Taylor M. Short

Curriculum Vitae

University of South Carolina
Department of Mathematics
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Education

Fall 2011– Present	**Ph.D. Mathematics** *University of South Carolina*, Columbia, SC Advisor: László Székely
Fall 2009– Spring 2011	**M.S. Pure Mathematics** *Virginia Commonwealth University*, Richmond, VA Advisor: Craig Larson
Fall 2004– Spring 2008	**B.S. Mathematics** *College of William and Mary*, Williamsburg, VA

Academic Positions

University of South Carolina, Columbia, SC

Spring 2012– Present — Graduate Instructor of Record

Full responsibility for the course which includes preparing and giving lectures, writing tests, grading all student work, holding office hours, and assigning course grades

- MATH 115: Precalculus Mathematics (Spring 2012)
- MATH 116: Brief Precalculus Mathematics (Fall 2012)
- MATH 122: Calculus for Business and Social Sciences (Fall 2013)
- MATH 141: Calculus I (Fall 2014, Fall 2015)
- MATH 142: Calculus II (Summer 2012, Spring 2013, Summer 2013, Spring 2014, Spring 2015, Spring 2016)

Fall 2011–Present — Graduate Teaching Assistant

Meet students weekly for recitation to answer homework questions and give quizzes, teach a computer lab with Maple, and hold office hours

- MATH 141: Calculus I (Fall 2011, Fall 2013)
- MATH 142: Calculus II (Spring 2014)

Fall 2013 — Tutor in the Math Department Tutoring Center

Two hours per week answering homework questions for lower-level courses

Fall 2014 — Substitute Instructor

Preparing and giving lectures

- MATH 574H: Discrete Mathematics (Honors)

Virginia Commonwealth University, Richmond, VA

Summer 2011 — **Adjunct Instructor for Precalculus MATH 151**
Full responsibility for the course which includes preparing and giving lectures, writing tests, grading all student work, holding office hours, and assigning course grades

Spring 2010– **Graduate Instructor of Record**
Spring 2011 — Full responsibility for the course which includes preparing and giving lectures, writing tests, grading all student work, holding office hours, and assigning course grades
- MATH 131: Introduction to Contemporary Mathematics (Spring 2010, Fall 2010, Spring 2011)
- MATH 151: Precalculus (Summer 2010)

Fall 2009 — **Graduate Teaching Assistant for Introduction to Contemporary Mathematics MATH 131**
Meet students for two out of the three class meetings each week. Responsible for preparing and giving lectures, writing quizzes, grading all student work, holding office hours, and assigning course grades

Self-Employed

Fall 2011 – **Private Tutor**
Present — College Algebra, Geometry, Precalculus, Business Calculus, Calculus I, Calculus II, Vector Calculus, Linear Algebra, Discrete Math

Papers

Publications

4. T. Došlić, T. Short. "Enumerating some families of graphs with small saturation number," *In preparation.*

3. T. Došlić, T. Short. "Maximal matchings in polyspiro and benzenoid chains," arXiv:1511.00590 [math.CO], *Submitted to Discrete Applied Math, 2015.*

2. É. Czabarka, J. Rauh, K. Sadeghi, T. Short, L. A. Székely. "On the number of non-zero elements of joint degree vectors," arXiv:1511.01035 [math.CO], *Preparing to submit to Discrete Applied Math.*

1. T. Short. "On some conjectures concerning critical independent sets of a graph," arXiv:1509.05057 [math.CO], *Submitted to the Electronic Journal of Combinatorics, 2015.*

Other

1. T. Short, "KE Theory & the Number of Vertices Belonging to All Maximum Independent Sets in a Graph" (2011). VCU Theses and Dissertations. Paper 2353. http://scholarscompass.vcu.edu/etd/2353.

Awards, Fellowships, and Grants

2015 — Travel Grant for Computers in Scientific Discovery 7, Richmond, VA ($300)

April 2015 — "2014-2015 Outstanding Graduate Teaching Award" from the Department of Mathematics at the University of South Carolina

2015	SPARC Graduate Fellowship from the Office of the Vice President for Research at the University of South Carolina ($5000)
2014	Travel Grant for the AMS Sectional Meeting, Greensboro, NC from the AMS ($250)
Summer 2014	Research Assistantship from the NSF DMS contract #1300547 ($4000)
2014	Travel Grant for the Atlanta Lecture Series in Combinatorics and Graph Theory XII, Atlanta, GA ($250)
2013	Travel Grant for the Triangle Lectures in Combinatorics, NC State University, Raleigh, NC ($150)

Presentations

Conference talks

Nov. 9, 2014	**Towards Vizing's independence number conjecture** AMS Fall Southeastern Sectional Meeting, Greensboro, NC
Jan. 6, 2011	**Vertices belonging to all maximum independent sets in a graph** AMS Joint Mathematics Meetings, New Orleans, LA

Departmental talks

Nov. 14, 2014	**An extremal problem related to degree sequences of graphs** Discrete Seminar, University of South Carolina, Columbia, SC
March 28, 2014	**Towards Vizings Independence Number Conjecture** Discrete Seminar, University of South Carolina, Columbia, SC
Feb. 21, 2011	**The fundamental group** Graduate Student Seminar, Virginia Commonwealth University, Richmond, VA
Feb. 4, 2011	**KE Theory & the Number of Vertices Belonging to All Maximum Independent Sets in a Graph** Public defense of Master's Thesis, Virginia Commonwealth University, Richmond, VA
Sept. 10, 2010	**A lower bound on the core of a graph** Discrete Seminar, Virginia Commonwealth University, Richmond, VA

Outreach

April 1, 2015	**Automated Conjecture Making** *Pi Mu Epsilon & Gamecock Math Club Student Seminar* University of South Carolina, Columbia, SC

Professional Service and Development

Referee Experience

2015	**Referee for the following journals:**
	○ Discrete Applied Mathematics (1 article)
	○ SIAM Journal on Discrete Mathematics (1 article)
2014	**Co-referee with advisor for the following journals:**
	○ Journal of Graph Theory (1 article)

○ Networks (1 article)

Elected Positions

2015 - Present	**President, SIAM Student Chapter** University of South Carolina, Columbia, SC
2014 - 2015	**Treasurer, SIAM Student Chapter** University of South Carolina, Columbia, SC
Spring 2014	**Vice President, SIAM Student Chapter** University of South Carolina, Columbia, SC

Other

2015	**Preparing Future Faculty Credential** *University of South Carolina, Columbia, SC* Successful PFF candidates have completed activities designed to prepare participants in the critical areas of faculty competence: teaching, research and service. This accomplishment is an indicator of the participant's initiative and a measure of experience toward becoming future faculty.
2014-2015	**Member of the Calculus Textbook Committee** *University of South Carolina, Columbia, SC* Reviewing multiple Calculus textbooks and attending regular committee meetings to choose a book for adaptation for the Calculus sequence

Workshops Attended

July 2015	**Computers in Scientific Discovery 7 - Computational Methods for Carbon Nanostructure Research** Virginia Commonwealth University, Richmond, VA
May 2013	**Summer School in Network Science** University of South Carolina, Columbia, SC

Conferences Attended

November 2014	**AMS Fall Southeastern Sectional Meeting** University of North Carolina at Greensboro, Greensboro, NC
April 2014	**Atlanta Lecture Series in Combinatorics and Graph Theory XII** Georgia Tech, Atlanta, GA
September 2013	**Triangle Lectures in Combinatorics** NC State University, Raleigh, NC
January 2011	**AMS Joint Mathematics Meeting** New Orleans, LA
November 2010	**AMS Fall Southeastern Section Meeting - Special Session on Topics in Graph Theory** University of Richmond, Richmond, VA
October 2010	**Virginia Operator Theory and Complex Analysis Meeting (VOTCAM)** Virginia Commonwealth University, Richmond, VA

Memberships

- American Mathematical Society (AMS)
- Society for Industrial and Applied Mathematicians (SIAM)
- Mathematical Association of America (MAA)
- Pi Mu Epsilon, Mathematical Honors Society

Computer Skills

- SAGE: Computer Algebra System
- LaTeX
- Maple
- Blackboard, WebAssign, CourseCompass, WileyPlus, MyMathLab

References

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