

Chad A.S. Mullikin

Curriculum Vitae

Current Address

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Education

Ph.D., Mathematics, University of Georgia, August, 2006.

- B.J. Ball Scholarship, 2003.
\$2500 cash award for most progress made towards the Ph.D.
- University Outstanding Graduate Teaching Award, 2004.
Nominees and winners are selected by the University based on student evaluation.
- Department Outstanding Graduate Teaching Award, 2005.
Nominees and winners are selected by the mathematics faculty.
- Thesis Advisor: Jason Cantarella. Thesis Title: "On Length Minimizing Curves with Distortion Thickness Bounded Below and Distortion Bounded Above".

M.S., Mathematics, Georgia Institute of Technology, May, 2000.

- Member Pi Mu Epsilon.

B.S., State University of West Georgia, 1998.

- Member Kappa Mu Epsilon.
- Marion Crider Award.
\$1000 cash award for excellence in mathematics.

Teaching

Assistant Professor, Spring Hill College, August 2006-Present.

- 1 section of freshman seminar, 5 sections of precalculus, 5 sections of differential calculus, 1 section of integral calculus, 1 section of multivariable calculus, 1 section of linear algebra, 1 section of general topology, 1 section of vector calculus, 1 section of abstract algebra, 2 sections of senior seminar. Rated between "superior" and "outstanding" by students.
- Leader of undergraduate research experience "Computer Simulated Exploration of the Connected Components of the Configuration Space for Equilateral Polylines Via Random Sampling and Gradient Descent."

Graduate Student, University of Georgia, 2000-2006.

- 2 sections of differential calculus, 2 sections of discrete mathematics, 4 sections of differential calculus labs, and 1 section of preparing new graduate students to teach classes. Rated between "superior" and "outstanding" by students.
- Co-leader in VIGRE summer undergraduate research experiences "Massively parallel computation of geometrically optimal knots" and "Mathematics and Visualization".

Graduate Student, Georgia Institute of Technology, 1998-2000.

- 1 section of integral calculus, 1 section of calculus for computer science majors, and several sections of recitation for differential calculus. Challenge Program for minority students.

Service

- Served on Computer Science Hiring Committee, Science Division Grant Writing Committee, Curriculum Committee.
- Organized Math Club and became the club's faculty advisor.
- Academic advisor for 13 students.

Publications

(1) Upper Bounds for Ropelength as a function of Crossing Number.

with J. Cantarella, X.W. Faber. *Topology and its Applications* 135 (2003) no. 1-3, p. 253-264.

- We find an upper bound on the ropelength of a knot proportional to the square of its crossing number.

(2) A Class of Curves in Every Knot Type where Chords of High Distortion are Common. *Topology and its Applications* 154 (2007) no. 14, 15, p. 2697-2708.

- We explore the implications of the existence of intervals of nonzero total curvature on curves of minimum length in a subclass of each knot type.

Invited Talks

University of Georgia Department of Mathematics Geometry/Topology Seminar, Multiple Talks 2003-2005

University of Georgia Department of Mathematics VIGRE Seminar, Multiple Talks 2003-2005.

Emory Department of Mathematics Geometry/Topology Seminar, October 2005.

Annual AMS Meeting January 2006.

University of South Alabama Department of Mathematics Colloquium, October, 2006.

Spring Hill College Math Club, October 2007.