

Nikolay Grantcharov

• nikolayg@uga.edu • US Citizen

EMPLOYMENT	University of Georgia Limited Term Assistant Professor Aug 2025-
EDUCATION	University of Chicago - Ph.D. in Mathematics, advised by Victor Ginzburg Sep 2019- Aug 2025 University of California, Berkeley - B.A. in Mathematics - Graduated with highest honors Aug 2015 – May 2019
AWARDS	- Lawrence and Josephine Graves Teaching Prize, University of Chicago2025 - NSF Graduate Research Fellowship \$102,0002020 – 2023 - Dorothea Klumpke Roberts Prize in Mathematics, UC Berkeley2019 - UC Berkeley department prize awarded to seniors who have demonstrated truly exceptional scholarship in mathematics - UC Berkeley Regents’ and Chancellor’s Scholarship, \$10,0002015 – 2019 - Awarded to 200 undergraduates each year, most prestigious scholarship offered by UC Berkeley. - UC Berkeley Dean’s Honors List2015 2017 - Top 4% of UC Berkeley College of Letters and Science Undergraduates.
PUBLICATIONS	Deformation Theory of the $(C_n^\vee, C_n)$-DAHA 2026 - Preprint available at https://arxiv.org/pdf/2606.29327 Quasi-Classical Braverman–Kazhdan Intertwiners via Quiver Varieties 2026 - With A. Slipper. Preprint available at https://arxiv.org/abs/2606.14637. Infinitesimal jet spaces of Bun_G in positive characteristic 2024 - Submitted. Preprint available at https://arxiv.org/abs/2402.10369. Extension Quiver for Lie Superalgebra $q(3)$ 2020 - With V. Serganova. <i>SIGMA</i>, 16 (2020), 141, 32 pages. https://www.emis.de/journals/SIGMA/2020/141/. On BBW Parabolics for Simple Classical Lie Superalgebras 2019 - With D. Grantcharov, D. K. Nakano, and J. Wu. <i>Advances in Mathematics</i>, 381 (2021), 107647, 44 pages. https://arxiv.org/abs/1810.06980.
TEACHING	University of Georgia Instructor Aug 2025 – Jun 2026 - Taught 1 section of Calculus 1 (Math 2250) and 2 sections of Calculus II (Math 2260). University of Chicago Instructor Sep 2021 – Jun 2024 - Spring 2025: Teaching Assistant for Paris Study Abroad Program - Fall 2024: Math 133: Calculus III - Fall 2021 - Spring 2022: Math 130s – Calculus I, II, and III. University of Chicago College Fellow Sep 2020 – Jun 2021 - Spring 2021: Math 259 Honors Basic Algebra III. - Winter 2021: Math 244 Introduction to Algebraic Geometry. - Fall 2020: Math 254 Basic Algebra I. AwesomeMath Summer Program Instructor Jun 2017 – Present - AwesomeMath is a 3 week long summer program for gifted high school students training for math olympiads such as USAMO and IMO. - Taught and prepared course material daily for Geometry 2.5 (intermediate) in multiple camps during Summers of 2017 - 2020 and Geometry 3 (advanced) Summer 2021. - Developed course curriculum and wrote course notes for new Geometry course (2021)

**SEMINARS
ORGANIZED**

The BunG seminar.

2023 – 2025

- Co-founded the BunG seminar <http://math.uchicago.edu/bundles/> with Aaron Slipper in January 2023. Throughout more than 50 talks, we have explored the local and global geometry of BunG and its role in the geometric Langlands program in a very accessible way. Frequently had talks given by leading faculty.

UGA Algebra Seminar

Aug 2025- Present

**WORK
EXPERIENCE**

UChicago Graduate Algebra Teaching Assistant

Sep 2022 –Today

- TA and HW grader for graduate Algebra I Fall 2022 and Fall 2023.
- TA and HW grader for graduate Algebra III Spring 2024.

UChicago Math DRP Mentor

Sep 2022 –Today

- Mentored C. Chang in a representation theory for finite groups and Lie algebras reading course

UChicago REU Mentor

Jun 2020 – Aug 2020

- Helped run the apprentice program and mentored J. Yang on project “Super five of Ramsey Theory” and G. Graham “The ring of symmetric polynomials”

Berkeley Math Circle Assistant

Jul 2015 – Jul 2016

- Managed BMC Website (<http://mathcircle.berkeley.edu>).
- Handled email communication with BMC instructors, parents and students.
- Helped with selection process for 400 applicants.

Berkeley Math Homework Grader

Jan 2017 – May 2019

- Grade weekly homework assignments for Abstract Algebra (113) for 40 students in the following terms: Spring 2017, Summer 2017, Fall 2017, Spring 2018, Spring 2019.
- Grade for graduate level Commutative Algebra (250B) Spring 2019 term.

AwesomeMath Summer Program Teaching Assistant

Jun 2014 – Aug 2016

- In charge of problem sessions, held office hours, and graded exams for two courses per camp.
- Throughout 7 camps, I was a TA for: Algebra 2.5, 3.5; Geometry 1.5, 2.5; Number Theory 2.5.

**SEMINAR AND
CONFERENCE
TALKS**

- Algebra Seminar, University of California Riverside, “Symmetries of the cotangent bundle of $SL_n/[P, P]$, (1 hours) May 21, 2026.
- Math Physics Seminar, Columbia University, “Symmetries of the cotangent bundle of $SL_n/[P, P]$, (2 hours) March 30, 2026.
- Algebra Seminar, UGA, “Symmetries of the multiplicative cotangent bundle of G/U , parts I and II”, (60 minutes) September 8 and 15, 2025.
- Math Physics Seminar, Northwestern, “Infinitesimal structure of BunG”, (60 minutes) November, 2024.
- Algebra Seminar, UGA, “Infinitesimal structure of BunG”, (60 minutes) November 11, 2024.
- Math Physics seminar, LSU, “Infinitesimal structure of BunG”, (60 minutes) October 28, 2024.
- UChicago BunG seminar, “Representation theory for finite W-algebras”, (120 minutes) October 16, 2024
- Math Physics seminar, Perimeter Institute, “Infinitesimal structure of BunG”, (60 minutes) May 23, 2024
- UChicago BunG seminar, “The global Hecke action”, (120 minutes) May 1, 2024
- UChicago BunG seminar, “Non-abelian poincare duality”, (120 minutes) February 14, 2024
- AMS Fall 2023 Sectional, Mobile Alabama, “Infinitesimal Structure of BunG” (20 minutes), October 15, 2023.
- UChicago BunG seminar, “Local and Global Hitchin Map”, October 18, 2023.
- University of Bath representation theory seminar, “Mini-lecture series on Cherednik Algebras”, August 12-15, 2023.
- AMS Spring 2023 Sectional, Cincinnati Ohio, “Infinitesimal Structure of BunG” (20 minutes), April 15, 2023.
- UChicago BunG seminar, “Infinitesimal structure of BunG”, March 28, 2023.
- UChicago student representation theory seminar, “A Compactification of a configuration space for curves”, May 27, 2022.
- Workshop on Supergeometry, Fields Institute, Toronto, Ontario, “Finite-dimensional representations of the queer Lie supergroup $Q(n)$ ” (25 minutes), March 21, 2022.
- UChicago student representation theory seminar, “Haiman’s proof of the $n!$ conjecture, parts I and II”, (90 mins each), October 20 and 27, 2021.
- Southeast Lie Theory XII, Charleston, South Carolina, “BBW parabolics for classical Lie superalgebras” (15 mins), October 16, 2021.
- Columbia University student seminar on category $\mathcal{O}$ (online), “Projective Functors” (90 mins), April 2, 2021.
- Columbia University student seminar on category $\mathcal{O}$ (online), “Parabolic Category $\mathcal{O}$ ” (90 mins), February 12, 2021.
- Superalgebra Theory and Representations seminar (online), Weizmann institute, “Finite-dimensional representation theory of the queer Lie superalgebra $q(n)$ ” (75 mins), December 2, 2020.
- Global Langlands over function fields seminar, UC Berkeley, April 4, 2019. “Excursion operators” (90 mins).
- Representation Theory and Integrable Systems conference, Zurich, Switzerland, “Extension quiver for Lie superalgebra $q(3)$ ” (15 mins), August 14, 2019, Slides.