

Emilie Wiesner

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EDUCATION **PhD**, University of Wisconsin-Madison, August 2005
Dissertation title: *Translation Functors and the Shapovalov Determinant*
Advisor: Arun Ram
Minor: Mathematics Education

BS, BA, Washington and Lee University, June 2000
Mathematics and Spanish, summa cum laude

EMPLOYMENT *Assistant Professor* Ithaca College
Dept of Mathematics Fall 2007-Present

Franklin Fellow (Temp. Asst. Professor) University of Georgia
Dept of Mathematics AY 2005- 2007

Research Assistant University of Wisconsin
Dept of Mathematics Spring 2005

Teaching Assistant/Instructor University of Wisconsin
Dept of Mathematics 2001-2002, Spring 2003
Spring 2004-Fall 2004

VIGRE Research Fellow University of Wisconsin
Dept of Mathematics AY 2000- 2001
Fall 2002, Fall 2003

RESEARCH AREA Algebra, Representation theory, Lie algebras; Math Education

PAPERS

- A. Weinberg & E. Wiesner. Understanding Mathematics Textbooks Through Reader-Response Criticism. (Submitted).
- A. Weinberg, E. Wiesner, & T. Pfaff. Using Informal Inferential Reasoning to Develop Formal Concepts. (Submitted).
- A. Weinberg, E. Wiesner, B. Benesh, & T. Boester. How Students Use Their Math Textbooks. (Submitted).
- B. Boe, D. Nakano, & E. Wiesner. Ext^1 -quivers for the Witt Algebra $W(1,1)$. *Journal of Algebra* 322 (2009), 1548-1564.
- M. Ondrus & E. Wiesner. Whittaker Modules for the Virasoro algebra, *Journal of Algebra and its Applications* 8 (2009), 363-377.
- UGA VIGRE Algebra Group. On Kostant's theorem for Lie algebra cohomology, *Contemporary Mathematics* 478 (2009), 39-60.
- B. Boe, D. Nakano, and E. Wiesner. Category \mathcal{O} for the Virasoro algebra: Cohomology and Koszulity, *Pacific Journal of Mathematics* 234 (2008), 1-22 .
- E. Wiesner. The Shapovalov Determinant and Translation Functors for the Virasoro Algebra. *Journal of Algebra* 307 (2007), 899-916.
- E. Wiesner. Backward minimal points for bounded linear operators on finite-dimensional vector spaces. *Linear Algebra and its Applications* 338 (2001), 251-259.

SELECTED
PRESENTATIONS

- Ext Groups for the Lie Algebra $W(1,1)$.*
Binghamton Graduate Conference in Algebra and Topology. Binghamton, NY: November, 2008.
- Workshop on Lie Groups, Lie Algebras and their Representations (University of California, Riverside). Riverside, CA: January, 2009.
- How Undergraduates Use their Textbooks.* MAA Seaway Section Meeting. Syracuse, NY: April 2008.
- Whittaker Modules for the Virasoro Algebra.*
AMS Southeastern Sectional Meeting, Special Session on Lie and Representation Theory. Murphreesboro, TN: November 2007.
- Poster, with M. Ondrus. Connections for Women Conference. Mathematical Sciences Research Institute, Berkeley, CA: January 2008.
- Cohomology of Category \mathcal{O} for the Virasoro algebra.*
Joint Meetings of the AMS and MAA, Special Session on Cohomology and Representation Theory. New Orleans, LA; January 2007.

AMS SouthEastern Sectional Meeting, Special Session on Geometric and Combinatorial Methods in Representation Theory. Davidson, NC; March 2007.

Undergraduates' Use of Mathematics Textbooks, Poster, with B. Benesh, T. Boester, and A. Weinberg. Psychology of Mathematics Education-North American Chapter Annual Meeting. Merida, Mexico: October 2006.

Translation Functors for the Virasoro Algebra.

University of Freiburg, June 2005.

University of Wuppertal, June 2005.

Conference on Algebraic Groups and Finite Reductive Groups. Lausanne, Switzerland, June 2005.

Blocks and Translation Functors for the Virasoro Algebra, Poster. Conference on Formal Power Series and Algebraic Combinatorics. Taormina, Sicily, June 2005.

Implementing Lesson Study at the Undergraduate Level. Joint Meetings of the AMS and MAA. Atlanta, GA, January 2005.

Some Sightseeing in Lie Theory. Pi Mu Epsilon Initiation at Washington and Lee University, April 2004.

TEACHING
EXPERIENCE

Ithaca College

Math 108: Calculus for Decision Making

Math 112: Calculus II

Math 144: Business Statistics

Math 185: Math Experimentation

Math 211: Multivariable Calculus

Math 303: Abstract Algebra

Math 392: Independent Study

- Jennifer Parker: *Algebraic Coding Theory*
(Spring 2009, 1 cr.)

- Catharina Carella: *Group Theory of the Rubik's Cube*
(Fall 2009, 1 cr.)

University of Georgia

Math 2200: Differential Calculus

Math 3200: Introduction to Higher Mathematics

Math 5001: Arithmetic and Problem Solving*

Math 5002: Geometry and Problem Solving*

University of Wisconsin

Math 130: Arithmetical Problem Solving*

Math 222: Calculus II

Math 221, 222, 234: Calculus I-III (teaching assistant)

*Math content courses for elementary education majors

DEPARTMENTAL
SERVICE

Colloquium Committee: Ithaca College, Fall 2009-Present

Teacher Education Program Committee: Ithaca College, Fall 2008-Present

Service Course Committee: Ithaca College, AY 2007-2009

Faculty mentor for student teachers: Ithaca College-Frederick Douglas Academy Partnership, Fall 2008

Mentor, Sophomore Seminar: Ithaca College, Spring 2008

Masters in Childhood Education Program Committee: Ithaca College, AY 2007-2008

Organizer, VIGRE Graduate Student Seminar: University of Georgia, AY 2006-2007

Coordinator, Sidewalk Math: University of Wisconsin-Madison, 2001-2004

TA evaluation committee: University of Wisconsin-Madison, AY 2003-2004

COLLEGE
SERVICE

Academic Policies Committee: Ithaca College, Fall 2009

First Year Reading Initiative Facilitator: Ithaca College, 2009

Community Service Committee: Ithaca College, AY 2008-2009

SERVICE TO
THE FIELD

Reviewer, Mathematical Reviews

Journal Referee

Communications in Algebra,

Journal of Algebra and its Applications,

Transactions of the American Mathematical Society

Mathematicians' Representative, Barrow Elementary School Career Day, 2005 & 2006

Mentor, UW-Madison Mentorship Program for Women in Mathematics, AY 2004-2005

AWARDS

Ithaca College H&S Educational Grant: *Mathematics Colloquium*, Fall 2009.

Ithaca College Faculty Development Award: *Using GAP to Explore Symmetric Groups* (3 credit course release), Fall 2009.

Ithaca College Faculty Development Award: *Mathematics for Elementary Teachers Materials* (3 credit course release), Fall 2008.

Ithaca College Academic Project Grant: *Investigating Mathematics Students' Use of Textbooks* (joint with Aaron Weinberg), 2007.