

## CONTACT INFORMATION

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## EDUCATION

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### Ph.D Mathematics

#### MS Teaching of Mathematics

2010-present

*University of Illinois, Urbana-Champaign*

Projected graduation May 2015. Ph.D emphasis in graph theory and combinatorics, advisor Alexandr Kostochka.

#### MS Mathematics

2008-2010

*West Virginia University*

Advisor John Goldwasser.

#### BS Mathematics

2002-2006

*University of Alaska, Fairbanks*

## TEACHING

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### Active Learning, Blended Online, and Traditional

2010-present

*University of Illinois*

At the University of Illinois, I have been a stand-alone teacher as well as a teaching assistant. I have taught special active-learning “merit” sections, a discussion section for an experimental blended online course, and traditional discussion sections. As head TA, I have overseen other TAs. In addition to teaching, I have developed course content. I have taught first and second semester calculus, preparation for calculus, and introduction to matrix theory. I have been a substitute teacher for a large precalculus lecture, an upper-division nonlinear optimization course, and an upper-division discrete mathematics course.

### Education Justice Project

2013-present

*University of Illinois and Danville Correctional Center*

I designed and held mathematics workshops on graph theory and SAT preparation for incarcerated men through the Education Justice Project of the University of Illinois. I also regularly staffed tutoring sessions, which like the workshops are held inside Danville Correctional Center.

### Louis Stokes Alliance for Minority Participation

2008-2010

*West Virginia University*

Under the Louis Stokes Alliance for Minority Participation grant, I taught special recitation sections for first- and second-semester calculus, and assisted in an active-learning based calculus classroom. We focused on recruiting and retaining underrepresented minority students to STEM subjects, and giving them tools to excel.

## Middle-School Math and Science Teacher

2006-2008

*US Peace Corps*

As a Peace Corps Volunteer, I spent two years as a full-time classroom instructor at Sambang Upper Basic School in Central River Region, The Gambia, West Africa. My teaching duties included developing course content to fit the national curriculum, setting up a school library, talking with parents, and performing administrative tasks. I also engaged in development work, such as HIV-awareness activities and environmental projects.

## Teacher Trainer

2006-2008

*BESPOR and US Peace Corps*

The Gambian Basic Education Support for Poverty Reduction (BESPOR) program was designed to help unqualified teachers earn their teaching certificates. The students, who were working as teachers but did not have certification, combined distance learning with in-person courses over school holidays. For the duration of my time in The Gambia, I met regularly with teachers in the program, helping them through their coursework for mathematics and science education. I also helped facilitate a nation-wide, in-person training program in December 2007, focusing on mathematics and science.

## AWARDS AND HONORS

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### Excellence in Undergraduate Teaching Award

Spring 2014

*University of Illinois*

This campus-wide award is given by the Office of the Provost.

### Lynn M. Martin Award for Distinguished Women Teachers

Spring 2015

*University of Illinois*

The College of Liberal Arts and Sciences awards this honor in recognition of exceptional achievement in undergraduate teaching by women.

### University Fellowship

Spring 2015

*University of Illinois*

One-semester fellowship, awarded by the Department of Mathematics on the basis of research.

### Brahana TA Award

2012

*University of Illinois*

Awarded for outstanding teaching, the Brahana is the highest departmental teaching award for graduate students in mathematics at the University of Illinois.

### International Mathematical Contest in Modeling

2006

*University of Alaska, Fairbanks*

My three-person team was awarded the second-highest rating, Meritorious, at the 2006 Mathematical Contest in Modeling. We used mathematical and computational methods to suggest a solution for optimally distributing caches of wheelchairs for use by travellers at airports.

## PUBLICATIONS

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### Ramsey-minimal saturation numbers for matchings

2014

*Michael Ferrara, Jaehoon Kim, Elyse Yeager. Discrete Math. 322(2014), 26-30*

### A note on list-coloring powers of graphs

2014

*Nicholas Kosar, Sarka Petrickova, Benjamin Reiniger, Elyse Yeager. Discrete Math. 322(2014), 10-14*

**The  $(2k - 1)$ -connected multigraphs with at most  $k - 1$  disjoint cycles** 2014+  
*Henry Kierstead, Alexandr Kostochka, Elyse Yeager. *Combinatorica*, to appear.*

**A characterization of  $P_5$ -free graphs with homeomorphically irreducible spanning tree** 2014+  
*Jennifer Diemunsch, Michitaka Furuya, Marayam Sharifzadeh, Shoichi Tsuchiya, David Wang, Jennifer Wise, Elyse Yeager. *Discrete Applied Mathematics*, to appear.*

**On the Corrádi-Hajnal theorem and a question of Dirac** submitted  
*Henry Kierstead, Alexandr Kostochka, Elyse Yeager*

**A note on large subposets of small dimension** submitted  
*Benjamin Reiniger, Elyse Yeager*  
<http://arxiv.org/abs/1404.0021>

**A special case of an Ore-type version of the Chen-Lih-Wu Conjecture** in preparation  
*Henry Kierstead, Alexandr Kostochka, Elyse Yeager*

**Graphs with induced-saturation number zero** in preparation  
*Sarah Behrens, Catherine Erbes, Michael Santana, Derrek Yager, Elyse Yeager*

## PRESENTATIONS

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Slides available at: <http://math.illinois.edu/~yeager2/Talks.html>

**Disjoint Cycles and Equitable Colorings (invited)** November 2014  
*AMS Sectional, University of Greensboro, North Carolina*

**A Ramsey version of graph saturation** October 2014  
*28th Midwest Conference on Combinatorics and Combinatorial Computing, Uni. of Nevada Las Vegas*

**A Ramsey version of graph saturation** October 2014  
*56th Midwest Graph Theory Conference, Fort Wayne, Indiana*

**Disjoint Cycles and Equitable Colorings (invited)** September 2014  
*AMS Sectional, University of Wisconsin, Eau Claire*

**Graph Saturation in Color (for undergraduates; invited)** September 2014  
*Rose-Hulman Mathematics Seminar*

**Disjoint Cycles and Equitable Colorings** August 2014  
*University of Illinois Combinatorics Seminar*

**Disjoint Cycles and Equitable Colorings in Graphs** May 2014  
*27th Cumberland Conference, West Virginia University*

**Disjoint Cycles and Equitable Colorings in Graphs (invited)** April 2014  
*Combinatorics Seminar, University of Colorado, Denver*

**Saturation Number of Ramsey-Minimal Families** March 2014  
*55th Midwest Graph Theory Conference, University of Detroit Mercy*

**Saturation Number of Ramsey-Minimal Families** March 2014  
*45th Southeastern Int'l Conference on Combinatorics, Graph Theory and Computing, Boca Raton Florida*

- Refinements of the Corrádi-Hajnal Theorem (invited)** April 2013  
*AMS Western Sectional, Boulder Colorado*
- A Refinement of the Corrádi-Hajnal Theorem** October 2012  
*University of Illinois Combinatorics Seminar*
- A Refinement of the Corrádi-Hajnal Theorem** September 2012  
*Midwest Graph Theory Conference, Ames Iowa*

## **SERVICE**

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- Students Advising on Graduate Education** 2014-2015  
 I served on the Students Advising on Graduate Education (SAGE) board. SAGE is a university-wide group of graduate students that partners with the graduate college to advise on matters pertinent to graduate students, and work on projects to improve graduate student life at the University of Illinois.
- Refereeing** 2013, 2014  
 Upon request, I refereed for Discrete Mathematics (2014) and Discrete Applied Mathematics (2013).
- Education Justice Project** 2013-present  
 My role as teacher and tutor in Danville Correctional Center was a volunteer position.
- Conference Logistics** 2012, 2013  
 At the University of Illinois, I helped put on the Graduate Student Combinatorics Conference in 2012, and Extremal Combinatorics in Illinois (EXCILL) in 2013.
- Teaching Award Committee Member** 2012  
 I was a member of the committee that selected four recipients for teaching awards among TAs in the department of mathematics. I reviewed applications, interviewed TAs, and observed classes.
- Panel Speaker** 2012  
 I volunteered to be on a University of Illinois Women in Mathematics (WIM) panel discussion, aimed at undergraduates considering grad school.
- Blood Donation** 2008-2015  
 I regularly donate blood, usually using an apheresis machine to donate platelets and plasma in a process that lasts around two hours.

## **WORKSHOPS**

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- Institute for Mathematics and its Applications** 2014  
 I have received funding to attend a week-long workshop on Geometric and Enumerative Combinatorics.
- Institute for Advanced Study** 2013  
 I attended the two-week Women in Math workshop on Combinatorics and Graph Theory where I attended lectures and collaborated on problems with the other attendees.
- Scientific Teaching Institute, West Virginia University** 2009  
 I attended a four-day intensive training in modern teaching methods, tailored towards teaching science and mathematics to undergraduates. It focused on student-centered, active learning methods.

## REFERENCES

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**Alexandr Kostochka**, Advisor  
*Professor, University of Illinois*  
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**Henry Kierstead**  
*Professor, Arizona State University*  
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**Ron Gould**  
*Goodrich C. White Professor, Emory University*  
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**Michael Ferrara**  
*Professor, University of Colorado, Denver*  
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**Jennifer McNeilly**  
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