Georg Menz

UCLA Mathematics Department
Box 951555
Los Angeles, CA 90095-1555

Phone: +1 (650) 521-4728
EMAIL: gmenz@math.ucla.edu
HOMEPAGE: www.stanford.edu/ gmenz/

September 14, 2015

RESEARCH INTERESTS: Probability and PDE with applications in finance, physics and material sciences
Equilibrium and non-equilibrium dynamics of spin systems
Mixing times of Markov chains

POSITIONS

Winter 2016	**Assistant Professor** Mathematics Department, UCLA, USA
Fall 2015	**Berlekamp Endowed Postdoctoral Fellow** Mathematical Sciences Research Institute, Berkeley, USA
2013- 2015	**Szegö Assistant Professor** Department of Mathematics Stanford University, USA
2011 - 2012	**Researcher** Research group of Felix Otto Max-Planck-Institute for Mathematics in the Sciences, Leipzig, Germany

EDUCATION

2007 - 2011	Ph.D. in MATHEMATICS, University of Bonn, Germany Advisor Felix Otto
2001 - 2006	Diploma in MATHEMATICS with minor subject PSYCHOLOGY University of Konstanz, Germany Advisor Reinhard Racke
2003 - 2004	Studies abroad at Universdade Estadual de Campinas, Brasil Internship in quality assurance at BSH, Hortolândia, Brasil

AWARDS

2007	DMV-price of the German Mathematical Society for diploma thesis
2006	VEUK-price, best graduate in mathematics at University of Konstanz
2004 - 2006	Scholarship of Cusanuswerk, gifted education

GRANTS

2014-2016	AIM SQuaRE *Displacement convexity for interacting Markov chains*
2014	NSF travel award

PUBLICATIONS

Equivalence of a mixing condition and the LSI in spin systems with infinite range interaction.
(with Henderson, C.), submitted.

Approximate tensorization of entropy at high temperature.
(with Caputo, P. and Tetali, P.), to appear in Annales de la Facult des Sciences de Toulouse.

Hydrodynamic limit for conservative spin systems with super-quadratic, partially inhomogeneous single-site potential.
(with Fathi, M.), arXiv:1405.3327, (2014).

The approach of Otto-Reznikoff revisited.
Electronic Journal of Probability 19, no. 107, 1-27 (2014).

A Brascamp-Lieb type covariance estimate.
Electronic Journal of Probability 19, no. 78, 1-15, (2014).

Decay of Correlations in 1D Lattice Systems of Continuous Spins and Long-Range Interaction.
(with Nittka, R.), Journal of Statistical Physics 156 (2), 239-267 (2014)

Poincaré and logarithmic Sobolev inequalities by decomposition of the energy landscape.
(with Schlichting, A.), Annals of Probability 42 (5), 1809-1884 (2014)

Uniform logarithmic Sobolev inequalities for conservative spin systems with super-quadratic single-site potential
(with Otto, F.), Annals of Probability 41 (3B), 2182-2224 (2013)

LSI for Kawasaki dynamics with weak interaction
Communications in Mathematical Physics 307, 817-860, (2011)

Equilibrium dynamics of continuous unbounded spin systems
Dissertation, University of Bonn, (2011)

Exponential stability of wave equations with potential and indefinite damping
Journal of Differential Equations 242, 171-191, (2007)

TEACHING

Stanford University	Introduction to Financial Mathematics, Spring 2015 Computation and Simulation in Finance, Spring 2015 Partial Differential Equations and Diffusion Processes, Winter 2015 Calculus Accelerated, Winter 2015 Elementary Functional Analysis, Spring 2014, Spring 2013 Ordinary Differential Equations with Linear Algebra, Winter 2014 Partial Differential Equations I, Fall 2013 Linear Algebra and Differential Calculus of Several Variables, Winter 2013 Short course on *Equilibrium dynamics of continuous unbounded spin systems*, Winter 2013.
University of Bonn	Undergraduate seminar on *Dynamical Systems*, Spring 2009, Spring 2008 Graduate seminar on *Weak Convergence Methods for Nonlinear Partial Differential Equations*, Spring 2007

INVITED SEMINAR TALKS

2015	UBC, UC Irvine, Stanford University, Columbia University, Berkeley
2014	Princeton University, Duke University, Stanford University, Georgia Institute of Technology, UCLA, Carnegie Mellon
2013	UC Davis, University of Delaware, Stanford University
2012	Roma Tre University, Ecole des Ponts ParisTech, University of Toulouse, University of Padua, University of Konstanz
2011	Technion Haifa, University of Warwick

INVITED CONFERENCE PRESENTATIONS

Jul 2014	AIMS Conference on Dynamical Systems, Differential Equations and Applications, Special Session SS88: Stochastic processes and spectral theory for partial differential equations and boundary value problems, Madrid
Jun 2013	SIAM Conference on Mathematical Aspects of Materials Science, Session: Analysis and Computations for Non-equilibrium Molecular Systems, Philadelphia
Sep 2012	Journes MAS, Session Inégalités Fonctionnelles, Clermont-Ferrand
May 2012	Workshop on Large Scale Behavior of Random Spatial Models, University of Warwick
Dec 2011	Workshop on Variational Methods for Evolution, Mathematisches Forschungsinstitut Oberwolfach
Nov 2011	Workshop on Recent Trends in Differential Equations: Analysis and Discretisation Methods, Bielefeld University
Sep 2011	Workshop on Metastability and Stochastic Processes, Ecole des Ponts ParisTech, Paris
Sep 2011	5th International Conference on Stochastic Analysis and its Applications, University of Bonn
Nov 2010	Berlin-Leipzig Seminar on Analysis and Probability Theory, Max-Planck Institute for Mathematics in the sciences, Leipzig
Jan 2010	First CIRM-HCM Joint Meeting, Stochastic Analysis, SPDE's, Particle Systems and Optimal Transport, Levico

STUDENTS

2014 -	Dante Vela, undergraduate student supported by the Stanford Undergraduate Research Institute in Mathematics
2013 -	Chris Henderson, graduate student Stanford University

MARITAL STATUS: Married, two children age 6 and 7

LANGUAGES: German (native), English, Portuguese (fluent), French (basic)