

JONATHAN SMITH

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SYNOPSIS

I am a PhD candidate in Mathematics at the University of South Carolina studying algebraic geometry under the advisement of Alex Duncan.

EDUCATION

University of South Carolina 2019 - Present

- Ph.D. in Mathematics
- Advisor: Alex Duncan

Liberty University 2015 - 2019

- Bachelor of Science in Mathematics
- Bachelor of Arts in Philosophy

RESEARCH INTERESTS

I broadly study algebraic geometry, but I am particularly interested in classical questions within birational geometry. I currently study topics like Galois cohomology, Fano varieties, and Cremona groups. I have recently started to think about derived categories as well.

RESEARCH AND PUBLICATIONS

In Preparation

- (1) J. Smith, *Automorphisms of Del Pezzo Surfaces in Characteristic Zero* – In Preparation

RESEARCH TALKS

Automorphisms of Del Pezzo Surfaces, *Binghamton University Geometry, Algebra, and Topology Conference* at Binghamton University, November 2022.

Automorphisms of Del Pezzo Surfaces. *The Graduate Colloquium Series* at UofSC, October 2022.

EXPOSITORY TALKS

Invariant Theory Case Studies, *AGCA Student Seminar on Geometric Invariant Theory* at UofSC, September 2022.

Diagonalizable Groups, *Linear Algebraic Groups Seminar* at UofSC, July 2022.

Actions of Algebraic Groups on Varieties, *Linear Algebraic Groups Seminar* at UofSC, May 2022.

Understanding Forms with Galois Cohomology, *AGCA Student Seminar* at UofSC, February 2022.

Introduction to Galois Cohomology, *AGCA Student Seminar* at UofSC, November 2021.

Birational Geometry of the Projective Plane, *AGCA Student Seminar* at UofSC, October 2021.

Finding Irreducible Characters and the Canonical Decomposition, *Student Seminar on Representation Theory* at UofSC, June 2021.

The Character of a Representation, *Student Seminar on Representation Theory* at UofSC, June 2021.

An Introduction to Weil Divisors, *AGNT Seminar* at UofSC, April 2021.

AWARDS AND GRANTS

- Outstanding First Year Graduate Student Award: Internal departmental award at UofSC 2020
- Frederick Copleston History of Philosophy Award: Internal departmental award at LU 2018

PROFESSIONAL ACTIVITIES

- Graduate Student Representative, *Graduate Advisory Council*, UofSC 2022 - 2023
- Co-organizer, *Graduate Colloquium Series*, UofSC 2022 - 2023
- Grace Community Academy online math proctor for grades 7 through 12 2021 - 2022
- Organizer, *Student Seminar on Representation Theory*, UofSC Summer 2021
- Peer tutor in Mathematics, Liberty University 2018 - 2019

TEACHING

University of South Carolina

Instructor of Record:

- Math 241 (Online) - Vector Calculus Summer 2020
- Math 170 - Finite Math Spring 2022
- Math 122 (Online) - Business Calculus Fall 2021
- Math 122 - Business Calculus Spring 2021
- Math 116 - Brief Precalculus Fall 2021
- Math 111I - Intensive College Algebra Fall 2020, Fall 2022

Teaching Assistant:

- Math 142 - Calculus 2 Fall 2019
- Math 141 - Calculus 1 Spring 2020

CONFERENCES AND WORKSHOPS

Binghamton University Graduate Combinatorics, Algebra, and Topology Conference, November 5-6, 2022. Binghamton University.

The Palmetto Number Theory Series XXXIV, September 24-25, 2022. University of North Carolina at Charlotte.

The Georgia Algebraic Geometry Symposium, April 1-3, 2022. Emory University.