

CONTACT INFORMATION	Mathematics Department University of California, Santa Cruz	Email: bdeewang@ucsc.edu Website: bdeewang.com
EDUCATION	<b>University of California, Santa Cruz</b> PH.D. IN MATHEMATICS Advisor: <i>Martin Weissman</i> M.A. IN MATHEMATICS  <b>Higher School of Economics</b> M.SC. IN MATHEMATICS Advisor: <i>Vadim Vologodsky</i>  <b>Shiv Nadar University</b> B.SC. (RESEARCH) IN MATHEMATICS Specialisation in Applied Algebra	California, USA Sep 2019 – present   Aug 2020  Moscow, Russia Jun 2019  Uttar Pradesh, India May 2016
EXTERNAL TALKS	<b>Vertical Frobenius Trace Distributions</b> <i>USTARS, University of Washington, Seattle, WA</i>  <b>Frobenius Trace Distributions informed by Angle Rank</b> <i>Joint Mathematics Meetings, Boston, MA</i>  <b>What is... a scheme?*</b> <a href="#">What is... a seminar?</a>  <b>A Non-Archimedean Volume of Hilbert Scheme of Points</b> <i>The Mathematics Society Seminar, Shiv Nadar University</i>	Mar 2023  Jan 2023  Oct 2021  Aug 2019
INTERNAL TALKS	<b>A Point is Worth a Shape: Introducing Moduli Spaces</b> <i>Undergraduate Student Colloquium, University of California, Santa Cruz</i>  <b>Angle Ranks and Frobenius Distributions*</b> <i>Graduate Student Colloquium, University of California, Santa Cruz</i>  <b>L<sup>A</sup>T<sub>E</sub>X Workshop</b> (with Jennifer Guerrero) <i>Undergraduate Student Colloquium, University of California, Santa Cruz</i>  <b>Some Invariants of Abelian Varieties over Finite Fields</b> <i>Graduate Student Colloquium, University of California, Santa Cruz</i>  <b>L<sup>A</sup>T<sub>E</sub>X Workshop, Parts II: Trying tikz, tikz-cd and beamer</b> <i>Undergraduate Student Colloquium, University of California, Santa Cruz</i>  <b>L<sup>A</sup>T<sub>E</sub>X Workshop Parts I: An Introduction</b> <i>Undergraduate Student Colloquium, University of California, Santa Cruz</i>  <b>Cohomology on Sites*</b> <i>Graduate Student Colloquium, University of California, Santa Cruz</i>  <b>Fundamental Groups: Topological, Étale, Tannakian*</b> <i>Graduate Student Colloquium, University of California, Santa Cruz</i>  <b>Demystifying the <math>p</math>-adics*</b> <i>Graduate Student Colloquium, University of California, Santa Cruz</i>	Feb 2023  Nov 2022  Oct 2022  Oct 2022  Apr 2022  Apr 2022  Jan 2022  Oct 2021  Nov 2020

<b>A First Introduction to Motivic Integration</b> <i>Geometric Structures on Manifolds Seminar, Higher School of Economics</i>	Jun 2019
<b><math>p</math>-adic Integration and Betti Numbers of Calabi-Yau Varieties</b> <i>Geometric Structures on Manifolds Seminar, Higher School of Economics</i>	Dec 2018
<b>Mordell's Theorem</b> <i>Graduate Student Seminar, Higher School of Economics</i>	May 2018

**PROGRAMMES,  
WORKSHOPS &  
CONFERENCES**  
(selected)

\*REMOTE

<b>Critical Issues in Mathematics Education: <i>Mentoring for Equity</i></b> <i>MSRI/SLMath, Berkeley, USA</i>	Mar 2023
<b>USTARS</b> <i>University of Washington, Seattle, USA</i>	Mar 2023
<b><i>Unlikely Intersections</i>, Arizona Winter School</b> <i>University of Arizona, Tuscon, USA</i>	Mar 2023
<b>Introductory Workshop: Diophantine Geometry</b> <i>MSRI/SLMath, Berkeley, USA</i>	Feb 2023
<b>Joint Mathematics Meetings</b> <i>Boston, USA</i>	Jan 2023
<b>Rethinking Number Theory*</b> Project Leader: <i>Maria Fox</i>	Jun – Jul 2022
<b><i>Automorphic Forms Beyond <math>GL_2</math></i>, Arizona Winter School</b> <i>University of Arizona, Tuscon, USA</i>	Mar 2022
<b>PCMI Graduate Summer School*</b> <i>Number Theory Informed by Computation</i> (Week 3) <i>Motivic Homotopy Theory</i> (Week 1) <i>IAS/PCMI, Park City, Utah, USA</i>	Jul 2021
<b>Rethinking Number Theory*</b> Project Leader: <i>Soumya Sankar</i>	Jul 2021
<b><i>Sparsity of Algebraic Points</i>, MSRI Summer Graduate School*</b> <i>MSRI, Berkeley, USA</i>	Jun 2021
<b>Rational Points and Galois Representations*</b> <i>University of Pittsburgh, USA</i>	May 2021
<b>Unlikely intersections, Diophantine geometry, and related fields*</b> <i>University of Reading, UK</i>	Apr 2021
<b>Connecticut Summer School in Number Theory (CTNT)*</b> <i>University of Connecticut, Connecticut, USA</i>	Jun 2020

**TEACHING**

\*REMOTE

<b>UNIVERSITY OF CALIFORNIA, SANTA CRUZ</b>		
<i>Instructor of Record</i>	<b>MATH 105A – Real Analysis</b>	Summer 2023*
	<b>MATH 103A – Complex Analysis</b>	Spring 2023
	<b>MATH 11B – Calculus with Applications</b>	Summer 2022*
	<b>MATH 100 – Introduction to Proof and Problem Solving</b>	Summer 2022*
	<b>MATH 103A – Complex Analysis</b>	Spring 2022
	<b>MATH 110 – Introduction to Number Theory</b>	Fall 2021
	<b>MATH 110 – Introduction to Number Theory</b>	Summer 2021*
	<b>MATH 105A – Real Analysis</b>	Fall 2020*

	<b>MATH 3 – Precalculus</b>	Summer 2020*
<i>Teaching Assistant</i>	<b>MATH 288B – Pedagogy of Mathematics (GSI)</b>	Winter 2023
	<b>MATH 19A – Calculus for Sci., Eng., and Math.</b>	Fall 2022
	<b>MATH 11A – Calculus with Applications</b>	Winter 2022
	<b>MATH 111T – Algebra</b> (Fellowship under SEMILLA Teach)	Spring 2021*
	<b>MATH 100 – Introduction to Proof and Problem Solving</b> (Fellowship under SEMILLA Teach)	Winter 2021*
	<b>MATH 3 – Precalculus</b>	Spring 2020*
	<b>MATH 181 – History of Mathematics</b>	Winter 2020
	<b>MATH 3 – Precalculus</b>	Fall 2019

#### SHIV NADAR UNIVERSITY

<i>Teaching Assistant</i>	<b>MAT260 – Linear Algebra</b>	Fall 2015
<i>Tutor, LASC</i>	<b>MAT260 – Linear Algebra</b>	Spring 2015
	<b>MAT284 – Probability and Statistics</b>	Spring 2015
	<b>MAT101 – Calculus I</b>	Fall 2014
	LASC = Learning & Academic Support Centre	

#### SERVICE & ORGANISING

#### UNIVERSITY OF CALIFORNIA, SANTA CRUZ

**Head TA**, for mentorship and support Jul 2022 – *present*  
*Head TA Team*, Mathematics Department

#### Directed Reading Program

*Organiser*, co-organising with David Rubinstein Aug 2021 – Jun 2024

#### Association for Women in Mathematics Chapter

*President* Sep 2022 – Aug 2023  
*General Secretary* Nov 2020 – Aug 2022

#### Mathematics Department Peer Support Program

*Organiser*, co-organising with Jennifer Guerrero, David Rubinstein, Ryan Pugh Aug 2021 – Jun 2023

#### Graduate Student Colloquium, Mathematics Department

*Organiser*, co-organised with David Rubinstein Dec 2020 – Jun 2022

#### Category Theory Learning Seminar

*Organiser*, co-organised with Vaibhav Sutrave, David Rubinstein Winter – Spring 2022

#### Reading Groups, *Organiser*

- **Topological Data Analysis** Winter 2023  
co-organised with David Rubinstein
- **Stacks** Fall 2022
- **Étale Cohomology** Fall 2021  
co-organised with Shane Kennerly, Malachi Alexander
- **Homological Algebra** Spring 2021  
co-organised with Vaibhav Sutrave, Malachi Alexander
- **A Course in Arithmetic by J.-P.Serre** Winter, Summer 2020

#### Mathematics Department DEI Committee

*Graduate Student Representative* Oct 2020 – Jun 2022

## OUTREACH

### UNIVERSITY OF CALIFORNIA, SANTA CRUZ

#### Directed Reading Program

- *Mentor*, Brooke Zhang  
COMBINATORIAL DESIGNS Fall 2022
- *Mentor* (with David Rubinstein), Kenneth Gee  
THE (CURRY-HOWARD-)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

#### Panelist, *The Roles and Contributions of TAs*

*Graduate Preparation Program* Aug 2022, 2021

### EXTERNAL

#### Twoples

- *Mentor*, Lillian Frey (Binghamton University)  
INTRODUCTION TO CODING THEORY: LINEAR CODES Sep – Dec 2022
- *Mentor*, Lalit Mohan Sharma (University of Delhi)  
NUMBER THEORY OF NUMBER FIELDS: CLASS GROUPS Jan – Apr 2022  
INTRODUCTION TO ALGEBRAIC GEOMETRY: VARIETIES Aug – Dec 2021
- *Mentor*, Bowen Li (Carleton College)  
JOURNEY THROUGH CATEGORY THEORY Jan – Apr 2022

#### Panelist, *Graduate Student Perspectives: A Year in Review*

*Lunch in the Time of COVID* May 2021

## PEDAGOGICAL & PROFESSIONAL DEVELOPMENT

### UNIVERSITY OF CALIFORNIA, SANTA CRUZ

#### Equity-Minded Mentoring for Graduate Students Certificate Program

*Center for Innovations in Teaching and Learning* Winter 2023

#### Graduate Student Researcher, *Redesigning Calculus in the Life Sciences*

*Mathematics Department & Center for Innovations in Teaching and Learning* Summer 2021  
Fellowship under the GANAS-Career Pathways grant

#### Summer Graduate Student Instructor Peer Support Team

*Center for Innovations in Teaching and Learning* Spring – Summer 2021

#### Preparing for Inclusive Teaching

*Center for Innovations in Teaching and Learning* Sep 2020, 2019

#### Integrated Course Design for Remote Instruction

*Online Education (OE)* Spring 2020

#### Course Design & Delivery Certificate Program

*Center for Innovations in Teaching and Learning* Spring 2020

#### Teaching for Equity Certificate Program

*Center for Innovations in Teaching and Learning* Spring 2020

<b>AWARDS, GRANTS &amp; SCHOLARSHIPS</b>	<b>State Funded Scholarship, Higher School of Economics</b>	2017 – 2019
	<b>Full Merit Scholarship, Shiv Nadar University</b>	2012 – 2016

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<b>MEMBERSHIPS</b>	<b>Association for Women in Mathematics</b>	Feb 2021 – <i>present</i>
	<b>American Mathematical Society</b>	Oct 2019 – <i>present</i>

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