JUSTIN Z. SCHROEDER

WORK EXPERIENCE

SEPT 2015-PRESENT	English and Programming Teacher Mosaic Centre Radstock, Gostivar, North Macedonia
Aug 2013-May 2015	Term Assistant Professor of Mathematics George Mason University, Fairfax, VA, USA
Jan 2013-May 2013	Adjunct Professor of Mathematics Marymount University, Arlington, VA, USA

EDUCATION

Aug 2007-May 2012	Ph.D. Mathematics, Vanderbilt University, Nashville, TN, USA Dissertation: <i>Hamilton cycle embeddings of complete tripartite graphs</i> <i>and their applications</i> (advised by Mark Ellingham)
Sept 2003-May 2007	B.A. Mathematics, Carthage College, Kenosha, WI, USA Thesis: <i>Using trio spaces to explore Steiner triple systems</i>

TEACHING

Mosaic Centre Radstock:	Web Programming (HTML/CSS/JavaScript/React) Introduction to Programming (Java) Introduction to Databases (SQL/C#) English as a Second Language (all levels)
George Mason University:	MATH 321 – Abstract Algebra MATH 203 – Linear Algebra MATH 125 – Discrete Mathematics MATH 114 – Analytic Geometry & Calculus 2 MATH 113 – Analytic Geometry & Calculus 1 MATH 112 – Discrete Mathematics for IT MATH 106 – Quantitative Reasoning
MARYMOUNT UNIVERSITY:	MA 155 – Finite Mathematics
VANDERBILT UNIVERSITY:	MATH 150A – Calculus 1 MATH 155B – Accelerated Calculus 2

HONORS AND AWARDS

- Winner 2019 Gen Cant Game Design Contest for Polyhedral Park Planner.
- Bjarni Jónsson Prize for Research, Vanderbilt University, 2012.
- B.F. Bryant Award for Excellence in Teaching, Vanderbilt University, 2012.
- AMS Graduate Student Travel Grant for Joint Mathematics Meetings, 2012.
- Graduate Student Summer Research Award, Vanderbilt University, 2011.
- Excellence in Mathematics Award, Carthage College, 2007.
- Clausen Scholar, Carthage College, 2003-2007.

PUBLICATIONS

- J.Z. Schroeder, A 2-regular graph has a prime labeling if and only if it has at most one odd component, J. Combin. 12 (2021), 379-388. Erratum to appear.
- J.Z. Schroeder, Every cubic bipartite graph has a prime labeling except $K_{3,3}$, *Graphs Combin.* **35** (2019), 119-140. Erratum in: *Graphs Combin.* **38** (2022), 148.
- J.Z. Schroeder, A tripling construction for mutually orthogonal symmetric hamiltonian double Latin squares, J. Combin. Designs 27 (2019), 42-52.
- E. Rarity, S.A. Schluchter, and J.Z. Schroeder, The smallest self-dual embeddable graphs in a pseudosurface, *Missouri J. Math. Sci.* **30** (2018), 85-92.
- S.A. Schluchter and J.Z. Schroeder, Self-dual embeddings of $K_{4m,4n}$ in different orientable and nonorientable pseudosurfaces with the same Euler characteristic, *Electron. J. Graph Theory Appl.* **5** (2017), 247-263.
- S.A. Schluchter, J.Z. Schroeder, et al., Prime labelings of generalized Petersen graphs, *Involve* **10** (2017), 109-124.
- J.Z. Schroeder, A lower bound for the number of rough numbers, arXiv:1705.04831, 16 May 2017.
- T.A. McCourt and J.Z. Schroeder, Self-embeddings of doubled affine Steiner triple systems, *Australas. J. Combin.* **66** (2016), 23-43.
- M.J. Grannell and J.Z. Schroeder, Biembeddings of 2-rotational Steiner triple systems, *Elec. J. Combin.* 22 (2015), 16pp.
- M.N. Ellingham and J.Z. Schroeder, Orientable hamilton cycle embeddings of complete tripartite graphs II: voltage graph constructions and applications, *J. Graph Theory* **77** (2014), 219-236.
- M.N. Ellingham and J.Z. Schroeder, Orientable hamilton cycle embeddings of complete tripartite graphs I: latin square constructions, *J. Combin. Designs* 22 (2014), 71-94.
- M.N. Ellingham and J.Z. Schroeder, Nonorientable hamilton cycle embeddings of complete tripartite graphs, *Discrete Math.* **312** (2012), 1911-1917.
- M.N. Ellingham and J.Z. Schroeder, Distinguishing partitions and asymmetric uniform hypergraphs, *Ars Math. Contemp.* 4 (2011), 111-123.

INVITED TALKS

- Constructing mutually orthogonal symmetric hamiltonian double latin squares from Mullin-Nemeth starters in finite fields, 6th Macedonian Workshop on Graph Theory and Applied Mathematics, Ohrid, North Macedonia, 14 August 2022.
- Let the games begin: turning puzzles and games into real mathematics, Mathematics Colloquium, Kutztown University, 23 April 2013.
- Nonorientable hamilton cycle embeddings of $K_{n,n,n}$, Special Session on Graph Theory, 2012 Spring Southeastern Section Meeting of the American Mathematical Society, University of South Florida, 10 March 2012.
- An orthogonal latin square construction for orientable hamilton cycle embeddings of $K_{n,n,n}$, AMS Special Session on Topological Graph Theory: Structure and Symmetry, 2012 Joint Mathematics Meetings, Boston, Massachusetts, 5 January 2012.
- Distinguishing partitions and asymmetric uniform hypergraphs, Atlanta Lecture Series in Combinatorics and Graph Theory, Emory University, 13 November 2010.
- A tripling construction for the genus of some joins of complete and edgeless graphs, Special Session on Topics in Graph Theory, 2010 Fall Southeastern Section Meeting of the American Mathematical Society, University of Richmond, 7 November 2010.

CONTRIBUTED TALKS

- A brief overview of some open problems on graph embeddings, 5th Macedonian Workshop on Graph Theory and Applications, Ohrid, North Macedonia, 17 September 2021.
- Steiner triple systems with small circumference, 3rd Macedonian Workshop on Graph Theory and Applications, Ohrid, North Macedonia, 16 August 2018.
- Prime labeling of 2-regular graphs, 2nd Macedonian Workshop on Graph Theory and Applications, Ohrid, North Macedonia, 17 August 2017.
- Maximal graphs with a distinguishing partition, 2013 Fall Eastern Section Meeting of the American Mathematical Society, Temple University, 12 October 2013.
- Euler's orthogonal latin square conjecture, 2011 Euler Society Meeting, Carthage College, 27 July 2011.
- Hamilton cycle embeddings of complete tripartite graphs, 7th Slovenian International Conference on Graph Theory, Bled, Slovenia, 25 June 2011.
- Necessary and sufficient conditions for the existence of a Steiner triple system, 75th Annual Spring Meeting of the Mathematical Association of America - Wisconsin Section, University of Wisconsin
 Eau Claire, 21 April 2007.

SEMINAR TALKS

- A survey on graphs with a distinguishing partition, Combinatorics, Algebra and Geometry Seminar, George Mason University, 27 September 2013.
- A Hamiltonian property for latin squares, Combinatorics Seminar, George Washington University, 1 November 2012, and Seminar in Functional Analysis and Related Areas, Catholic University of America, 24 October 2012.
- Distinguishing partitions and asymmetric uniform hypergraphs, Graph Theory and Combinatorics Seminar, Vanderbilt University, 7 and 14 February 2011.
- A tripling construction for the genus of some joins of complete and edgeless graphs, Discrete Mathematics Seminar, Middle Tennessee State University, 15 November 2010 and Graph Theory and Combinatorics Seminar, Vanderbilt University, 27 September and 4 October 2010.

PROFESSIONAL SERVICE

- Provided accounting and marketing services for Mosaic Centre Radstock.
- Mentored undergraduate research at George Mason.
- Served as a reviewer for the Journal of Combinatorial Theory Series B, Graphs and Combinatorics, and the Australasian Journal of Combinatorics.

OTHER ACTIVITIES

- Designed six tabletop board games and expansions available at https://boardgamegeek.com/boardgamedesigner/119803/justin-schroeder.
- Attended Memphis-Budapest Summer School in Combinatorics, Budapest, Hungary, August 7-20, 2011.
- Passed Exams P and FM conducted by the Society of Actuaries.