

# Aaron A. Allen

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## Education

\* **Doctor of Philosophy in Mathematics**

*Iowa State University, Ames, IA; May 2009*

*Dissertation: "Stability results for damped multilayer composite beams and plates"*

*Advisor: Dr. Scott Hansen*

\* **Master of Arts in Mathematics**

*University of Nebraska-Lincoln, Lincoln, NE; May 2003*

\* **Bachelor of Arts in Mathematics and Computer Science**

*Northwestern College, Orange City, IA; May 2001*

- Graduated Cum Laude

## Academic/Teaching Experience

\* **Assistant Professor of Mathematics**

Responsibility involves teaching 4 courses per semester, ranging in size from 5 to 25 students. Primary duties include writing syllabi, preparing lectures and activities, writing exams, grading, holding office hours, and participating in curricular discussions with other professors.

*Area of Scientific Learning, Milligan College, Milligan College, TN;*

*August 2009 - present*

**Courses Taught**

- **Math 211:** Precalculus/Calculus I
- **Math 213:** Statistics
- **Math 214:** Discrete Mathematics
- **Math 307:** Linear Algebra

\* **Graduate Teaching Coordinator**

*Iowa State University; January 2008 – May 2009*

- Schedule teaching assistants their teaching duties each semester
- Assign help room hours to non-teaching graduate students
- Organize a teaching seminar and math department orientation for the new incoming graduate students
- Assist new foreign graduate students in their English speaking skills and help prepare them for speaking and teaching exams required by the university
- Observe the teaching of the first-year teaching assistants during first semester
- Mentor first-year graduate students

\* **Teaching Assistant**

Responsibility involves teaching 1-2 stand-alone courses per semester, ranging in size from 25 to 50 students. Primary duties include writing syllabi, preparing lectures and activities, writing exams, grading, holding office hours, and participating in curricular discussions with other teaching assistants and professors.

*Iowa State University; August 2004 – May 2009*

**Stand-Alone Courses Taught**

- **Math 265:** Calculus III (Summer 2008, Spring 2007, Summer 2006, Spring 2006)
- **Math 160:** Survey of Calculus (Spring 2008, Fall 2007)
- **Math 140:** College Algebra (Fall 2006)
- **Math 165:** Calculus I (Fall 2005)
- **Math 166:** Calculus II (Spring 2005)

**Recitations Led**

- **Math 142:** Trigonometry and Analytic Geometry, web-based (Fall 2008)
- **Math 165:** Calculus I (Fall 2004)

**Course Grader**

- **Math 141/142:** Trigonometry and Analytic Geometry (Summer 2005)

*University of Nebraska-Lincoln; August 2001 – May 2003*

**Stand-Alone Courses Taught**

- **Math 101:** College Algebra (Spring 2003, Fall 2002, Summer 2002)
- **Math 100A:** Intermediate Algebra (Spring 2002)

**Recitation Led**

- **Math 106:** Calculus I (Fall 2001)

**\* Mathematics Tutor**

Main responsibility is to be a facilitator for students who seek help with their math assignments. Duties include answering questions students have on homework and proctoring make-up exams and retakes. Students are in courses ranging in difficulty from College Algebra to Differential Equations.

- *Iowa State University; Summer 2007*
- *University of Nebraska-Lincoln; Fall 2001 and Fall 2002*
- *Northwestern College; September 1998 – May 2001*

**Academic Awards/Honors**

**\* J.J.L. Hinrichsen Applied Mathematics Research Award**

*Iowa State University; January 2009*

- Awarded annually by the Math department for research excellence in applied mathematics

**\* Aggie-Ho Teaching Excellence Award**

*Iowa State University; May 2008*

- Awarded annually to one teaching assistant in the Math department

**\* Graduate Teaching Excellence Award**

*Iowa State University; May 2006*

- Awarded annually to the top 10% of teaching assistants in each department

**Research Interests**

- \* Applying control theory to partial and ordinary differential equations.
- \* Introducing damping in beam and plate models and analyzing its results.
- \* Utilizing linear operator theory, semigroups, and Riesz basis methods to analyze partial and ordinary differential equations.

## Professional Development

### \* Preparing Future Faculty

*Iowa State University; August 2006 – May 2007*

- A program which offers new teaching, mentoring, and learning possibilities for graduate students.
- Participants are prepared for faculty careers through a combination of seminars, mentoring, and practical classroom and departmental service experiences.

### \* College Teaching Seminar

*Iowa State University; August 2004*

*University of Nebraska-Lincoln; August 2001*

- Designed as an orientation for teaching assistants.
- Presentations and discussions were conducted on various educational topics.
- Provided general teaching information as well as information specific to ISU and UNL respectively.

### \* Academic Support Tutoring Workshop

*Northwestern College; September 1998, September 1999, September 2000*

- Provided general tutoring information as well as information specific to the Academic Support Center at Northwestern.

## Scholarship and Professional Activities

### \* Publications

- *Aaron A. Allen and Scott W. Hansen, “Analyticity of a Multilayer Mead-Markus Plate”, to appear, Journal of Nonlinear Analysis*
- *Aaron A. Allen and Scott W. Hansen, “Analyticity and Exponential Stability of a Multilayer Mead-Markus Beam”, in preparation*
- *Aaron A. Allen and Scott W. Hansen, “Exponential Stability of a Multilayer Rao-Nakra Beam”, in preparation*

### \* Contributed Talk

- *“Stability Results for a Multilayer Mead-Markus Beam”, American Mathematical Society Joint Mathematics Meetings, Washington, D.C., January 2009*

## Organizations and Memberships

### \* National Council of Teachers of Mathematics

*June 2009 – present*

### \* American Mathematical Society

*August 2001 – May 2003, August 2004 - present*

### \* Mathematical Association of America

*August 1998 – August 1999*

## Service Opportunities

### \* **Math Graduate Student Council**

*Iowa State University; August 2007 – May 2009*

- An organization consisting of five or six graduate students who are nominated and elected by the graduate student body in the math department.
- Primary duties include acting as a liaison to the Graduate Committee, drafting proposals, organizing events, scheduling colloquia, soliciting nominations for new members, and organizing elections for new members

### \* **Vinograde Award Selection Committee Leader**

*Iowa State University; January 2008 – April 2008*

- Committee selects one faculty member from the Mathematics Department at ISU to receive the award for excellence in teaching (odd years) or advising (even years).
- Responsibilities include organizing meetings to read through nominations from students and discuss the nominations with the other committee members, contacting former students of the nominees to gather more information, and selecting a winner.

## References

### \* **Dr. Scott W. Hansen, Associate Professor**

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### \* **Dr. Elgin H. Johnston, Associate Chair and Professor**

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### \* **Dr. Ryan Martin, Assistant Professor**

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### \* **Dr. Paul E Sacks, Director of Graduate Education in Mathematics, Professor**

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