

GEORGE H. SEELINGER—CV

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RESEARCH INTERESTS

Algebraic combinatorics: symmetric functions, Schubert calculus, Macdonald polynomials

EDUCATION

Doctor of Philosophy, Mathematics

Advisor: Jennifer Morse

University of Virginia, Charlottesville, Virginia

Expected May 2021

Master of Science, Mathematics

Loyola University Chicago, Chicago, Illinois

August 2015

Bachelor of Science, summa cum laude

Major: Mathematics and Computer Science

Interdisciplinary Honors

Loyola University Chicago, Chicago, Illinois

May 2015

PUBLICATIONS

A shuffle theorem for paths under any line

Joint with J. Blasiak, M. Haiman, J. Morse, and A. Pun

· In preparation.

K -theoretic Catalan functions

Joint with Jonah Blasiak and Jennifer Morse

· In preparation.

Canonical idempotents of multiplicity-free families of algebras

Joint with Stephen Doty and Aaron Lauve

arxiv:1606.08900

· L'Enseignement Mathématique, **64** (2018) 23–63.

TALKS

Philadelphia Area Combinatorics and Algebraic Geometry Seminar

University of Pennsylvania

February 6, 2020

· Title: K -theoretic Catalan functions

Garsiafest 90: Future Directions in Algebraic Combinatorics

The Scripps Seaside Forum, San Diego, CA. Lightning Talk

June 18, 2019

· Title: *Raising operators in Schubert calculus*

Mid-Atlantic Algebra, Combinatorics, and Geometry Workshop

Drexel University. Poster

May 4, 2019

· Title: K -theoretic Catalan functions

University of Virginia Representation Theory Reading Seminar

Seminar talks on various topics; selected titles listed

2016 – 2020

· “ k -Schur functions as Schubert representatives for the affine Grassmannian”

Spring 2020

· “Introduction to the affine Grassmannian”

Spring 2020

- “Chern class computations, flag manifolds, and the Grassmannian” Spring 2019
- “Schur- Q functions and related combinatorics” Fall 2018
- “Applications of the Jacobson-Morozov Theorem” Fall 2017
- “The principal, subregular, and minimal nilpotent orbits” Fall 2016

Sage Days 65

June 11, 2015

Loyola University Chicago

- Title: *Orthogonal idempotents in semisimple Brauer algebras*

TEACHING EXPERIENCE

Instructor of Record

University of Virginia

- MATH 1310: Calculus I (flipped classroom) Fall 2019
- MATH 1220: Survey of Calculus II Spring 2018
- MATH 1210: Survey of Calculus I Fall 2017

HONORS, AWARDS, AND FELLOWSHIPS

- Dorothy M. Batten Jefferson Fellowship, 2016–2021, by the Jefferson Scholars Foundation, UVa
- Phi Beta Kappa Honor Society, inducted May 7, 2015
- Alpha Sigma Nu Honor Society, induced October 14, 2014

SERVICE AND OUTREACH

Department

- **Member and Webmaster, Association for Women in Mathematics** Fall 2018–Present
Help maintain the UVa AWM chapter's website and developed a blog for other members to post content.
- **Mentor, Directed Reading Program at University of Virginia** Fall, 2018
Guided my undergraduate DRP mentee, Dylan Hunt, through a machine learning textbook and helped him prepare for a presentation at UVa's Math Club.
- **UVa Math Ambassador** Fall 2017– Spring 2019
UVa's Mathematics outreach program to Albemarle County and Charlottesville city schools.
- **Panelist, Prospective Graduate Student Open House** Spring 2018

Professional

- **Organizing committee, Mid-Atlantic Algebra, Geometry, and Combinatorics Workshop** Spring, 2020
Cancelled due to Covid-19

University

- **Jefferson Scholar Selection Weekend Seminar Planner and Leader, Jefferson Scholars Foundation, UVa** Spring 2020
Cancelled due to Covid-19
- **Panelist, Institute for Leadership and Citizenship Graduate School Panel Jefferson Scholars Foundation, UVa** Summer 2018

TECHNICAL STRENGTHS

Computer Languages

Proficiency with: Python, Sage, Java and Scala.
Experience with: Mathematica, R and C/C++.

Languages

Fluent: English
Elementary Proficiency: French, Italian.