

Sarah Crown Rundell

CONTACT INFORMATION

Office of First-Year Experience (740) 587-6668
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Denison University
Granville, OH. 43023

EDUCATION

University of Michigan, Ann Arbor, MI
Ph.D. in Mathematics, August 2007
Dissertation: “The Homology of the Cyclic Coloring Complex of Simple Graphs”
Advisor: Philip J. Hanlon

Bryn Mawr College, Bryn Mawr, PA
A.B. with Honors in Mathematics, May 2002
Magna Cum Laude

PROFESSIONAL APPOINTMENTS

Sophomore Dean, Denison University, July 2022 - present

Director of Advising, Denison University, September 2021 - present

Academic First-Year and Sophomore Dean, Denison University, May 2021 - June 2022

Process Advisor for Academic Integrity, Denison University, September 2017 - May 2021

Associate Professor, Denison University, September 2013 - present

Assistant Professor, Denison University, August 2007 - August 2013

Visiting Professor, MIT, May 2011 - August 2011

Graduate Student Instructor, University of Michigan, September 2002 - April 2007

RESEARCH PUBLICATIONS

E. Flapan, S. Rundell, M. Wyse, Asymmetric 2-colorings of graphs. *J. Graph Theory*, **86** (2017), no. 4, 361–374.

B. Braun and S. Rundell, Hyperoctahedral Eulerian Idempotents, Hodge Decompositions, and signed graph coloring complexes, *Electronic Journal of Combinatorics*, **21** (2014), no.2.

S. Rundell, The coloring complex and cyclic coloring complex of a complete k -uniform hypergraph, *J. Combin. Theory Ser. A*, **119** (2012), no. 5, 1095–1109.

J. Long and S. Rundell, The Hodge structure of the coloring complex of a hypergraph. *Discrete Math.*, **311** (2011), no. 20, 2164–2173.

S. Crown, The homology of the cyclic coloring complex of a simple graph, *J. Combin. Theory Ser. A*, **116** (2009), no. 3, 595–612.

OTHER
PUBLICATIONS

S. Rundell, “How to prepare for a career at a teaching oriented institution.” *AMS Notices*, **67** (2020), no. 6, 814–816.

S. Rundell, “Promoting a healthy work environment.” *AMS Notices*, **67** (2020), no. 3, 853–855.

CONFERENCE
PROCEEDINGS

S. Rundell and J. Long, The Hodge structure of the coloring complex of a hypergraph (extended abstract), *DMTCS Proceedings, 22nd International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2010) [Online]*, 0 22 Jul 2010. Available at: <http://www.dmtcs.org/dmtcs-ojs/index.php/proceedings/article/view/dmAN0178> .

PRESENTATIONS

S. Rundell, The Coloring Complex of a Hypergraph, Combinatorics Seminar, The Ohio State University, May 2012.

S. Rundell, The Coloring Complex of a Hypergraph, AMS Special Session on Enumerative and Geometric Combinatorics, University of Kansas, March 2012.

S. Rundell, The Coloring Complex of a Hypergraph, AMS Special Session on Combinatorics: Algebraic and Geometric, University of Southern Florida, March 2012.

S. Rundell, The Coloring Complex of a Hypergraph, MIT Combinatorics Seminar, MIT, October 2011.

S. Rundell, The Homology of the Coloring Complex and Cyclic Coloring Complex of a Hypergraph, WILDCATS Seminar (Work, Interactions, and Leading Developments in Combinatorics, Algebra, Topology, and Statistics), University of Kentucky, June 2011.

S. Rundell, The Homology of the Coloring Complex of a Hypergraph (poster), Formal Power Series and Algebraic Combinatorics, San Francisco, August 2010.

S. Rundell, The Homology of the Coloring Complex of a Hypergraph, AMS Special Session on Geometric Combinatorics, Albuquerque, NM, April 2010.

S. Rundell, The Mathematics of Perspective Drawing, Musings, Denison University, March 2010.

S. Rundell, Partitions, Kenyon College, November 2009.

S. Crown, Graphs and Coloring Complexes, Stephen F. Austin State University, Nacodogches, TX, March 2009.

S. Crown, The Mathematics of Perspective Drawing, Tuesday Lunch Series, Denison University, February 2009.

S. Crown, The Cyclic Coloring Complex, CombinaTexas, University of Texas - El Paso, April 2008.

S. Crown, The Cyclic Coloring Complex, Project NExT/YMN Poster Session, AMS/MAA Joint Meetings, San Diego, January 2008.

S. Crown, Coloring Complexes, Kenyon College, October 2007.

S. Crown, Tilings and Partitions, Denison University, October 2007.

S. Crown, The Homology of the Cyclic Coloring Complex of Simple Graphs, University of Indiana, October 2007.

S. Crown, The Homology of the Cyclic Coloring Complex of Simple Connected Graphs, Bryn Mawr College, September 2006.

UNDERGRADUATE
RESEARCH AND
INTERNSHIP
STUDENTS

Jorge Ramirez, Generalized Simon Invariants, Summer 2020.

Tony Tang, Generalized Simon Invariants, Summer 2019.

Ryan Fleming and Emma Weber, Writing Undergraduate Combinatorics Problems, Summer 2018.

Nathaniel Kell, Investigation of Coloring Complexes in Hypergraphs, Summer 2012.

Mary Kimberly, Beidi Qiang, A Combinatorial Interpretation of a Kostka Matrix Identity, Summer 2010.

STUDENT
RECOGNITION

Mary Kimberly, MAA Outstanding Presentation Award, Undergraduate Student Presentation Session, MathFest, Summer 2010.

DENISON
UNIVERSITY
SERVICE

SERC, September 2021 - May 2022.

June-O Advisor, Summer 2020.

Posse Mentor for Boston Posse 15, 2019 - 2023.

Process Advisor for Academic Integrity at Denison University, 2017 - Present.

Faculty Mentor for Sarah Wolff, 2015 - Present.

Faculty Advisor for the Association for Women in Mathematics Section at Denison University, September 2010 - 2013.

Religious Life Advisory Board Member, 2010 - 2016.

Member of University Honor Committee, 2009 - 2017.

Newman Association Faculty Advisor, 2009 - 2013.

Math/CS Department Faculty Representative at a session for high school perspective students in the sciences, April 2012.

Junior Faculty Panelist for Preparing for Third Year Review Session, October 2010, April 2011, October 2011, and April 2012.

Junior Faculty External Department Interviewer for Physics Department Faculty Search, December 2011.

Taught one-credit seminar on Number Theory, Spring 2011.

Denison University Summer Internship Committee Member, March 2010, 2011.

Wells Scholarship Selection Committee Member, March 2010, 2011.

Table Leader for Fall Faculty Symposium, August 2010, 2011.

Co-taught INTD 150: Food Consumption, Spring 2010.

LeaderShape Cluster Facilitator, January 2010.

Member of First-Year Advisory Board Committee, September 2009 - May 2010.

June-O Orientation Faculty Advisor, June 2009.

Member of the Search Committee for an Assistant Director of Academic Support, May - June 2009.

Member of Science and Society Concentration Development Group, 2008 - 2010.

Co-organizer of DSA, 2008-2009.

Co-organizer of Department of Mathematics and Computer Science FaST talks, 2008-2009.

PROFESSIONAL
SERVICE

Review Introduction to Proofs Textbook for Cambridge University Press. June 2020.

Member of the MAA Committee for the Invited Paper Sessions, January 2014 - 2020.

Member of the MAA Committee on Minicourses, January 2010 - December 2013.

Reviewed journal articles for *Discrete Mathematics*, *Notices of the American Mathematical Society*, *The Electronic Journal of Combinatorics*, and *Math Reviews*.

Mentor for Graduate Students who attended the Summer Program for Undergraduate Women at Carleton College, MAA/AMS Joint Meetings, New Orleans, January 2011.

Member of Mathematical Association of America Committee on Mini-courses, January 2009-2012.

Co-organizer of Project NExT panel on Recruiting Undergraduate Math Majors, Math Fest, Madison, WI, August 2008.

Member of the Committee on Student Members of the Ohio Section of the Mathematical Association of America, 2007-2010.

SCHOLARSHIPS
AND AWARDS

Bayley-Bowen Fellowship, Denison University, August 2010.

Project NExT Fellow, Mathematical Association of America, August 2007 - August 2008.

Alumni Scholarship, Department of Mathematics, University of Michigan, May 2005, 2006

Carroll V. Newsom Scholarship, Department of Mathematics, University of Michigan, May 2004

PROFESSIONAL
MEMBERSHIPS

NACADA