

GRETHE HYSTAD

Department of Mathematics
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Citizenship: Norway

Education

December 2009	University of Arizona, Tucson, AZ, USA Ph.D., Mathematics <i>Periodic Ising Correlations</i> Advisor: Dr. John N. Palmer
May 2006	University of Arizona, Tucson, AZ, USA M.S., Mathematics <i>Sum of lowest eigenvalues of the Discrete Laplacian</i> Advisor: Dr. Daniel Ueltschi
Fall 2000	University of Oslo, Norway Candidata Magisterii, Mathematics (B.S. equivalent)
Spring 1999	Østfold University College, Fredrikstad, Norway Three-year degree in Medical Laboratory Technology

Research Interests

General areas:	Functional Analysis, Statistical Mechanics, Complex Analysis
Specific topics:	Complex analytic and representation theoretic methods applied to classical lattice systems

Employment

January 2010-Present	University of Arizona, Tucson, AZ, USA Instructor
Summer 2010	University of Arizona, Tucson, AZ, USA Instructor for the New Start Summer Program
August 2003-January 2010	University of Arizona, Tucson, AZ, USA Graduate Teaching Associate/Assistant
August 2002-May 2003	University of Oslo, Norway Teaching Assistant

Publications

G. Hystad, *Periodic Ising Correlations*,

J. Math. Phys. 52, 013302, 2011

J. Palmer and G. Hystad, *Spin Matrix for the Scaled Periodic Ising Model*,

J. Math. Phys. 51, 123301, 2010

Teaching Experience

August 2002-Present

Independent Instructor (with full responsibility for the class)

Duties include lecturing, writing and grading exams, quizzes and homework, tutoring in Departmental tutoring lab, using WebAssign for online assignments.

- Introduction to Probability Theory (with R)
- Calculus I with Applications (with WebAssign) ($\times 4$)
- Calculus II (with WebAssign) ($\times 4$)
- Plane Trigonometry ($\times 2$)
- Elements of Calculus
- Calculus Preparation ($\times 2$)
- College Algebra ($\times 4$)

Recitation sessions

Duties include leading recitation sessions, grading exams and quizzes, tutoring in Departmental tutoring lab.

- Introduction to Ordinary Differential Equations ($\times 2$)
- Discrete Mathematics
- Introductory Course in Theoretical Mathematical Analysis (with Maple)

Teaching Assistant

- Formal Mathematical Reasoning and Writing (Introduction to Proofs class), Spring 2008, Spring 2006

Research Mentor

- Research Mentor for Mathematical Modeling Course, Predator-Prey modeling, Spring 2007
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Related Work Experience

Research Assistant for the mathematics education project: *Knowledge for Teaching Secondary School*
University of Arizona, Tucson, AZ, Spring 2010

Awards, Professional Organizations, and Activities

January 5-9, 2011	Joint Mathematics Meetings, New Orleans
Spring 2011	Supervisor for an Undergraduate Teaching Assistant
Fall 2010	Supervisor for a Graduate Teaching Assistant
January 13-16, 2010	Joint Mathematics Meetings, San Francisco (Funded Conference Attendances)
Fall 2009	Outstanding Graduate Teaching Assistant Award
February 20, 2009	High School Workshop on Calculus problems (Presenter), Tucson, AZ
January 5-8, 2009	Joint Mathematics Meetings, Washington D.C. (Funded Conference Attendances)
April 21, 2007	AMS Section Meeting in Tucson, AZ
2003-2009, and 2011-Present	Member of American Mathematical Society

Presentations

October 2009	<i>Periodic Ising Correlations</i> Mathematical Physics Seminar, University of Arizona
October 2008	<i>Ising Model and Ising Correlations</i> Graduate Student Mathematics Colloquium, University of Arizona
April 2008	<i>Ising Correlations</i> Mathematical Physics Seminar, University of Arizona
January 2007	<i>The Strong Szegő limit theorem</i> Graduate Student Mathematics Colloquium, University of Arizona
March 2006	<i>The Discrete and Continuum Laplacian</i> Recruitment Workshop, University of Arizona
April 2005	<i>The Discrete Laplacian</i> Graduate Student Mathematics Colloquium, University of Arizona

Computer Skills

HTML, L^AT_EX, MATLAB, Maple, R, JAVA, Linux/Unix,