer, Workshop on Number Theory and Physics (ICTP Trieste) (Jun 2024)
7. **(S)** Organizer, School on Number Theory and Physics (ICTP Trieste) (Jun 2024)
8. Organizer, Geometry and Automorphy of Supersymmetric Partitions (Kavli IPMU), Feb 2023
9. Organizer, Strings 2022, Vienna (Jul 2022)
10. Organizer, *Workshop on Number theory, strings, and quantum physics*, May 31 - June 4 2021 (Kavli IPMU)

Programming and Computing

Extremely strong programming skills in C/C++, Python, Singular, Mathematica, SageMath, Pari/GP and GAP. Excellent familiarity with mathematical libraries such as FLINT, PALP and TOPCOM as well as programming tools such as Git. Very good knowledge of Python/CUDA GPU programming, shell scripting in Unix systems, and management of Linux/Unix systems and servers. Good knowledge of functional programming (Haskell and OCaml). Intermediate skills with Rust, and theorem provers (Isabelle, Coq).

Strong Experience with writing computational libraries for number theory and mathematical software development. Currently under development: FLINT and Pari/GP packages for quasimodular forms, and Pari/GP libraries for rational point counts on abelian and algebraic varieties.

Languages

Native Fluency: English, Tamil, Kannada, Hindi/Urdu
Full Professional Fluency: German, Sanskrit
Limited Working Fluency: Spanish, Telugu, Malayalam
Elementary: Japanese

References

(Co-Author): Collaborated/am collaborating *and* have written a paper. *(Collaborator)*: Currently working.

Mathematical Physics

1. Prof. Shamit Kachru (SITP, Stanford University) (Fellowship advisor)
   skachru@stanford.edu
2. Prof. Murat Günaydin (Pennsylvania State University) (Co-Author)
   mgunaydin@psu.edu
3. Prof. Taizan Watari (Kavli IPMU) (Co-Author)
   taizan.watari@ipmu.jp
4. Prof. Yuji Tachikawa (Kavli IPMU) (Postdoctoral Mentor & Collaborator)
   yuji.tachikawa@ipmu.jp
5. Prof. Dr. Olaf Lechtenfeld (Leibniz U. Hannover) (**Teaching reference**)
   lechtenf@itp.uni-hannover.de

Mathematics

1. Prof. Kyu-Hwan Lee (University of Connecticut) (Collaborator)
   khlee@math.uconn.edu
2. Prof. Dr. Daniel Roggenkamp (MPI for Mathematics in the Sciences) (Research group leader)
   daniel.roggenkamp@mis.mpg.de
3. Prof. Dr. Bernd Sturmfels (MPI for Mathematics in the Sciences & UC Berkeley)
   bernd@mis.mpg.de (**Also teaching reference**)