

REZA GHEISSARI

CONTACT INFORMATION	Courant Institute of Mathematical Sciences New York University 251 Mercer Street, Rm. 809 New York, New York 10012 USA	reza@cims.nyu.edu cims.nyu.edu/~reza
RESEARCH INTERESTS	Probability theory and mathematical physics—specifically, spin systems at criticality, their statics and dynamics, mixing times, and relations to SLE and CFT.	
EDUCATION	Courant Institute of Mathematical Sciences, New York University Ph.D. Candidate, Mathematics (expected May 2019) <ul style="list-style-type: none">• Advisors: Eyal Lubetzky and Charles Newman• GPA: 4.00 — Oral Comprehensive Exams: Passed, April 2016. Columbia University in the city of New York B.A. in Mathematics, minors in Physics and English (May 2014) <ul style="list-style-type: none">• Departmental Honors in Mathematics — Advisor: Julien Dubedat	
PREPRINTS AND PUBLICATIONS	<i>Zero-temperature dynamics in the dilute Curie-Weiss model</i> with C. M. Newman and D. L. Stein, (2017). Preprint available at arXiv:1707.08875. <i>Concentration inequalities for polynomials of contracting Ising models</i> , with E. Lubetzky and Y. Peres. (2017). Preprint available at arXiv:1706.00121. <i>Exponentially slow mixing in the mean-field Swendsen–Wang dynamics</i> , with E. Lubetzky and Y. Peres. (2017). Preprint available at arXiv:1702.05797. <i>The effect of boundary conditions on mixing of 2D Potts models at discontinuous phase transitions</i> , with E. Lubetzky. (2017). Submitted. Preprint available at arXiv:1701.00181. <i>Quasi-polynomial mixing of critical 2D random cluster models</i> , with E. Lubetzky. (2016). Submitted. Preprint available at arXiv:1611.01147. <i>On the spectral gap of spherical spin glass dynamics</i> , with A. Jagannath. (2016). Submitted. Preprint available at arXiv:1608.06609. <i>Mixing times of critical 2D Potts models</i> , with E. Lubetzky. (2016). Submitted. Preprint available at arXiv:1607.02182. <i>Ising model: local spin correlations and conformal invariance</i> , with C. Hongler and SC Park. (2016). Submitted. Preprint available at arXiv:1312.4446. <i>Asymptotics of height change in the toroidal Temperleyan dimer model</i> , with J. Dubedat. Journal of Statistical Physics , (2015), DOI:10.1007/s10955-014-1181-x.	
OTHER SCIENTIFIC PAPERS	<i>Long-time predictability in disordered spin systems following a deep quench</i> , with J. Machta, C. Newman, D. Stein, and J. Ye, (2016). To appear in Physical Review E . Preprint available at arXiv:1601.00105.	

Multivalued and deterministic polling in social networks with reputation conscious participants, with B. Englert. **Proc. of 12th IEEE ISPA**, p.895-902, (2013).

TALKS		<i>Relaxation to equilibrium in spherical spin glasses</i> , AMS Joint Mathematics Meetings: Session on spin glasses and disordered media (invited). (January 2017)
		<i>Mixing times of critical 2D Potts models</i> , AIM workshop on Markov chain mixing times (invited). (June 2016)
		<i>Conformal invariance and lattice fields of the Ising Model</i> , Northeast Probability Seminar, Courant Institute of Mathematical Sciences. (November 2015)
		<i>Lattice local fields of the planar Ising model</i> , CRM-PIMS Summer School in Probability, McGill University. (June 2015)
VISITS	May 2017 Feb 2017 Nov 2016	Microsoft Research (visiting Y. Peres) Microsoft Research (visiting Y. Peres) Microsoft Research (visiting Y. Peres)
HONORS AND AWARDS	2016 2014–2019 2014 2013 2012	GSAS Dean’s Travel Grant Henry MacCracken Fellowship New York University Graduate School of Arts and Sciences Magna Cum Laude Columbia University in the city of New York Top 500 on the Putnam Exam NASA Space Grant Jet Propulsion Laboratory
CONFERENCES ATTENDED	June 2017 March 2017 Jan 2017 July 2016 June 2016 Nov 2015– June–July 2015	AIM workshop on phase transitions in random computational problems (<i>invited</i>) SLE, GFF, and LQG in NYC JMM of the AMS: Special session on spin glasses and disordered media (<i>invited</i>) Northwestern probability summer school AIM workshop on Markov chain mixing times (<i>invited</i>) Simons Collaboration on Algorithms and Geometry CRM-PIMS Summer School in Probability
SEMINAR ORGANIZATION	Sept 2015– Sept 2015–	Courant Graduate Student Probability Seminar Courant Graduate Student/Post-doc Seminar
TEACHING AND GRADING	Spring 2017 Fall 2016 Spring 2016 Fall 2015	TA for Complex Analysis TA for Analysis I (two sections) Grader for Multivariable Analysis (Masters level) Grader for Complex Variables I (Masters level)
RELEVANT SKILLS	Languages: Coding:	English (fluent), French (fluent), Farsi (fluent) Proficient in MATLAB and Java