

# Reginald Anderson

## Curriculum vitae

Adams Hall 208  
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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

- 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. “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](https://www.researchgate.net/publication/363796564_The_Hilbert_Polynomial_as_an_Embedded_Subvariety). 23 September 2022.
2. Anderson, Reginald C. “What is an Infinitesimal?” AMS Graduate Student Blog, 28 August 2019. Web. <https://blogs.ams.org/mathgradblog/2019/08/28/32749/>
3. Anderson, R. and D. Havlick. “History and Values in Ecological Restoration Workshop.” *Ecological Restoration* 31.1 (2013): 7-10. Web.
4. 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

- “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  $A_\infty$  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	<b>Courses at Claremont McKenna College as Postdoc and Visiting Assistant Professor</b> Math 030: Calculus I.
	<b>Courses at Kansas State: 2017-2022</b>
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