

Curriculum Vitae

Elizabeth S. Meckes

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D.O.B.: 6/23/1980

Citizenship: USA

Appointments

Assistant Professor of Mathematics, Case Western Reserve University, July 2007 – present.
American Institute of Mathematics Five-year Fellow, July 2006 – present.
Visiting Scholar of Mathematics, Cornell University, August 2006 – June 2007.

Education

Ph.D. in Mathematics, Stanford University, September 2002 – June 2006.

Thesis: An Infinitesimal Version of Stein's Method

Advisor: Persi Diaconis

M.S. in Mathematics, Case Western Reserve University, August 2001 – May 2002.

Thesis: Harmonic Maps Between Graphs

Advisor: E. Jerome Benveniste

B.S. in Mathematics, summa cum laude, with a minor in German, Case Western Reserve University, August 1998 – May 2001.

Grants, honors, memberships

NSF individual grant DMS-0852898, 2009 – 2012.

Clay Institute of Mathematics Liftoff Fellowship – 2007.

American Institute of Mathematics Five-Year Fellowship 2006 – 2011.

ARCS Fellowship, 2005-06.

Mary Sunseri Fellowship, 2004-05.

Barry M. Goldwater Fellowship, 2001.

Max Morris Prize for the outstanding undergraduate in mathematics, Case, 2001.

Memberships: American Mathematical Society, Phi Beta Kappa.

Papers

- Kirkpatrick, Kay; Meckes, Elizabeth. “Asymptotics of the mean-field Heisenberg model”. Submitted; available online at <http://arxiv.org/abs/1204.3062>
- Meckes, Elizabeth; Meckes, Mark. “Concentration and convergence rates for spectral measures of random matrices”. To appear in *Probab. Theory Related Fields*; available online at <http://arxiv.org/abs/1109.5997>.
- Meckes, Elizabeth. “Projections of probability distributions: A measure-theoretic Dvoretzky theorem”. To appear in *Geometric Aspects of Functional Analysis: Papers from the Israel Seminar (GAFA) 2011*; available online at <http://arxiv.org/abs/1102.3438>.
- Kahle, Matthew; Meckes, Elizabeth. “Limit theorems for Betti numbers of random simplicial complexes”. Submitted; available online at <http://arxiv.org/abs/1009.4130>.
- Meckes, Elizabeth; Meckes, Mark. “Another observation on operator compressions”. *Proc. Amer. Math. Soc.* 139 (2011); available online at <http://arxiv.org/abs/1001.1954>.
- Meckes, Elizabeth. “Approximation of projections of random vectors”. To appear in *J. Theoret. Probab.*; available online at <http://arxiv.org/abs/0912.2044>.
- Meckes, Elizabeth. “On Stein’s method for multivariate normal approximation”. In *High Dimensional Probability V: The Luminy Volume* (2009); available online at <http://arxiv.org/abs/0902.0333>.
- Meckes, Elizabeth. “Quantitative asymptotics of graphical projection pursuit”. *Elec. Comm. Probab.* 14 (2009); available online at <http://arxiv.org/abs/0811.2769>.
- Meckes, Elizabeth. “On the approximate normality of eigenfunctions of the Laplacian”. *Trans. Amer. Math. Soc.* 361, no. 10 (2009); available online at <http://arxiv.org/abs/0705.1342>.
- Chatterjee, Sourav; Meckes, Elizabeth. “Multivariate central limit theorems via the method of exchangeable pairs”. *ALEA* 4 (2008); available online at <http://arxiv.org/abs/math/0701464>.
- Meckes, Elizabeth. “Linear functions on the classical matrix groups”. *Trans. Amer. Math. Soc.* 360, no. 10 (2008); available online at <http://arxiv.org/abs/math.PR/0509441>.
- Meckes, Elizabeth; Meckes, Mark. “The central limit problem for random vectors with symmetries”. *J. Theoret. Probab.* 20, no.4 (2007); available online at <http://arxiv.org/abs/math.PR/0505618>.
- Chatterjee, Sourav; Diaconis, Persi; Meckes, Elizabeth. “Exchangeable pairs and Poisson approximation”. *Probab. Surv.* 2, 64–106, 2005. Available online at <http://www.i-journals.org/ps/viewarticle.php?id=20&layout=abstract>.

Invited talks and workshops

- Research program speaker, Midwest Probability Colloquium, Northwestern University, October 2012 (forthcoming).
- Additional speaker, 2012 Clifford Lectures at Tulane University, March 2012 (Main Speaker: Shmuel Weinberger).

Seminar, University of Illinois at Urbana-Champaign, November 2011.

Analysis Seminar, University of Michigan, October 2011.

High Dimensional Probability, Banff International Research Station, October 2011.

Session on Current Trends in Probability, Association of Women in Mathematics 40th Anniversary Conference, Brown University, September 2011.

Probability Seminar, University of Delaware, December 2010.

Thematic Program on Asymptotic Geometric Analysis, Fields Institute, Toronto, Canada, September 2010.

AMS Special Session on Random Matrices and Applications, Albuquerque, April 2010.

Colloquium, Cleveland State University, November, 2009.

Workshop on Topological Complexity of Random Sets, American Institute of Mathematics, August, 2009.

Workshop on Advances in Stochastic Inequalities and their Applications, Banff International Research Station, June, 2009.

Cincinnati Symposium on Probability Theory and Applications, University of Cincinnati, March, 2009.

Workshop for Women in Probability, Cornell University, October 2008.

High Dimensional Probability V, Luminy, France, May 2008.

Workshop on Stein's Method, Institute for Mathematical Sciences, National University of Singapore, April 2008.

UC Berkeley Probability Seminar, March 2008.

Carnegie Mellon Analysis Seminar, February 2008.

Carnegie Mellon Probability Seminar, February 2008.

Workshop on Probability Inequalities with Applications to High Dimensional Phenomena, Texas A&M University, August, 2007.

Third Cornell Probability Summer School, June 2007.

Courant Probability Seminar, NYU, April 2007.

Upstate New York Probability Seminar, University of Rochester, April 2007.

Workshop on Number Theory and Random Phenomena, University of Bristol, March 2007.

AMS Special Session on Random Matrices and Non-commutative Probability, Miami University, March 2007.

AMS Special Session on Limit Theorems of Probability Theory, University of Cincinnati, October 2006.

Conference on Number Theory and Random Matrix Theory, University of Rochester, June 2006.

UCSD Probability Seminar, May 2006.

Case Western Reserve University Colloquium, February 2006.

University of Illinois at Chicago Probability Seminar, February 2006.

Northwestern University Probability Seminar, February 2006.

Conference on Convex Geometry and High Dimensional Phenomena, TU Vienna, July 2005.

Courses taught

Calculus: Calculus for Engineering II (summer 2001); Calculus for Life Sciences I and II (Fall 2001/Spring 2002).

Probability: Introduction to Probability (undergraduate) Fall 2007, Spring 2009; Probability I and II (graduate) Fall 2009/Spring 2010.

Other upper level math: Introduction to Advanced Mathematics (transition to proof-based courses) Fall 2010; Linear Algebra (for math majors) Spring 2011.

Department and College service

Department committees: undergraduate committee, graduate committee, curriculum committee, colloquium committee.

College committees: graduate committee (chair in 2010-2011).

Professional service

Associate Editor for *Journal of Statistical Planning and Inference*

Referee for:

Annales de l'Institut Henri Poincaré

Annals of Probability

Combinatorics, Probability and Computing

Communications in Mathematical Physics

Electronic Journal of Probability

Electronic Communications in Probability

Journal of Theoretical Probability

SIAM Journal on Matrix Analysis and Applications