
Curriculum Vitae
Todd Martin Gutekunst

Personal Details

Citizenship:

United States

Postal Address:

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Education

Doctorate of Philosophy (expected)

Department of Mathematical Sciences

University of Delaware

May 2008

Dissertation: "Subsets of finite groups exhibiting additive regularity"

Advisor: Robert Coulter

Master of Science

Department of Mathematical Sciences

University of Delaware

May 2005

Bachelor of Science

Summa Cum Laude Department of Physics and Astronomy

Dickinson College

Carlisle, PA

May 2001

Thesis: "On the habitability of eccentric-orbit exoplanets"

Employment History

Instructor: 2005 – present

Department of Mathematical Sciences, University of Delaware

Graduate Research Fellow: 2005

Department of Mathematical Sciences, University of Delaware

Teaching Assistant: 2002 – 2007

Department of Mathematical Sciences, University of Delaware

Writing Tutor: 1999 – 2001

Department of Physics and Astronomy, Dickinson College

- A position created at my request to satisfy the need for peer review of students' technical writing, both for content and clarity.

Radiation Monitor: 1998 – 2001

Department of Physics and Astronomy, Dickinson College

- Dickinson College serves as an independent watchdog to monitor radiation emanating from the nearby nuclear reactor at Three Mile Island, Pennsylvania. Duties involved regular collection and testing of air filters for potentially harmful elements. From 2000 – 2001 I was the student coordinator of this project, organizing and overseeing several students in these tasks.

Teaching Assistant: 1998 – 2000

Department of Physics and Astronomy, Dickinson College

Teaching Experience

- University of Delaware, Newark DE:
 - MATH 117 – Pre-Calculus for Scientists and Engineers, Summer 2005 (Instructor)
 - MATH 221 – Calculus I, multiple semesters (Teaching Assistant)
 - MATH 210 – Discrete Mathematics I, multiple semesters (Teaching Assistant)
 - MATH 210 – Discrete Mathematics I, Winter 2007, Fall 2007 (Instructor)
 - MATH 241 – Analytic Geometry and Calculus A, Spring 2003 (Teaching Assistant)
 - MATH 242 – Analytic Geometry and Calculus B, Spring 2006 (Teaching Assistant)
 - MATH 243 – Analytic Geometry and Calculus C, Spring 2008 (Instructor)
 - Dickinson College, Carlisle PA:
 - Physics 131, 132 – Introductory Physics, 1998 – 1999 (Teaching Assistant)
 - Physics 213 – Analog and Digital Electronics, 2000 (Teaching Assistant)
 - Tutored in the following subject areas:
 - high school geometry
 - precalculus
 - first and second year calculus
 - discrete mathematics
 - group theory
 - probability and statistics
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Awards, Scholarships, and Memberships

- Graduate Student Representative to the Graduate Committee
University of Delaware, Department of Mathematical Sciences 2005 – 2006
 - Graduate research fellowship, University of Delaware Department of Mathematical Sciences, Fall 2005
 - Nikos Pyrros Memorial Teaching Award and Scholarship, University of Delaware, Fall 2004
 - President, Society of Physics Students, Dickinson College Chapter 2000 – 2001
 - Blanche & Henry Yeagley Scholarship, Dickinson College, 1999 – 2001
 - John Patton Memorial Prize, Dickinson College, 1999
 - For outstanding scholarly achievement.
 - Delaplaine McDaniel Prize, 1998
 - For overall superior academic achievement in the freshman class of Dickinson College.
 - Landis-Mohler Prize in Physics, 1998
 - Awarded to the outstanding Dickinson College freshman in Physics.
 - E. Harold & Florence Frantz Scholarship, 1998
 - Awarded at the end of freshman year to Dickinson College students who have shown strong character, intellectual promise, and potential to serve.
 - Benjamin Rush Scholarship, 1997 – 2001
 - A four-year award given to top-rated applicants to Dickinson College.
 - Member, Sigma Pi Sigma National Physics Honors Society
 - Member, Pi Mu Epsilon National Mathematics Honors Society
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Papers and Selected Talks

Current Research

1. R.S. Coulter, T. Gutekunst, *Special subsets of difference sets with particular emphasis on their role in skew Hadamard difference sets*, in final draft.
2. R.S. Coulter, T. Gutekunst, *Subsets of finite groups exhibiting additive regularity*, in preparation.

Selected Talks

1. “The Art and Science of Music” Dickinson College freshman seminar on the physics of music and dance, Fall, 2001
 2. “Projective Planes defined by Planar Functions” at the University of Delaware Discrete Mathematics Seminar, March 17, 2005
 3. “How to break into your professor’s house” at the University of Delaware Department of Mathematics Graduate Student Seminar Series, October 25 2006
 4. “A Fundamental Approach to skew Hadamard difference sets” at the Eighth International Conference on Finite Fields and Applications, Melbourne, Australia, July 11, 2007
 5. “Math is broken, but that’s OK” at the University of Delaware Department of Mathematics Graduate Student Seminar Series, October 10 2007
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