

Reginald Anderson

Curriculum vitae

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Dept. of Mathematics
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Education

- Kansas State University, PhD in Mathematics. 2019-2023.
GPA 4.00/4.00
- Kansas State University, Master of Science in Mathematics. 2017-2019
GPA: 4.00/4.00.
- University of Iowa, Preparation for PhD program in Mathematics, Philosophy. Studied foreign language, philosophy, and graduate-level mathematics. 2015-2017
GPA: 3.27/4.00
- Sinte Gleska University, Indian Education and Human Relations Course for Alternative South Dakota Teach Certification. 2015
GPA: 4.00/4.00
- University of South Dakota, Teach For America Summer Institute at Arizona State University and School Law Course for Master's in Educational Administration. Summer 2013.
GPA of 3.67/4.00
- Colorado College, Bachelor of Arts with Majors in Philosophy and Mathematics. Graduated *cum laude* with Distinction in Philosophy 2009-2013, overall GPA of 3.83/4.00

Research Area

- Algebraic geometry, derived categories, symplectic geometry, homological mirror symmetry

Advisor

- Gabriel Kerr

Professional appointments, employment

- Postdoctoral Fellow and Visiting Assistant Professor. Fall 2023 - Current.
- Graduate Teaching Assistant for Kansas State Mathematics Department. Fall 2017 - Current.
- Mathematics tutor for high school algebra. 2015
- Teach For America Secondary Mathematics Teacher for Todd County in Mission, South Dakota. 2013-2015
- UBS Fund Services, (Cayman) Ltd. Intern for Legal Department in George Town, Grand Cayman. 2011

- Research Assistant for NSF-sponsored Research Project on Military-to-Wildlife Conversions in Environmental Ethics, Colorado College Philosophy Department. 2012
- First Year Experience Mentor for Colorado College Philosophy Department. 2010

Publications

1. Anderson, Reginald. "Strong Full Exceptional Collections for Unimodular Toric Surfaces." Submitted to *Algebraic Geometry: Foundation Compositio Mathematica*.
2. Anderson, Reginald. "A Resolution of the Diagonal for Toric D-M Stacks." Submitted to *Mathematical Proceedings of Cambridge Philosophical Society*.
3. Anderson, Reginald. "A Resolution of the Diagonal for Smooth Toric Varieties. Submitted to *Mathematical Proceedings of Cambridge Philosophical Society*.
4. Anderson, Reginald. "A Resolution of the Diagonal for Toric Deligne-Mumford Stacks." PhD Dissertation for Kansas State University, May 2023. <https://arxiv.org/abs/2303.17497>
5. "The Hilbert Polynomial as an Embedded Subvariety" pre-print: 10.13140/RG.2.2.16238.69443. https://www.researchgate.net/publication/363796564_The_Hilbert_Polynomial_as_an_Embedded_Subvariety. 23 September 2022.
6. Anderson, Reginald C. "What is an Infinitesimal?" AMS Graduate Student Blog, 28 August 2019. Web. <https://blogs.ams.org/mathgradblog/2019/08/28/32749/>
7. Anderson, R. and D. Havlick. "History and Values in Ecological Restoration Workshop." *Ecological Restoration* 31.1 (2013): 7-10. Web.
8. Anderson, Reginald C. "Growing Up Between." *The Good Men Project - Ethics and Values*. Ed. Wisdom Amouzou. The Good Men Project, 3 June 2016. Web.

Awards & Honors

- Lois Aileen Hostinsky Outstanding Graduate Teaching Assistant in Academics Award, Kansas State University. \$1500 from L. Aileen Hostinsky Memorial Scholarship Fund. 2019
- President from 2012-2013, Member from 2010-2012, Blue Key Honor Society. 2010-2013
- Dean's List at Colorado College. 2011
- Alpha Lambda Delta Honor Society. 2010

Grants and Fellowships

- Kansas State University Graduate Student Support Scholarship: \$300.00. 2021.
- Mathematically Gifted and Black (MGB) Grant (Grant # 0000017) for Predoctoral Students. Amount: \$500. 2021
- Segal Education Award: \$5500 per year from 2013-2014, 2014-2015 AmeriCorps Service. 2015

Invited talks and Panels

- “Cellular Resolutions of the Diagonal and Exceptional Collections for Toric Deligne-Mumford Stacks.” UAlberta Geometry and Physics (GAP) Seminar. September 28, 2023. (*via Zoom*).
- “Cellular resolutions of the diagonal and exceptional collections for toric Deligne-Mumford stacks” Talks I and II. September 2023. Claremont 7-C’s Topology Seminar.
- “Building the Fan of a Toric Variety.” Claremont 7-C’s Math Colloquium. September 27th, 2023.
- “Cellular resolutions of the diagonal and exceptional collections for toric D-M stacks.” Claremont McKenna College Algebra, Number Theory, and Combinatorics (ANTC) Seminar. October 2nd, 2023.
- “A Resolution of the Diagonal for Some Toric Deligne-Mumford Stacks.” Parts I and II. Beamer presentation of selected portions of my PhD Dissertation results for Kansas State Algebra Seminar. February 2023.
- “Logarithmic Differential Forms” Parts I and II. Junior Mirror Symmetry Seminar, Kansas State University. November and December 2022.
- “Hilbert Polynomials.” Presented a novel result on Hilbert Polynomials to Graduate Student Seminar, Kansas State University. September 2022
- Overview of Fukaya Categories with an Example. Junior Mirror Symmetry Seminar, Kansas State University. February 2022
- Dyckerhoff ‘Matrix Factorizations’ Chapter 5. Junior Mirror Symmetry Seminar, Kansas State University. October 2021
- “Tree Structures in A_∞ Categories.” Junior Mirror Symmetry Seminar, Kansas State University. February 2020.
- “Toric View of Riemann-Roch.” Graduate Student Seminar, Kansas State University. October 2019
- “What is an Infinitesimal?” Differential Geometry Seminar, University of Iowa. February 2019
- “What is an Infinitesimal?” Graduate Student Seminar, Kansas State University. February 2019
- “Representation Theory of $SL(2, \mathbb{C})$.” Graduate Student Seminar, Kansas State University. August 2018
- “What’s Life Like in the KSU Graduate Math Program?” Panel for KSU Summer REU students. July 2018
- “Opportunities in Education for Philosophy Majors, and Applying for Graduate School” Alumni Panels at the Colorado College in Colorado Springs. January 2017
- Qualifying Exam Preparation Problem for Complex Analysis course, University of Iowa. July 2016
- State of TCMS 8th Grade Mathematics, Todd County Middle School Mathematics Department Presentation to the School Board. 2014

Conference Activity and Participation

- International Research Experience for Students in Uzbekistan. Workshop on Analysis on Fractal Spaces and Dynamical Systems. Organized by California State Fullerton, held at Urgench State University, Uzbekistan. August 2023.
- MSRI/SLMath Summer School on Derived Algebraic Geometry. July 2023 on UC Berkeley campus. Participant.
- KU Geometry Day. November 12-13, 2022. Participant.
- MSRI Summer School on Gauge Theory. July 5-16, 2021. Held online.

- AGONIZE (Arithmetic Geometry is ONLINE In Zoom, Everyone). Online Conference Participant. March 2020.
- MSRI: Toric Varieties Summer School, August 28-September 10 2019. Invited student to 2 week summer school in Taipei, Taiwan. Sole student invited from Kansas State University. August 2019.
- Attended WARTHOG Conference in Eugene, Oregon on Deligne-Luztig Theory, focusing on geometry of Deligne-Luzstig varieties and algebraic groups. August 2018
- Attended Kylerec 2018, Graduate Student Workshop in Symplectic Topology in Leavenworth, WA. Research focused on Arnold's Nearby Lagrangian Conjecture. May 2018
- Participant, Connected Mathematics Conference at Michigan State University. Summer 2014
- Research Assistant for History and Values of Ecological Restoration, NSF project listed above. Summer 2012

Teaching Experience

2023	Courses at Claremont McKenna College as Postdoc and Visiting Assistant Professor Math 030: Calculus I. Fall 2023.
	Courses at Kansas State: 2017-2022
2022	MATH205: Lecturer/Recitation Instructor for Spring. Math222: Calculus III Coordinator for Summer. Math222: Calculus III Recitation Instructor for Fall.
2021	MATH220: Calculus I. Recitation Instructor for Spring. MATH510: Discrete Mathematics. Coordinator for Summer. MATH205: Lecturer/ Recitation Instructor for Fall.
2020	MATH551: Applied Matrix Theory. Recitation Instructor for Spring, Lab Assistant and Grader for Summer. MATH150: Plane Trigonometry Recitation Instructor for Fall 2020.
2019	MATH221: Calculus II. Recitation Instructor. Graduate Level Qualifying Exam Preparation, Algebra (Summer Course). Instructor. MATH222: Calculus 3. Recitation Instructor.
2018	MATH150: Plane Trigonometry. Recitation Instructor. MATH222: Calculus 3 (Summer Course). Grader and substitute teacher for 2 weeks. MATH340: Elementary Differential Equations. Recitation Instructor.
2017	MATH100: College Algebra Recitation instructor. Responsible for grading exams
2015	High School Algebra II Tutor for Cedar Rapids K-12 student
2013-2015	Certified Staff, Todd County School District. 8th Grade Mathematics; Pre-Algebra and Algebra I
2013	Kids Are Dramatic Teaching Intern in Colorado Springs, CO for extracurricular drama program

Research Experience

- Successfully defended PhD Dissertation on resolutions of the diagonal and derived categories of toric Deligne-Mumford stacks at Kansas State University. May 2023.
- Research project on homological mirror symmetry for quadric hypersurfaces in \mathbb{P}^n . 2018-2019.
- Research Assistant for NSF-sponsored Research Project on Military-to-Wildlife Conversions in Environmental Ethics, Colorado College Philosophy Department. 2012

References

Letter Writers: Research Experience

- Dr. Gabriel Kerr, Advisor
- Dr. Rina Anno, Faculty Member and Research Recommendation Letter Writer
- Dr. Zongzhu Lin, Faculty Member and Research Recommendation Letter Writer
- Dr. Yan Soibelman, Faculty Member and Research Recommendation Letter Writer

Letter Writers: Teaching Experience

- Dr. Sarah Reznikoff, Graduate Program Director and Teaching Recommendation Letter Writer

Last updated: December 16, 2023 •