

Rhea Kommerell

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Updated March 2026

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| INTERESTS | Tensor triangular geometry, Algebraic geometry, Category theory. |
| EDUCATION | University of California, Los Angeles 2029 (expected) Ph.D. in Mathematics University of California, Berkeley 2024 B.A. in Mathematics · High Honors · GPA 3.97 |
| PUBLICATIONS | [1] Linear maps preserving the Lorentz spectrum of 3×3 matrices, with M. I. Bueno, B. Faktor, R. Li, J. Veltri. <i>Involve: A Journal of Mathematics</i> , 17.1 , 121-152. arXiv. 2024. [2] A computational approach to detecting the envelope of variation, with I. Bleaman. <i>Linguistics Vanguard</i> , 10.1 , 385-395. 2024. |
| TEACHING | Teaching Assistant, UCLA <ul style="list-style-type: none">Math 115A: Linear Algebra Winter 2026PIC 16A: Python with Applications Fall 2024, Winter 2025, Fall 2025Math 115B: Linear Algebra Spring 2025 Mentor, UCLA Directed Reading Program <ul style="list-style-type: none"><i>Category Theory in Context</i>, E. Riehl Fall 2024, Winter 2025, Winter 2026 Assistant Instructor, Olga Radko Endowed Math Circle, UCLA Fall 2024 Junior Faculty, Hampshire College Summer Studies in Mathematics 2023, 2024, 2026 Inquiry-based learning program in college-level mathematics for high school students. Lead Instructor, Introduction to Category Theory Fall 2023, Spring 2024 Designed the syllabus and coordinated a team of instructors for a student-led course (DeCal). Associate Mentor, Computer Science Mentors Fall 2021, Spring 2022 |
| TALKS | <i>The Balmer spectrum for perfect complexes</i> UCLA Algebra Seminar November 2025 <i>Quotients of projective varieties in geometric invariant theory</i> UCLA Algebra Seminar April 2025 <i>Hats, hard hats, and the Axiom of Choice</i> UCLA Graduate Student Seminar January 2025 HCSSiM July 2023, July 2024 <i>DVRs and separatedness</i> UC Berkeley, <i>The Rising Sea</i> Reading Group May 2023 <i>Basis-free determinant and trace</i> Berkeley Seminar for Undergraduate Mathematics April 2023 <i>Detecting the envelope of variation using computational language models</i> , with I. Bleaman New Ways of Analyzing Variation October 2022 <i>Linear preservers of Lorentz spectra</i> , with R. Li Young Mathematicians Conference August 2022 |
| OUTREACH & SERVICE | Co-president, UCLA Math Graduate Student Organization 2025 – Present Organizer, UCLA Directed Reading Program 2026 – Present Mentor, Women in Math Mentorship Program 2024 – Present Member, UCLA Math Undergraduate Studies Committee 2025 – Present |

President, Berkeley Math Undergraduate Student Association 2021 – 2024
Mentor, Berkeley Undergraduate Math Mentoring Program 2022 – 2024
Peer Advisor, UC Berkeley Math Department 2022

AWARDS

Dorothea Klumpke Roberts Prize UC Berkeley, 2024
Nominated for **Alice T. Schafer Mathematics Prize** UC Berkeley, 2022
Dean’s List UC Berkeley, 2021
Regents’ and Chancellor’s Scholar UC Berkeley, 2020
Kenneth & Margaret Millar Honors Scholarship Scholarship Foundation of Santa Barbara, 2020
National Merit Scholar 2020

SKILLS

Languages
English, German, Python, C, Java, L^AT_EX