

## Ryan Johnson

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CONTACT INFORMATION	Department of Science and Mathematics Grace College 200 Seminary Lane Winona Lake, IN, 46580	(608) 387-5337 johnsor@grace.edu
RESEARCH INTERESTS	<ul style="list-style-type: none"><li>• Spherical fusion categories, particularly Tambara-Yamagami categories and near-group categories.</li><li>• Modular categories.</li><li>• Bilinear and quadratic forms on finite abelian groups.</li></ul>	
EDUCATION	<b>Iowa State University</b> Ph.D. in Mathematics, June 2014 <ul style="list-style-type: none"><li>• Dissertation Topic: The Frobenius-Schur Indicator of Tambara Yamagami Categories</li><li>• Advisor: Tathagata Basak</li><li>• Minor in physics</li></ul> <b>Hope College</b> B.S. in Mathematics, May 2009 <ul style="list-style-type: none"><li>• Minor in computer science</li></ul>	
PUBLICATIONS	Basak, Tathagata; Johnson, Ryan. <i>Indicators of Tambara-Yamagami categories and Gauss sums</i> . Algebra Number Theory 9 (2015), no. 8, 1793–1823.  Ekstrand, Jason; Erickson, Craig; Hall, H. Tracy; Hay, Diana; Hogben, Leslie; Johnson, Ryan; Kingsley, Nicole; Osborne, Steven; Peters, Travis; Roat, Jolie; Ross, Arianne; Row, Darren D.; Warnberg, Nathan; Young, Michael. <i>Positive semidefinite zero forcing</i> . Linear Algebra Appl. 439 (2013), no. 7, 1862–1874.	
STUDENT COLLABORATIONS	Johnson, Ryan; Kuszewski, Gabriel; Ware, Katelyn. Talk given at the spring 2018 MAA joint conference with Indiana, Michigan, and Illinois.	
CONFERENCE TALKS	<i>The Frobenius-Schur Indicator of Tambara-Yamagami Categories</i> . Meeting #1096: Joint Mathematics Meetings, Baltimore, Maryland. Event: MAA General Contributed Paper Session on Research in Algebra and Topology, (January 2014).  <i>Some Gauss Sums Found in Category Thoery</i> . Iowa Section of Mathematical Association of America Meeting Conference, Wartburg College, (October 2013).  <i>Using Gauss Sums to Distinguish Certain Algebraic Structures</i> Indiana Section MAA Spring Meeting Program at Franklin College, (March 2016).	
OTHER TALKS	<i>An invariant that distinguishes Tambara-Yamagami categories</i> Algebra Colloquium at Notre Dame University, (October 27th, 2016).  <i>Using Gauss Sums to Distinguish Certain Algebraic Structures</i> Hope College Math Colloquium Series, (September 2016).	

*A complete invariant of Tambara-Yamagami Categories* Grace College Faculty Forum, (March 2014)

*The Frobenius-Schur Indicator of Tambara-Yamagami Categories.* Combinatorics, Algebra, and Number Theory Seminar, Iowa State University, (November 2013).

*Positive semidefinite zero forcing.* Discrete Math Seminar, Iowa State University, (December, 2012).

*How to Save 99 Lives.* Colloquium Series, Hope College, (November 2010).

*Modelling Tri-Trophic Interactions with Tall Fescue Grass, Fall Armyworms, and Parasitic Wasps.* Undergraduate Research in Mathematics at Grand Valley State University, (July 2007).

HONORS AND AWARDS

2011 Teaching Excellence Award  
2010 Hope College Travel Grant

RESEARCH EXPERIENCE

2019 OSU Quantum Symmetries Summer Research Program.  
Organizer: David Penneys, The Ohio State University  
Organizer: Corey Jones, The Ohio State University  
Location: The Ohio State University, Columbus, Ohio.

2014 Mathematics of Quantum Phases of Matter and Quantum Information Mathematical Research Community  
Organizer: Siu-Hung Ng, Louisiana State University  
Organizer: Eric C. Rowell, Texas A&M University  
Organizer: Zhenghan Wang, Microsoft Station Q  
Location: Snowbird Resort, Utah.