

Curriculum Vitae
Shannon Starr
August 2011

Professional Preparation

U. C. Berkeley	Mathematics	B.A. 1996
U. C. Davis	Mathematics	Ph.D. 2001
Princeton University (NSF MSPRF)	Mathematics	2001–2003
McGill University	Mathematics	2003–2004

Professional Appointments

U. C. Los Angeles	Assistant Adjunct Professor of Mathematics	2005–2006
University of Rochester	Assistant Professor of Mathematics	2006 to 2012
UAB	Assistant Professor of Mathematics	2012 to present

Graduate Students Trained

- Meg Walters, *current*. Anticipated graduation date 2014. One paper to date. (See publication list.)

Grant Support

- NSF, DMS 0102009 Mathematical Sciences Postdoctoral Research Fellowship. *Quantum Spin Systems*. Amount: \$90,000. Start date: 07/07/01. Award duration: 24 months.
- NSF, DMS 0706927 in program: Probability. *Probabilistic methods in quantum spin systems and spin glasses*. Amount: \$89,183. Start date: 07/01/07. Award duration: 36 months.
- NSF, DMS 0757327 in program: Applied Mathematics. *FRG: Collaborative Research: Quantum Spin Systems. Theory and Applications in Quantum Computation*. (Co-PI, with Bruno Nachtergaele, Robert Simsl and H.T.Yau) Amount: \$49,064. Start date: 07/15/08. Award duration: 36 months.
- NSF, DMS 0952143 in program: Probability. REU Supplement (for Megan Walters). *Probabilistic methods in quantum spin systems and spin glasses*. Amount: \$2,250. Start date: 07/01/07. Award duration: 6 months.
- NSA Mathematical Sciences Program in: Probability. *Symmetry Methods in Probability*. Amount \$19,898 awarded. Start date: 02/2011 anticipated. Award duration: 1 year and renewable for a second year at the rate \$19,993, pending approval.

Awards

Alice Leung mathematics prize in graduate research, U.C. Davis, 2000.

Conferences organized

- NSF FRG Workshop on Quantum Spin Systems and Quantum Information Theory.
 - May 21–25, 2010. University of Rochester, Mathematics Department, Rochester, NY.
 - 22 participants from Caltech, Clarkson University, Harvard, IBM Research, Los Alamos, Tokyo University, University of Arizona, U.C. Davis, University of Cardiff.
 - Including invited lectures from researchers at University of Rochester from both Mathematics and Physics departments (also advertised to the Computer Science department).
 - See website for more details:
<http://www.math.rochester.edu/people/faculty/sstarr/FRGmain.html>.

Invited Conference Talks

- International Conference on Differential Equations and Mathematical Physics, Birmingham, AL, November 2000.
- 20th Annual Western States Mathematical Physics Meeting, Caltech, February 2001.
- Volterra-CIRM International School on Quantum Probability, Trento, Italy, December 2001.
- 23rd Annual Western States Mathematical Physics Meeting, Caltech, February 2004.
- Workshop on Dynamics in Statistical Mechanics, organized by Vojkan Jaksic and C.-A. Pillet, Montréal, Canada, Summer 2004.
- AMS Regional Meeting, Special Session on Probability and Statistical Physics, San Francisco, April 2006.
- 95th Statistical Mechanics Conference, Rutgers University, May 2006.
- Young Researchers Symposium of the International Congress of Mathematical Physics, Rio de Janeiro, Brazil, July 2006.
- YEP-V (Young European Probabilists) : Statistical Mechanics on Random Structures, Eindhoven, Netherlands, March 2008.

- CRM Workshop, Integrable Quantum Systems and Solvable Statistical Mechanical Models, Montreal, Canada, July 2008.
- Mini-Workshop on Collective Phenomena in Quantum Mechanics, Oberwolfach, Germany, September 2008.
- Canadian Mathematics Society Meeting, St. Johns, Newfoundland, June 2009.
- NSF FRG Workshop on Quantum Spin Systems and Quantum Information Theory, University of Arizona, Tucson, AZ, May 2009.
- Statistical Mechanics on Random Structures, International Research Station, Banff, November 2009.
- Canadian Society of Applied and Industrial Mathematics, St. Johns, Newfoundland, June 2010.
- NSF FRG Workshop on Quantum Spin Systems and Quantum Information Theory, Harvard, Cambridge, MA, May 2011.
- “Disorder in Probability and Statistical Mechanics,” Modena, Italy, June 2012.

Contributed Conference Talks and Poster Sessions

- Poster, International Congress of Mathematical Physics, London, England, Summer 2000.
- Five minute talk, 84th Statistical Mechanics Conference, Rutgers University, December 2000.
- Poster, International Congress of Mathematical Physics, Lisbon, Portugal, Summer 2003.
- Five minute talk, 88th Statistical Mechanics Conference, Rutgers University, December 2003.
- Student/participant lecture at Les Houches summer school on statistical mechanics, France, Summer 2005.
- Poster, International Congress of Mathematical Physics, Rio de Janeiro, Brazil, Summer 2006.
- Thirty minute talk, International Congress of Mathematical Physics, Prague, Czech Republic, August 2009.

Seminars

Stanford University; U.C. Davis; U.C.L.A; U.C. Irvine; U.C. Santa Cruz; University of Southern California; University of Illinois at Urbana Champaign; UMass, Amherst; University of Michigan; Johannes Gutenberg University, Mainz, Germany; ETH-Hoenggerberg, Switzerland; Universität Osnabrück, Germany; Università di Bologna, Italy; McGill University, Canada; Centre de recherches mathématiques, Montréal, Canada; University of Rochester; Memorial University of Newfoundland, St. Johns, Newfoundland, Canada; University of Erlangen, Germany.

Undergraduate mentees/supported summer research assistants

- Matt Conomos, 2007, one paper, “Asymptotics of the Spectral Gap for the Interchange Process on Large Hypercubes.” The paper is coauthored by Conomos and me. It has been accepted for Journal of Statistical Mechanics.
- Lam Tran, 2008, one paper, “Counterexamples to Ferromagnetic Ordering of Energy Levels.” Submitted to Journal of Mathematical Physics, the full list of coauthors is Wolfgang Spitzer, Lam Tran and me.
- Meg Walters, 2009, one paper in preparation, “Concentration in the Mallows Model.” Meg is currently a graduate student working with me.
- Rahul Patel, 2009. He studied Greg Lawler’s textbook, “Conformally Invariant Processes in the Plane.” Now attending Law School.
- Taurean Parker, 2011. Research is still in progress. Anticipated title of paper, “Spectral ordering of cycles in Specht modules.”

Postdoctoral mentees

- Brigitta Vermesi, 2006-08. Two papers: “Some Observations for Mean-Field Spin Glass Models,” published Letters in Mathematical Physics, “Thinning Invariant Partition Structures,” submitted to Journal of Statistical Physics, and under review.
- Andrew Ledoan, 2007-2009. One paper: “A Universality Property of Gaussian Analytic Functions,” published in Journal of Theoretical Probability. The full list of coauthors is Marco Merkli, Andrew Ledoan, and me.
- Stephen Ng, 2011-12. One paper: “Dual bases for the graphical representation of $\mathcal{U}_q(\mathfrak{sl}_2)$.” In preparation.