

Garner Cochran

Curriculum Vitae

University of South Carolina
Department of Mathematics
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Education

- August 2013– Present **Ph.D. Candidate in Applied Mathematics,**
University of South Carolina, Columbia, SC.
Advisor: Éva Czabarka
- January 2012– May 2012 **Budapest Semesters in Mathematics,**
Budapest, Hungary.
- August 2009– May 2013 **B.A. Mathematics,**
Trinity University, San Antonio, TX.

Academic Positions

- August 2013– Present **Teaching Assistant,** *University of South Carolina.*
- Summer 2011 **Integrated Research in Biomathematics,** *Trinity University.*

Publications

1. Bjorkman, C., Gao, Keough, Kirsch, Phillipson, Rorabaugh, Smith, and Wise. Combinatorial structures of RNA folding. 2017+. Submitted.
2. C., Czabarka, and Dankelmann. An improved bound on the oriented diameter of graphs. 2017+. In Preparation.
3. C., Czabarka, Dankelmann, and Szekely. Size condition for diameter 2 orientability of a graph. 2017+. In Preparation.
4. C., Groothuis, Herring, Rohatgi, and Stucky. Polynomial chebyshev quotients combinatorially. *Discrete Applied Mathematics*, 2017. Submitted.
5. Chamberlain, C., Ginsburg, Miceli, Riehl, and Zhang. Generating functions and wilf equivalence for generalized interval embeddings. *Australasian Journal of Combinatorics*, 2015.
6. Livingstone, Olofsson, C., Dagilis, Macpherson, and Seitz. A stochastic model for the development of bateson-dobzhansky-muller incompatibilities incorporating protein interaction networks. *Mathematical Biosciences*, 238:49–53, 2012.

Conference Talks

- January 6, 2017 **"Polynomial Chebyshev Quotients, Combinatorially."**,
Joint Mathematics Meetings, Atlanta, GA, Contributed Paper Session in Combinatorics and Graph Theory.
- October 17, 2014 **"Generating Functions for Wilf Equivalence in Interval Embeddings"**,
Graduate Student Combinatorics Conference, University of Kentucky, Lexington, KY.
- April 20, 2013 **"Generating Functions for Wilf Equivalence in Interval Embeddings"**,
CombinaTexas, Houston, TX.

Invited Seminar Talks

- March 18, 2016 **"The Stable Marriage Problem"**,
Carolina Math Seminar, Newberry College.
- February 24, 2015 **"The Stable Marriage Problem"**,
Pi Mu Epsilon Induction, University of South Carolina.

Other Seminar Talks

- October 5, 2017 **"Polynomial Chebyshev Quotients, Combinatorially."**,
Colloquium Seminar, University of Johannesburg, Johannesburg, South Africa.
- September 28, 2017 **"The Stable Marriage Problem"**,
Math Majors, University of Johannesburg, Johannesburg, South Africa.
- January 20, 2017 **"Polynomial Chebyshev Quotients, Combinatorially."**,
Discrete Seminar, University of South Carolina, Columbia, SC.
- May 27, 2015 **"What do math majors do?"**,
Clark High School, San Antonio, TX.
- October 17, 2014 **"Generating Functions for Wilf Equivalence in Interval Embeddings"**,
Discrete Seminar, University of South Carolina, Columbia, SC.
- May 2013 **"Generating Functions for Wilf Equivalence in Interval Embeddings"**,
Mathematics Seminar, Trinity University, San Antonio, TX.
- August 2011 **"A stochastic model for the development of Bateson-Dobzhansky-Muller incompatibilities Incorporating Protein Interaction Networks"**,
Trinity University Summer Research Symposium, Trinity University, August 2011.

Teaching Experience

Instructor of Record

- Spring 2017 **Math 116 (Brief Precalculus Mathematics)**, USC.
- Spring 2017 **Math 170 (Finite Mathematics)**, USC.
Topics include: Intro linear algebra, probability, and graph theory.

Spring 2015, **Math 122 (Business Calculus)**, *USC*.
Spring 2016, Fall
2016

Fall 2015 **Math 115 (Precalculus)**, *USC*.

Teaching Assistant

Fall 2014 **Math 142 (Calculus II)**, *USC*.

Spring 2014 **Math 141 (Calculus I)**, *USC*.

Fall 2013 **Math 142 (Calculus II)**, *USC*.

Tutoring

Fall 2014- 2018 **Private Tutor**, *University of South Carolina*.

Summer 2012 **Private Tutor**, *San Antonio, TX*.

SAT Math

Calculus B, *Trinity University*, 2 hours per week.

Spring 2011

Grading

Linear Algebra and Differential Equations, *Trinity University*.

Fall 2011 and Fall 2012

Service and Professional Development

Fall 2017-Spring **Business Calculus Textbook Committee**.

2018 Discuss a possible change of text

January 2018 **Lead Organizer for AMS Special Session at JMM**.

Contact and invite speakers and organize the schedule

December 2016 **Columbia Math Circle**.

Discuss and expose K-12 students to upper level mathematics

Fall 2015-Spring **Organizer of USC Discrete Seminar**.

2016 Invite speakers and organize the calendar for the seminar

January 2015 **USC High School Math Contest**, Volunteer Proctor.

January 2014 **USC High School Math Contest**, Volunteer Proctor.

Fall 2015-Spring **USC SIAM Secretary**.

2016 Update the SIAM website and send out emails to members announcing talks

Conferences Attended

January 2017 **2017 AMS & MAA Joint Mathematics Meetings**, *Atlanta, GA*.

March 2016 **AMS Sectional Meeting**, *University of Georgia*, Athens, GA.

March 2015 **Graduate Student Combinatorics Conference**, *University of Kentucky*, Lexington, KY.

January 2015 **2015 AMS & MAA Joint Mathematics Meetings**, *San Antonio, TX*.

September 2013 **Triangle Lectures in Combinatorics**, *NC State*, Raleigh, NC.

April 2013 **CombinaTexas**, *University of Houston*, Houston, TX.

January 2013 **2013 AMS Joint Mathematics Meeting**, *San Diego, CA.*

Workshops Attended

July 17-29, 2016 **Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics**, *University of Wyoming, Laramie, WY.*

June 1-13, 2015 **Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics**, *Iowa State University, Ames, IA.*

March 2015 **2nd Lake Michigan Workshop on Combinatorics and Graph Theory**, *University of Notre Dame, Notre Dame, IN.*

May 2013 **Summer School in Network Science**, *University of South Carolina, Columbia, SC.*

Awards and Honors

2016-2017 **USC SPARC Grant Recipient**, *Awarded by the VP for Research, University of South Carolina, Columbia, SC.*

October 2016 **Travel Award (Full Support)**, *Atlanta Lecture Series, Georgia Tech, Atlanta, GA.*

July 17-July 29, 2015 **Acceptance to Workshop with Full Support**, *Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics, University of Wyoming, Laramie, WY.*

November 2015 **Travel Award (Full Support)**, *Atlanta Lecture Series, Georgia Tech, Atlanta, GA.*

June 1-June 13, 2015 **Acceptance to Workshop with Full Support**, *Rocky Mountain-Great Plains Graduate Research Workshop in Combinatorics, Iowa State University, Ames, IA.*

March 2015 **Travel Award (Full Support)**, *Lake Michigan Workshop on Combinatorics and Graph Theory, University of Notre Dame, South Bend, IN.*

Summer 2014 **Summer Grant Funding**, *Professor László Székely's NSF Grant, University of South Carolina, Columbia, SC.*

September 2013 **Travel Award (Full Support)**, *Triangle Lectures in Combinatorics, NC State University, Raleigh, NC.*

February 2011 and February 2013 **Successful Participant**, *The Mathematical Contest in Modeling, COMAP.*

Summer 2011 **Summer Grant Funding**, *Integrated Research in Biomathematics, Trinity University.*

Memberships

- American Mathematical Society (AMS)
- Society for Industrial and Applied Mathematicians (SIAM)
- Kappa Mu Epsilon, Mathematics Honors Society

Computer Skills

- Python
- Sage
- L^AT_EX
- Maple
- Mathematica

References

Éva Czabarka (Teaching)

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Peter Dankelmann

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Joshua Cooper

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