Deewang Bhamidipati (he/him/his)

Department of Mathematics and Statistics, Carleton College
Website: bdeewang.com | Email: bdeewang@carleton.edu

Employment

Carleton College, Department of Mathematics and Statistics — *Minnesota, USA*
Visiting Assistant Professor — Sep 2025 – *present*

Education

University of California, Santa Cruz (UCSC) — *California, USA*
Ph.D. in Mathematics (Advisor: Martin Weissman) — Aug 2025

Higher School of Economics (HSE) — *Moscow, Russia*
M.Sc. in Mathematics (Advisor: Vadim Vologodsky) — Jun 2019

Shiv Nadar University (SNU) — *Delhi NCR, India*
B.Sc. (research) in Mathematics, Specialisation in Applied Algebra — May 2016

Research Interests

Arithmetic Geometry, Algebraic Number Theory, Undergraduate & Graduate Mathematics Education

Papers & Preprints

Accepted or Published

1. *Frobenius distributions of low dimensional abelian varieties over finite fields* with S. Arango-Piñeros and S. Sankar
   International Mathematics Research Notices (2024), no. 16, 11989-12020
2. *The Brauer group of $\mathscr{Y}_0(2)$* with N. Achenjang, A. Jha, C. Ji, R. Lopez
   Épijournal de Géométrie Algébrique (2026), no. 10

Submitted or Preprints

3. *Analogues of Traverso's Isogeny Conjecture for Some Unitary p-Divisible Groups*
   with E. Andrews, M. Fox, H. Goodson, S.R. Groen, S. Nair | arXiv:2507.19708
4. *Ekedahl-Oort strata with a superspecial factor in unitary Shimura varieties*
   with E. Andrews, H. Goodson, S.R. Groen, S. Nair | arXiv:2610.22036
5. *On the classification of indecomposable Ekedahl–Oort strata in unitary Shimura varieties, and related Newton polygons*
   with E. Andrews, M. Fox, H. Goodson, S.R. Groen, S. Nair | arXiv:2606.16882
6. *Ekedahl–Oort strata and the Newton stratification of the $\mathrm{GU}(3,2)$ Shimura variety*
   with E. Andrews, M. Fox, H. Goodson, S.R. Groen, S. Nair | arXiv:2510.01090
7. *Ekedahl–Oort strata in the $\mathrm{GU}(q-2,2)$ Shimura variety*
   with E. Andrews, M. Fox, H. Goodson, S.R. Groen, S. Nair | arXiv:2405.04464
8. *Humanizing the Digital Math Classroom: Research-Based Strategies for Synchronous Online Learning*
   with P. Morales-Almazan, S. Aiken, M. Alexander, C. Dowd

In Preparation

9. *A p-adic analytic Brauer group & fractional Hodge–Tate weights* (based on my Ph.D. thesis)

Teaching

Carleton College	MATH 232 – **Linear Algebra**	Spring 2027, Fall 2026
	MATH 210 – **Calculus 3**	Spring 2027, Winter 2027, Spring 2026
	MATH 295 – **Error-correcting Codes**	Winter 2027
	MATH 120 – **Calculus 2**	Fall 2026, Spring 2026
	MATH 282 – **Number Theory**	Winter 2026
	MATH 111 – **Introduction to Calculus**	Winter 2026, Fall 2025

UC Santa Cruz	MATH 134 – **Cryptography**	Summer 2025
	MATH 3 – **Precalculus**	Summer 2025, Summer 2020
	MATH 11B – **Calculus with Applications**	Summer 2024, Summer 2022
	MATH 181 – **History of Mathematics**	Summer 2024
	MATH 100 – **Introduction to Proof and Problem Solving**	Winter 2024, Summer 2022
	MATH 105A – **Real Analysis**	Summer 2023, Fall 2020
	MATH 103A – **Complex Analysis**	Spring 2023, Spring 2022
	MATH 110 – **Introduction to Number Theory**	Fall 2021, Summer 2021

Research Talks

A p-adic analytic Brauer group

at the *Five College Number Theory Seminar*, Amherst College	Feb 2027
Special Session on Rethinking Number Theory at Joint Mathematics Meetings	Jan 2025
AMS Contributed Paper Session at AMS Fall Western Sectional	Oct 2024
AMS Contributed Paper Session on Number Theory and Related Topics at Joint Mathematics Meetings	Jan 2024
Special Session on Rethinking Number Theory at AWM Research Symposium	Oct 2023

Analogs of Traverso's Isogeny Conjecture for Supersingular Unitary p-Divisible Groups

AWM Special Session on Arithmetic Geometry & Algebraic Groups at Joint Mathematics Meetings	Jan 2027

Indecomposable Ekedahl–Oort strata in unitary Shimura varieties

USTARS at JMM: A Special Session on Algebra and Topology at Joint Mathematics Meetings	Jan 2027

p-torsion invariants of Abelian Varieties over finite fields

Special Session on Topics in Number Theory and Arithmetic Geometry at AMS Spring Western Sectional	May 2025

Strata intersections in some unitary Shimura varieties

at the *Algebra and Number Theory Seminar*, University of Arizona	Jan 2025
at the *Number Theory Seminar*, The Ohio State University	Oct 2024
at the *Algebra and Number Theory Seminar*, UCSC	Oct 2024
at the *Connecticut Summer School in Number Theory* (CTNT) *Conference*	Jun 2024
at the *Underrepresented Students in Topology and Algebra Research Symposium* (USTARS)	Apr 2024
Special Session on Research in Mathematics by Early Career Graduate Students at AMS Spring Western Sectional	May 2023

q-Frobenius Trace distributions of Abelian varieties

at the *Arithmetic Geometry Seminar*, CUNY Graduate Center	Nov 2024
at the *Number Theory Seminar*, Oklahoma State University	Oct 2024
at the Indian Institute of Technology Hyderabad, India	Sep 2024
at the *Algebra and Number Theory Seminar*, UCSC	May 2024
at the *Math for All conference* (virtual poster)	Apr 2024
at The *Golden Section of the Mathematical Association of America (MAA)* (poster)	Feb 2024
at the *West Coast Number Theory* (WCNT) *Conference*	Dec 2023
at the *Underrepresented Students in Topology and Algebra Research Symposium* (USTARS)	Mar 2023
Special Session on Rethinking Number Theory at Joint Mathematics Meetings	Jan 2023

The Brauer group of stacky $Y_0(2)$

AMS Contributed Paper Session at AMS Spring Western Sectional	May 2024

Undergraduate and Pedagogy Talks & Outreach Activities

Undergraduate Talks

A Point is Worth a Shape: Introducing Moduli Spaces at University of St. Thomas, MN	Feb 2027
A Point is Worth a Shape: Introducing Moduli Spaces at the *MSCS Colloquium*, St. Olaf College, MN	Nov 2026
The Time I was Dreaming about Rational Triangles . . . in the World of Alg. Geometry at Carleton College, MN	Apr 2025
A Point is Worth a Shape: Introducing Moduli Spaces at the *Undergraduate Colloquium*, UCSC	Feb 2023

Pedagogy Talks

TA Orientation: Your First Day as a TA with Jennifer G. — Sep 2024
Math Summit 2024, University of California, Santa Cruz

Preparing Future Scientists: Redesigning Applications in Calc. for Life Sci. with Sophie A., Jennifer G. — Mar 2024
Alliance of Hispanic Serving Institution Educators (AHSIE) Best Practices Conference

The Role of TAs in Transformative Education with Nandini Bhattacharya — Sep 2023
Math Summit 2023, University of California, Santa Cruz

Outreach Activities

The Gerrymandering Game: The Partisan Art of Tipping the Scales — Mar 2025, '24
Math Teachers' Circle, Santa Cruz

Secret Agents: Crack the Code, Save the World! (5th - 10th grade girls) with Sophie A., Jennifer G. — Dec 2024
Lyceum 11th Annual Expanding Your Horizons at Hartnell College

Euler, Graphs and Paths (6th & 7th graders) — Oct 2024
Santa Cruz Math Circle

Ciphers & Secret Messages (6th & 7th graders) — Mar 2024
Santa Cruz Math Circle

Pedagogical & Professional Development

Programmes

Silver '26 Cohort, **Project NExT**, MAA — 2026–27

Participant, **Research Experiences for Undergraduate Faculty (REUF)**, AIM — July 2026
Project: *Formalising Mathematics in Lean*.

The Educational Group for Enrichment in Data Science (edge-DS), UCSC & CSU Monterey Bay
Participant, **Data Science Integration Program** — Summer 2025
Interdisciplinary Scholar — Fall 2024 – Spring 2025
Foundations Scholar — Fall 2023 – Spring 2024

Participant, **Data Science Boot Camp**, Erdös Institute — Feb – May 2024
Final Project: *D&D Combat Length Predictions* (Top 5 Project).

Participant, **Fundamentals of Process Oriented Guided Inquiry Learning (POGIL) Workshop**, The POGIL Project — Jan 2024

Equity-Minded Mentoring Certificate, Teaching & Learning Center, UCSC — Winter 2023

Preparing for Inclusive Teaching, Teaching & Learning Center, UCSC — Sep 2020, 2019

Integrated Course Design for Remote Instruction Certificate, Teaching & Learning Center (then OE), UCSC — Spring 2020

Course Design & Delivery Certificate, Teaching & Learning Center, UCSC — Spring 2020

Teaching for Equity Certificate, Teaching & Learning Center, UCSC — Spring 2020

Teaching as an Ethical Practice (online), Teaching & Learning Center, UCSC — Fall 2019

Positions

Graduate Teaching Fellow, Online Course Development, Mathematics Department, UCSC — Spring 2025, '24

Graduate Student Facilitator, **Preparing for Inclusive Teaching**, Teaching & Learning Center, UCSC — Sep 2024, '23

Graduate Student Researcher, *Redesigning Calculus in the Life Sciences* — Summer 2024, '23, '21
Mathematics Department, Teaching & Learning Center, UCSC (Fellowship under GANAS-Career Pathways)

Graduate Pedagogy Fellow, Mathematics, Teaching & Learning Center, UCSC — Winter – Spring 2024

Summer GSI Peer Support Team, Teaching & Learning Center, UCSC — Spring – Summer 2021

Outreach, Mentorship & Community Involvement

Presenter & Panelist, **Frontiers of STEM: Geometry** (Career Panel), **National Math Stars** — Feb 2026

Project for Inmate Education (PIE), UCSC
- *Instructor, Grader & Coordinator*, College Algebra (for UCSC credits) — Oct 2024 – Jun 2025
- *Instructor & Grader*, Pre-Algebra (for GED) — Apr – Jun 2024

Instructor, **Santa Cruz Math Circle** — Mar 2024 – Feb 2025

Session Leader, **Math Teachers' Circle, Santa Cruz** — Mar 2025, '24

Co-Session Leader, **Expanding Your Horizons at Hartnell College** — Dec 2024

Course Assistant, Number Theory, **COSMOS** — Jul – Aug 2024

Graduate Student Mentor, **Rethinking Number Theory** — Jun 2024

Facilitator & Volunteer, UCSC Math Table, **STEAM Fest**, Chase Center, San Francisco, CA — Mar 2024

Facilitator & Volunteer, Mini Math Festival, **STEAM Expo**, Santa Cruz County of Education — Mar 2024

Panelist & Volunteer, **STEAM Fair**, Pacific Elementary School, Davenport, CA — Feb 2024

Directed Reading Program, UCSC

- *Mentor*, Heather Doubinkine. **Matrix Groups as Lie Groups** — Spring 2025
- *Mentor* (with Yahya Bashandy), Elyas Gharavi. **Explicit Local Class Field Theory** — Spring 2025
- *Mentor*, Ethan Jones. **Curves over Finite Fields** — Spring 2025
- *Mentor* (with Mike Williams), Chuck Naghise. **Topology of Surfaces** — Winter 2025
- *Mentor*, August Noë. **Frames, Locales and Stone Duality** — Winter 2025
- *Mentor* (with Yahya Bashandy), Nick Van Daele. **Geometric Group Theory** — Fall 2024
- *Mentor*, Ethan Jones. **Modular Forms** — Fall 2024
- *Mentor*, Ethan Jones. **Primes of the form $x^2 + ny^2$** — Spring 2024
- *Mentor*, August Noë. **Period Numbers** — Spring 2024
- *Mentor*, Chloe Watson. **Seifert Surfaces & Genus of Knots** — Winter – Spring 2024
- *Mentor* (with David Rubinstein), Yahya Bashandy. **Derived Functors & Kan Extensions** — Winter 2024
- *Mentor*, August Noë. **Introduction to Model Theory and Applications** — Fall 2023
- *Mentor* (with David Rubinstein), Yahya Bashandy. **Group Cohomology & Hilbert's Theorem 90** — Fall 2023
- *Mentor*, Morea Lee. **Kummer Theory** — Spring 2023
- *Mentor*, Brooke Zhang. **Combinatorial Designs** — Fall 2022
- *Mentor* (with David Rubinstein), Kenneth Gee. **The Lambek Correspondence** — Summer – Fall 2022
- *Mentor*, Miles Mitchell. **Affine Algebraic Groups and Hopf Algebras** — Spring 2022
- *Mentor*, Morea Lee. **Galois Theory over $\mathbb{Q}$** — Winter 2022
- *Mentor*, Yijia Sun. **Linear Error Correction Codes** — Fall 2021
- *Mentor*, Anna Yoon. **Elliptic Curve Cryptography** — Winter 2020

Twoples

- *Mentor*, Lillian Frey (Binghamton University). **Introduction to Coding Theory: Linear Codes** — Sep – Dec 2022
- *Mentor*, Lalit Sharma (University of Delhi). **Number Theory of Number Fields: Class Groups** — Jan – Apr 2022
- *Mentor*, Bowen Li (Carleton College). **Journey through Category Theory** — Jan – Apr 2022
- *Mentor*, Lalit Sharma (University of Delhi). **Introduction to Algebraic Geometry: Varieties** — Sep – Dec 2021

Panelist

- *Preparing for the Job Market*, Math. Dept. DEI Committee, UCSC — Jun 2026
- *On Research Collaborations and Mentorship*, Special Session on RNT, JMM 2025 — Jan 2025
- *The Roles and Contributions of TAs*, Graduate Preparation Program, UCSC — Aug 2024, '23, '22, '21
- *How to Conduct Research in Mathematics (as a PhD student)*, Math. Dept. DEI Committee, UCSC — Feb 2024
- *Conferences and Funding*, Graduate Student Colloquium, UCSC — Nov 2023
- *Graduate Student Perspectives: A Year in Review*, Lunch in the Time of COVID — May 2021

Study Leader, Prelim Study Groups by AWM at UCSC

- *Study Leader for Algebra* — Winter 2025, Spring 2024, Summer 2023
- *Study Leader for Analysis* — Spring 2025, Summer 2022, Winter 2022
- *Study Leader for Geometry* — Summer 2022, Winter 2022

Peer Mentor, Math Dept. Peer Support Program — Fall 2021 - Aug 2025

Staff Writer, Learning Through the Ranks: A Graduate Student Blog at MAA's Values Blog — Nov 2024, Dec 2023

Residential Counselor, **Duke Talent Identification Program (Duke TIP)** — May 2015

Mentor (Debating) & *Instructor* (Creative Writing), **Vidyagyan, Shiv Nadar Foundation** — Mar 2014

Instructor (Mathematics), Teaching Staff, **AURA**, SNU — Sep – Nov 2013

Service & Organising

Carleton College

Co-Organiser, **Problem Solving Seminar** 2026–27

Member, **Independent Comps Committee** Fall 2026

Co-Facilitator, **Intra-departmental AI Workshop** Summer 2026

Co-Organiser, **PORTALS**, intra-departmental seminar on pedagogy and research 2025–26

External

Special Session on "Rethinking Number Theory" at AWM Research Symposium May 16 – 18, 2025
Co-Organiser, w/ Swati and Shilpi Mandal

Special Session on "Curves and Abelian Varieties in Characteristic *p*" at AWM Research Symposium May 16 – 18, 2025
Co-Organiser, w/ Steven Groen and Sandra Nair

Biography Writer & *Data Collector*, **AWM EvenQuads Deck 3**

Invited Paper Session on "Rethinking Number Theory" at MAA MathFest Aug 7 – 10, 2024
Co-Organiser, w/ Tyler Billingsley and Sandra Nair

Special Session on "Rethinking Number Theory" at AWM Research Symposium Sep 30 – Oct 2, 2023
Co-Organiser, w/ Eva Goedhart and Amita Malik

University of California, Santa Cruz

Co-Organiser, **Experiences in Mathematics**, w/ Jennifer G., Nariel M. Spring 2024 - Spring 2026

Co-Director, **Project for Inmate Education** (PIE), w/ Mikayla W., Andy S. Jul 2023 – Jun 2025

Head TA, Mathematics Department Jul 2022 – Jun 2025

Co-Organiser, **Math. Dept. Peer Support Program** Aug 2021 – Jun 2025

Co-Organiser, **Directed Reading Program** Aug 2021 – Mar 2025

Graduate Student Member, Organising Committee, Math Summit (under GANAS-Career Pathways) Aug – Sep 2024, '23

Co-Organiser, **Category Theory Learning Seminar** Spring 2024, Winter – Spring 2022

Association for Women in Mathematics (AWM) Chapter (co-founded w/ Jennifer Guerrero)
President, AWM Executive Committee Sep 2022 – Sep 2023
General Secretary, AWM Executive Committee Nov 2020 – Aug 2022

Co-Organiser, **Prelim Study Groups** (an AWM Initiative) Jan – Aug 2025, Jan 2022 – Sep 2023

Co-Organiser, **Undergraduate Colloquium** (an AWM Initiative) Mar – Jun 2022

EmpowHER Hour (an AWM Initiative), supported as a member of AWM Executive Committee Mar 2022 – Jun 2023

Co-Organiser, **What are you reading?** an informal seminar Spring 2023

Co-Organiser, **Graduate Colloquium, Mathematics Department** (resuscitated w/ David R.) Dec 2020 – Jun 2022

Graduate Student Representative, **Mathematics Department DEI Committee** Oct 2020 – Jun 2022

Organiser & Convener, **Math. Dept. GSI Support** Feb – Aug 2021

Workshops & Conferences Attended (selected)

*Remote

MAA MathFest. New Orleans, LA, USA Aug 2027

Joint Mathematics Meetings. Chicago, IL, USA Jan 2027

K3 Surfaces over Finite Fields, ICERM. Providence, RI, USA Oct 2026

MAA MathFest. Boston, MA, USA Aug 2026

REUF, AIM. Pasadena, CA, USA Jul 2026

Summer Research Institute in Algebraic Geometry. Colorado State University, Fort Collins, CO, USA Jul 2025

AWM Research Symposium. Madison, WI, USA May 2025

AMS Spring Western Sectional Meeting. San Luis Obispo, CA, USA May 2025

SQuaREs, AIM. Pasadena, CA, USA Feb 2025

Joint Mathematics Meetings. Seattle, WA, USA — Jan 2025

Workshop on *p*-adic Geometry, National University of Singapore. Singapore — Nov 2024

CTNT Conference. University of Connecticut, Storrs, CT, USA — Jun 2024

USTARS. University of Iowa, Iowa City, IA, USA — Apr 2024

AHSIE Best Practices Conference. Monterey, CA, USA — Mar 2024

AWS: *Abelian Varieties*. University of Arizona, Tucson, AZ, USA — Mar 2024

SIGMAA on RUME Annual Conference* — Feb 2024

Joint Mathematics Meetings. San Francisco, CA, USA — Jan 2024

West Coast Number Theory Conference. Henderson, NV, USA — Dec 2023

AWM Research Symposium. Atlanta, GA, USA — Oct 2023

AMS's MRC: *Explicit Computations with Stacks*. Java Center, NY, USA — June 2023

AMS Spring Western Sectional Meeting. Fresno, CA, USA — May 2023

CIME: *Mentoring for Equity*. MSRI/SLMath, Berkeley, CA, USA — Mar 2023

USTARS. University of Washington, Seattle, WA, USA — Mar 2023

AWS: *Unlikely Intersections*. University of Arizona, Tucson, AZ, USA — Mar 2023

Introductory Workshop: Diophantine Geometry. MSRI/SLMath, Berkeley, CA, USA — Feb 2023

Joint Mathematics Meetings. Boston, MA, USA — Jan 2023

Rethinking Number Theory 3* — Jun – Jul 2022

AWS: *Automorphic Forms Beyond GL_2*. University of Arizona, Tucson, AZ, USA — Mar 2022

Rethinking Number Theory 2* — Jul 2021

MSRI Summer Graduate School: *Sparsity of Algebraic Points** — Jun 2021

Connecticut Summer School in Number Theory (CTNT)* — Jun 2020

Awards, Grants & Fellowships

Curricular Innovation Grant, Carleton College — Summer 2026

SQuaREs, AIM (American Institute of Mathematics) w/ E. Andrews, M. Fox, H. Goodson, S. Groen, and S. Nair — 2024, '25, '27

Chancellor's Dissertation-Year Fellowship, Division of Physical and Biological Sciences, UCSC — 2024 – 2025

PI, Proofs and Proof-Writing in a Large Institute, Small-grants Program for Pedagogy Development — 2024 – 2025
w/ J. Guerrero; Teaching & Learning Center and Graduate Division, UCSC

Graduate Dean's Travel Grant, Division of Graduate Studies, UCSC — Jun 2025, Jan 2024, Jun 2023

Diversity Innovation Fellowship, Graduate Division, UCSC; w/ J. Guerrero and N. Monteiro — Mar 2025

JMM Graduate Student Travel Grant, AMS — Nov 2024

AMS Sectional Graduate Student Travel Grant, AMS — Aug 2024

Rita Olsen Pister Re-entry Student Scholarship, Services for Transfer and Re-entry Students (STARS), UCSC — Apr 2024

Graduate Pedagogy Fellowship, Teaching & Learning Center, UCSC — Winter – Spring 2024

Co-PI, Head Support TA Role, Small-grants Program for Pedagogy Development — 2022 – 2023
w/ J. Guerrero (PI) and A. Price; Teaching & Learning Center and Graduate Division, UCSC

State Funded Scholarship, HSE — 2017 – 2019

Full Merit Scholarship, SNU — 2012 – 2016