

CURRICULUM VITÆ

Melissa A. Dennison

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EDUCATION

**Ph.D., Mathematics**

*Anticipated May 2010*

*University of Illinois at Urbana-Champaign; Urbana, IL*

Dissertation Title: *“A Sequence Related to the Stern Sequence”*

Dissertation Committee: Bruce Reznick (advisor), Bruce C. Berndt,  
Kenneth B. Stolarsky, Alexandru Zaharescu

**M.S., Teaching of Mathematics**

May 2004

*University of Illinois at Urbana-Champaign; Urbana, IL*

**B.S., Mathematics, magna cum laude, with honors**

December 2001

*Drake University; Des Moines, IA*

PROFESSIONAL EXPERIENCE

**Graduate Teaching Assistant, Mathematics Department**

Jan 2003-present

*University of Illinois at Urbana-Champaign; Urbana, IL*

Primary instructor for 9 different courses, including a large lecture and smaller sections of calculus and entry level courses. Taught in four different styles, including traditional, Calculus & Mathematica, Merit Workshop, and web courses.

**Implemented New Course, Mathematics Department**

Fall 2009

*University of Illinois at Urbana-Champaign; Urbana, IL*

Taught and aided in the development of the new course “Calculus Refresher” during its first offering. This course provides a review of integration techniques along with an introduction to vector calculus to prepare students for Calculus III.

**Honors Project Supervisor, Mathematics Department**

*University of Illinois at Urbana-Champaign; Urbana, IL*

*“The Calculus of Rollercoasters: A Mathematica Project”*

Spring 2009

*“A Polar Experiment in Parameters”*

Spring 2006

Supervised mathematics projects completed by James Scholars. The students received honors credit for completing these projects during their calculus courses.

**Graduate Research Assistant, Mathematics Department**

Fall 2008

*University of Illinois at Urbana-Champaign; Urbana, IL*

Summer 2005

**Course Supervisor, Mathematics Department**

Summer 2008

*University of Illinois at Urbana-Champaign; Urbana, IL*

Summer 2007

Supervised ten graduate-student taught courses each summer. Responsibilities included reviewing syllabi, approving exams, classroom observations, and meetings with the teaching assistants.

<b>Teaching Mentor</b> , Mathematics Department	Fall 2007
<i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Fall 2006
The mentoring program matches new TA's with experienced instructors. Mentors meet with five new TA's to provide support and improvement opportunities through regular classroom observations, seminars, and personal counsel.	
<b>Implemented New Course</b> , Mathematics Department	Spring 2007
<i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Fall 2006
Taught, edited for, and aided in the development of the new course "Ideas in Geometry". Topics in this general education course include straight-edge and compass constructions, and writing short geometric proofs.	
<b>Advisor</b> , Mathematics Department	Summer 2004
<i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	
Advised entering-freshmen in mathematics and related fields.	
<b>Teaching Assistant</b> , Mathematics Department	Jan 2002-Aug 2002
<i>Iowa State University; Ames, IA</i>	
<b>Tutor &amp; Supplemental Instruction Leader</b> , Mathematics Department	Aug 2000-Dec 2001
<i>Drake University; Des Moines, IA</i>	

## TEACHING & INSTRUCTION

### Teaching Experience

Vector Calculus Supplement <sup>*†@</sup> ( <i>for transfer students</i> )	Fall 2009
Calculus Refresher <sup>*†@</sup>	Fall 2009
Calculus I <sup>*†</sup>	Spring 2009
Introductory Matrix Theory *	Fall 2008
A Mathematical World *	Spring 2008
Calculus for Business * ( <i>large lecture</i> )	Fall 2007
Ideas in Geometry *	Spring 2007
Ideas in Geometry *	Fall 2006
Calculus II <sup>*†</sup>	Spring 2006
Calculus I ~	Fall 2005
Finite Mathematics *	Spring 2005
A Mathematical World *	Fall 2004
Calculus II <sup>*†</sup>	Spring 2004
Calculus II	Fall 2003
Finite Mathematics *	Spring 2003
Finite Mathematics *	Summer 2002
Finite Mathematics	Spring 2002

\* indicates primary instructor with full course responsibilities

† indicates courses taught in the Calculus & Mathematica Program, which uses the computer program Mathematica to introduce concepts, aid visualization, and develop conceptual understanding of mathematics. Students complete homework by creating and editing Mathematica documents.

~ indicates courses taught in the Merit Workshop Program, which focuses on small-group learning. During a two-hour Merit recitation section, the instructor poses problems and facilitates group work.

@ indicates courses conducted on the web. Students complete their assignments using Mathematica, and submit them to the course website. The instructor is responsible for making assignments, grading student homework, holding office hours, and giving pencil & paper exams.

## HONORS, AWARDS & ACHIEVEMENTS

- Recipient**, LAS Award for Excellence in Undergraduate Teaching May 2008  
*University of Illinois at Urbana-Champaign; Urbana, IL*  
 This honor is awarded by the College of Liberal Arts and Sciences each year for exemplary teaching.
- Awarded**, Teacher Scholar Certificate May 2008  
*Center for Teaching Excellence, University of Illinois at Urbana-Champaign*  
 This advanced teaching certificate requires assessment of original work, exploration of pedagogy, reflection, and discipline-based service beyond the level of the Graduate Teaching Certificate.
- Recipient**, Brahana TA Instructional Award May 2007  
*University of Illinois at Urbana-Champaign; Urbana, IL*  
 This honor is awarded by the Mathematics Department to two graduate students each year for exemplary teaching.
- Named** to the List of Teachers Ranked Excellent By Their Students 2003-2009  
*University of Illinois at Urbana-Champaign; Urbana, IL*  
 Received the honor nine times, based on student evaluations.
- Funded participant**, “Computing the Continuous Discretely” Short Course Aug 2005  
*Banff International Research Station; Banff, AB, Canada*  
 Funded and sponsored by MSRI, the short course was an opportunity for graduate students to work through the text by M. Beck and S. Robins.
- Awarded**, Graduate Teacher Certificate May 2004  
*Center for Teaching Excellence, University of Illinois at Urbana-Champaign*  
 Certificate requires teacher training, two semesters of teaching, observation, reflection, and workshop participation.
- Awarded**, VIGRE Fellowship Summer 2003  
*University of Illinois at Urbana-Champaign; Urbana, IL* Fall 2002
- Recipient**, Outstanding Student in Mathematics May 2002  
*Drake University, Des Moines, IA*  
 This honor is awarded by the Mathematics and Computer Science Department to one undergraduate student each year.

## UIUC SEMINAR TALKS

- Number Theory Seminar**  
*A Sequence Related to the Stern Sequence* Nov 2009
- Seminar for Women in Mathematics**  
*Generating Functions and the Bow Sequence Modulo Two* Dec 2009  
*Purely Even Terms in the Bow Sequence* Apr 2008  
*Bow & Stern Sequences* Apr 2007  
*Some Interesting Properties of the Stern and Bow Sequences* Mar 2006

**PROFESSIONAL DEVELOPMENT & SERVICE**

<b>Orals Judge</b> , ICTM High School Math Competition <i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Apr 2008
<b>Chair</b> , Graduate Teaching Awards Committee <i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Aug 2007 - May 2008
<b>Panel Member</b> , Mathematics Teaching Orientation <i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Aug 2007 Aug 2006
<b>Orals Coordinator</b> , ICTM High School Math Competition <i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Apr 2006
<b>Member</b> , Mathematics Undergraduate Affairs Committee <i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Aug 2005-May 2006
<b>Microteaching Leader</b> , Campus-wide Teaching Orientation <i>University of Illinois at Urbana-Champaign; Urbana, IL</i>	Jan 2006

**REFERENCES**

**Bruce Reznick** (Advisor)  
Professor  
Department of Mathematics  
University of Illinois  
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**Bruce C. Berndt**  
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**Robert G. Muncaster**  
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Associate Chair  
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**Alison Ahlgren**  
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