

Alexander W. N. Riasanovsky

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Education

Ph.D. Mathematics

Iowa State University, Ames, IA.

August 2016 – exp. May 2021

B.A. Mathematics

University of Pennsylvania, Philadelphia, PA.

August 2016

Research Papers

- Ryan R. Martin and Alexander W. N. Riasanovsky, The edit distance function of random graphs, submitted.
- Jane Breen, Steve Butler, Melissa Fuentes, Bernard Lidický, Michael Phillips, Alex W. N. Riasanovsky, Sung-Yell Song, Ralihe Raúl Villagrán Olivas, Cedar Wiseman, Xiaohong Zhang, Hadamard diagonalizable graphs of order at most 36, submitted.
- Alexander W. N. Riasanovsky, t -cliques in random graphs, in preparation.
- 4. Steven N. Harding and Alexander W. N. Riasanovsky, Moments of the weighted Cantor measures, *Demonstr. Math.*, **52** (2019), no. 1, 256–273.
- 3. András Gyárfás, Alexander W. N. Riasanovsky, and Melissa U. Sherman-Bennett, Chromatic Ramsey numbers of acyclic hypergraphs, *Discrete Math.*, **340** (2017), no. 3, 373–378.
- 2. Alex Collins, Stanisław Radziszowski, Alexander W. N. Riasanovsky, and John C. Wallace, Zarankiewicz numbers and bipartite Ramsey numbers, *Journal of Algorithms and Computation*, **47** (2016), no. 1, 63–78.
- 1. Joshua N. Cooper and Alexander W. N. Riasanovsky, On the reciprocal of the binary generating function for the sum of divisors, *J. Integer Seq.*, **16** (2013), no. 1, Article 13.1.8, 13 pp.

Honors and Awards

- trainee for NSF-Research Training Group: Combinatorics, Computation and Applications at Iowa State University (August 2019 – August 2020)
- Long Term Visitor of Dan Král’ funded by European Research Council (ERC) consolidator grant Large Discrete Structures (LADIST) (April 2019 & December 2019)
- Robert J. Lambert Graduate Assistantship (ISU Department of Mathematics, given to one student each year) (Spring 2019)

- Professional Advancement Grant [\$200] (January 2018)
- ISU Department of Mathematics Graduate College Teaching Excellence Award (October 2017)
- University of Pennsylvania Department of Mathematics Undergraduate Research Prize (April 2013, April 2016)
- Kitüntetessel (honor roll) at Budapest Semesters in Mathematics (Spring 2015)

Employment and Experience

Graduate Teaching Assistant *August 2016 – December 2018, June – July 2019*
 Department of Mathematics, Iowa State University, Ames, IA. *August 2020 – present*
 Sole Instructor, Recitation Instructor, or Grader (see below).

NSF Research Training Group Trainee *August 2019 – July 2020*
 Department of Mathematics, Iowa State University, Ames, IA.
 NSF-DMS award #1839918: *Combinatorics, Computation and Applications*

Robert J. Lambert Graduate Assistant *January 2018 – May 2018*
 Department of Mathematics, Iowa State University, Ames, IA. *August 2020 – present*
 See Robert J. Lambert Graduate Assistantship.

REU Research Intern *June – July 2015*
 Department of Computer Science, Rochester Institute of Technology, Rochester, NY.
 NSF-REU (Award #1358583): *Extremal Graph Theory and Dynamical Systems*. Mentor:
 Stanisław Radziszowski. Topics: Zarankiewicz numbers and bipartite Ramsey numbers.

PROMYS Counselor *June – July 2014*
 Program in Mathematics for Young Scientists, Boston, MA. *June – July 2013*
 Graded homework and exams and guided a small research group.
 Topics: number theory, representation theory, discrete mathematics.

Undergraduate Teaching Assistant *January – May 2014*
 Department of Computer Science, University of Pennsylvania, Philadelphia, PA.
 CIS 160: Mathematical Foundations of Computer Science.
 Topics: discrete mathematics, combinatorics.

Masterclass Assistant *June – July 2013*
 Wadham College, Oxford University, Oxford, UK.
 Through CMI-PROMYS International Alliance.
 Topics: discrete mathematics, extremal graph theory.

Research Assistant *July – August 2012*
 Interdisciplinary Mathematics Institute, University of South Carolina, Columbia, SC.
 Under NSF grant DUE-TUES-1020692. Mentor: Joshua Cooper.
 Topics: poset theory, algorithms, multiobjective optimization, and conjoint analysis.

SPRI Research Intern*June – July 2011*

University of South Carolina, Columbia, SC.

Through the South Carolina Governor's School for Science and Mathematics Summer Program for Research Interns. Mentor: Joshua Cooper.

Topics: binary generating functions.

Activities

- (Co-)organizer of Mathematics Graduate Student Seminar (Fall 2018 – Spring 2020)
- Co-organizer of MMMM (Mostly Manitoba, Michigan and Minnesota) Combinatorics Graduate Student Workshop (September 2018)
- Student at Budapest Semesters in Mathematics (Fall 2014 – Spring 2015)

Invited Talks

- **On the edit distance function of random graphs** *October 2020*
Fall Western AMS Sectional Meeting (formerly at University of Utah). Special Session on Graphs, Hypergraphs and Set Systems.
- **On the edit distance function of random graphs** *October 2020*
Fall Southeastern AMS Sectional Meeting (formerly at University of Tennessee at Chattanooga). Special Session on Structural and Extremal Graph Theory, II.
- **On the edit distance function of random graphs** *August 2020*
Combinatorics Literature seminar, University of Illinois Urbana-Champaign, Urbana-Champaign, Illinois.
- **Partitioning random graphs with Turán graphs** *December 2019*
Combinatorics seminar, Alfred Rényi Institute, Budapest, Hungary.
- **Zarankiewicz numbers and bipartite Ramsey numbers** *January 2016*
Joint Mathematics Meetings, Washington State Convention Center, Seattle, WA.

Contributed Talks

- **On the edit distance function of random graphs** *August 2020*
Discrete Mathematics Seminar, Iowa State University, Ames, IA.
- **Cut distance from hereditary properties** *September 2018*
MMMM Graduate Student Workshop, Iowa State University, Ames, IA.
- **Reciprocals of binary power series** *June 2012*
South Carolina Junior Academy of Science Annual Meeting, University of South Carolina Aiken, Aiken, SC.
- **Small bipartite Ramsey numbers** *August 2015*
Young Mathematics Conference, Ohio State University, Columbus, OH.

Seminar Talks

- **On the edit distance function of random graphs** *September 2020*
Discrete/Combinatorics Seminars, University of South Carolina, Columbia, South Carolina.
- **Decomposing random graphs into highly structured pieces** *February 2019*
Mathematics Graduate Seminar, Iowa State University, Ames, IA.
- **There's Probably Analysis and Data Science in a graphon** *September 2018*
Probability Analysis and Data Science Seminar, Iowa State University, Ames, IA.
- **de Grey's breakthrough on the plane-coloring problem** *April 2018*
Mathematics Graduate Seminar, Iowa State University, Ames, IA.
- **Graph limits and distance from hereditary properties** *March 2018*
Discrete Mathematics Seminar, Iowa State University, Ames, IA.
(Preliminary Exam)
- **Zarankiewicz numbers and bipartite Ramsey numbers** *October 2016*
Discrete Mathematics Seminar, Iowa State University, Ames, IA.
- **Chromatic Ramsey numbers and coloring triple systems** *September 2016*
Discrete Mathematics Seminar, Iowa State University, Ames, IA.
- **Chromatic Ramsey numbers for triple systems** *May 2015*
Research Presentations, Budapest Semesters in Mathematics,
McDaniel College, Budapest, Hungary.

Conferences and Workshops Attended

- *Fall Western AMS Sectional Meetings* *October 2020*
Online (formerly at University of Utah).
- *Fall Southeastern AMS Sectional Meetings* *October 2020*
Online (formerly at University of Tennessee at Chattanooga).
- *Fall Eastern AMS Sectional Meetings* *October 2020*
Online (formerly at University of Pennsylvania State University).
- *Fall Central AMS Sectional Meetings* *September 2020*
Online (formerly at University of Texas at El Paso).
- *Mostly Manitoba, Michigan and Minnesota Combinatorics Graduate Students Workshop* *September 2018*
Iowa State University, Ames, IA.
- *NSF-CBMS Conference on Additive Combinatorics* *May 2018*
University of South Carolina, Columbia, SC.

- *Georgia Discrete Analysis Conference* *May 2018*
University of Georgia, Athens, GA.
- *International Workshop on Graph Limits* *January – February 2018*
École Normale Supérieure de Lyon, Lyon, France.
- *International Research School on Graph Limits* *January 2018*
École Normale Supérieure de Lyon, Lyon, France.
- *Graduate Research Workshop in Combinatorics* *July 2017*
University of Colorado Denver & University of Denver, Denver, CO.
- *4th Lake Michigan Workshop on Combinatorics* *April 2017*
Western Michigan University, Kalamazoo, MI.
- *Joint Mathematics Meetings* *January 2016*
Washington State Convention Center, Seattle, WA.
- *Young Mathematics Conference* *August 2015*
Ohio State University, Columbus, OH.
- *South Carolina Junior Academy of Science Annual Meeting* *February 2012*
University of South Carolina Aiken, Aiken, SC.

Courses Taught as Sole Instructor

- **MATH 266/267: Elementary Differential Equations** *Summer 2018*
Iowa State University, Ames, IA.
- **MATH 266/267: Elementary Differential Equations** *Summer 2017*
Iowa State University, Ames, IA.

Courses Taught as Recitation Instructor

- **MATH 265: Calculus III** *Fall 2020*
Iowa State University, Ames, IA.
- **MATH 140: College Algebra** *Fall 2017*
Iowa State University, Ames, IA.
- **MATH 266/267: Elementary Differential Equations** *Spring 2017*
Iowa State University, Ames, IA.
- **MATH 165: Calculus I** *Fall 2016*
Iowa State University, Ames, IA.

Courses Taught as Grader

- **MATH 165: Calculus I** *Summer 2019*
Iowa State University, Ames, IA.

- **MATH 566: Discrete Optimization** *Fall 2018*
Iowa State University, Ames, IA.
- **MATH 201: Introduction to Proofs** *Spring 2018*
Iowa State University, Ames, IA.
- **MATH 439: Fractals and Chaos** *Spring 2018*
Iowa State University, Ames, IA.