April 2025

Vladislav Kargin's CV

Current Mailing Address	Contact Details	Status Info
4400 Vestal Pkwy E	347-468-0342	US citizen
Vestal, NY 13850	vladislav.kargin@gmail.com	Russia citizen

Areas of Interest: Probability theory, especially in connections with mathematical physics, combinatorics and algorithm theory.

Education

2004 – 2008	PhD, Mathematics	Courant Institute of Mathematical Sciences, NYU
	Advisor:	Gerard Ben Arous
	Thesis:	"Limit Theorems in Free Probability Theory"
1996 – 2001	PhD, Economics	Boston University
	Advisor:	Robert W. Rosenthal
	Thesis:	"Essays on Finance and Agency Theory"
1994 – 1996	MA, Economics	New Economic School (Moscow)
1986 – 1993	Diploma with Honors, Mathematics	Moscow State University (Russia)
1985	Diploma	Kolmogorov's High School # 18 for students gifted in mathematics and sciences (Moscow)

Employment/Appointments

2017 – present	Associate Professor	Binghamton University
2014 – 2017	Assistant Professor	Binghamton University
2011 – 2012	Lecturer (fixed-term)	University of Cambridge
Fall 2010	Research Member	MSRI (Berkeley) (on leave from Stanford University)

2008 – 2011	Szego Assistant Professor	Stanford University
2007 – 2008	Teaching Fellow	NYU
2001 – 2006	Associate	Cornerstone Research (an economic consulting firm)
1996 – 2001	Teaching Fellow Research Assistant	Boston University

Publications in peer-reviewed journals

40. **On the joint distribution of the area and the number of peaks for Bernoulli excursions**
Bernoulli, v. 30, (2024), pp.2700–2720

39. **Scaling limits of slim and fat trees**
Journal of Theoretical Probability, v. 36, (2023), pp.2192–2228

38. **On number of ribbon tilings for strips** (joint with Y. Chen)
Discrete Applied Mathematics, v. 340, (2023), pp.85--103

37. **On enumeration and entropy of ribbon tilings** (joint with Y. Chen)
Electronic Journal of Combinatorics, v. 30(2), (2023), P2.15

36. **Cycles in random meander systems**
Journal of Statistical Physics, v. 181, (2020), pp. 2322-2345

35. **A 3D Ginibre Point Field**
Journal of Statistical Physics, v. 171, (2018), pp.1067-1095

34. **Variation of word frequencies in Russian literary texts**
Physica A: Statistical Mechanics and its Applications, v. 445, (2016), pp.328 – 334.

33. **Limit theorems for linear eigenvalue statistics of overlapping matrices**
Electronic Journal of Probability, v. 20, (2015), article 121, pp.1 – 30.

32. **On estimation in the reduced-rank regression with a large number of responses and predictors**
Journal of Multivariate Analysis, v. 140, (2015), pp.377-394.

31. **Subordination of the resolvent for a sum of random matrices**
Annals of Probability, v. 43, (2015), pp.2119-2150.

30. **On the largest Lyapunov exponent for products of Gaussian matrices**
Journal of Statistical Physics, v.157 (2014) pp.70-83

29. **Statistical properties of zeta functions' zeros**
Probability Surveys, v.11 (2014) pp.121-160

28. **On Pfaffian random point fields**
Journal of Statistical Physics, v.154 (2014) pp.681-704

27. **On fluctuations of Riemann's zeta zeros**
Probability Theory and Related Fields, v.157 (2013) pp.575-604

26. **An inequality for the distance between densities of free convolutions** *Annals of Probability*, v.41 (2013) pp.3241-3260

25. **A concentration inequality and a local law for the sum of two random matrices**
Probability Theory and Related Fields, v.154 (2012) pp.677-702

24. **On eigenvalues of the sum of two random projections**
Journal of Statistical Physics, v.149 (2012) pp.246-258

23. **On free stochastic differential equations**
Journal of Theoretical Probability, v.24 (2011) pp.821-848

22. **Relaxation time is monotone in temperature in the mean-field Ising model** *Statistics and Probability Letters*, v.81 (2011) pp.1094-1097

21. **Bounds for mixing time of quantum walks on finite graphs**
Journal of Physics A: Math. and Theor. v.43 (2010) 335302

20. **Continuous-time quantum walk on integer lattices and homogeneous trees** *Journal of Statistical Physics* v.140 (2010) pp.393-408

19. **Products of random matrices: Dimension and growth in norm**
Annals of Applied Probability v.20 (2010) pp.890-906

18. **Free point processes and free extreme values** (Joint with G. Ben Arous) *Probability Theory and Related Fields* v.147 (2010) pp.161-183

17. **Spectrum of random Toeplitz matrices with band structure**
Electronic Communications in Probability v.14 (2009) pp.412-423

16. **Lyapunov exponents of free operators**
Journal of Functional Analysis, v.255 (2008) pp.1874-1888

15. **Curve forecasting by functional autoregression** (Joint with A. Onatski)
Journal of Multivariate Analysis v.99, (2008) pp.2508-2526

14. **Coordination Games with Quantum Correlations**
International Journal of Game Theory, 2008, 37, 211-218

13. **On the asymptotic growth of the support of free multiplicative convolutions**
Electronic Communications in Probability, v.13 (2008) pp.415-421

12. **A limit theorem for products of free unitary operators**
Probability Theory and Related Fields, v.141 (2008) pp.603-623

11. **On superconvergence of convolutions of free random variables**
Annals of Probability , v.35 (2007) pp. 1931-1949

10. **A large deviation inequality for vector functions on finite reversible Markov chains**
Annals of Applied Probability, v.17 (2007) pp.1202-1221

9. **The norm of products of free random variables**
Probability Theory and Related Fields, v.139 (2007) pp. 397-413

8. **Berry-Esseen for free random variables**
Journal of Theoretical Probability, v.20 (2007) pp.381-395

7. **A proof of a non-commutative central limit theorem by the Lindeberg method**
Electronic Communications in Probability, v.12 (2007) pp.36-50

6. **On the Chernoff bound for efficiency of quantum hypothesis testing** *Annals of Statistics*, v. 33 (2005) pp.959-976

5. **Lattice Option Pricing by Multidimensional Interpolation**
Mathematical Finance, 2005, 15, 635-647

4. **Uncertainty of the Shapley Value**
International Game Theory Review, 2005, 7(4), 517-529

3. **Optimal Asset Allocation with Asymptotic Criteria**
IJTAF, 2003, 6(6), 593-604

2. **Prevention of Herding by Experts**
Economics Letters, 2003, 78(3), 401-407

1. **Value Investing in Emerging Markets: Risks and Benefits**
Emerging Markets Review, 2002, 3(3), 233-244

Conference/Seminar Presentations

February 2023	Cambridge University, Cambridge, UK
June 2021	European Congress of Mathematicians, Portoroz, Slovenia
February 2020	Joint Seminar of U. of Pennsylvania and Temple U., Philadelphia, PA
August 2018	International Congress of Mathematicians, Rio de Janeiro, Brasil
July 2018	International Conference on Probability and Mathematical Statistics, Vilnius, Lithuania
July 2018	The 18th Workshop in Non-commutative probability, Bedlewo, Poland
March 2018	AMS Sectional Meeting, Columbus OH
April 2017	U. of Syracuse, Syracuse NY
August 2016	"Workshop on Random Product Matrices," Bielefeld, Germany
October 2014	Stanford, Palo Alto CA
March 2014	SUNY, Binghamton NY
March 2014	UC Davis, Davis CA
April 2013	Bristol University, Bristol, UK
Jan 2013	Ohio State U., Columbus, OH
Jan 2013	Carnegie Mellon U., Pittsburg, PA
June 2012	University of Warwick, Coventry, UK
May 2012	Mathematical Sciences Research Institute, Berkeley CA

Nov 2011	University of Cambridge, Cambridge UK
May 2011	London School of Economics, London UK
April 2011	U. of Oxford, Oxford UK
Mar 2011	U. of Cambridge, Cambridge UK
Mar 2011	Imperial College, London UK
Feb 2011	IUPUI, Indianapolis IN
Feb 2011	U. of Delaware, Newark DE
Feb 2011	Georgia Tech, Atlanta GA
Jan 2011	U. of Pittsburg, Pittsburg PA
Jan 2011	U. of Michigan, Ann Arbor MI
Nov 2010	MSRI, Berkeley CA
Oct 2010	UC Davis, Davis CA
May 2010	Stanford U., Stanford CA
Dec 2009	UC Berkeley, Berkeley CA
Mar 2009	Workshop on Stochastic Processes, Stanford CA
Oct 2008	Stanford U., Stanford CA
Oct 2008	UC Davis, Davis CA
Feb 2008	John Hopkins U., Baltimore MD
Jan 2008	UC Davis, Davis CA
Jan 2008	McGill U., Montreal, Quebec
Jan 2008	Workshop on Free Probability and its Applications, Banff, Alberta
Oct 2007	Probability Seminar at CIMS, New York NY
Mar 2007	Graduate Student / Postdoc Seminar at CIMS, New York NY
Nov 2006	Free Probability Seminar at TAMU, College Station TX
Jul 2006	Workshop on Stochastic Eigen-Analysis and Its Applications, Boston, MA
Jan 2006	North American Winter Meeting of the Econometric Society, Boston MA
Aug 2005	Joint Statistical Meetings, Minneapolis MN
Jul 2005	SIAM Meeting, New Orleans LA
Aug 2004	Institute of Mathematical Statistics/Bernoulli Society, Barcelona, Spain
Jul 2004	International Conference on Game Theory, Stony Brook NY
Jun 2004	North American Summer Meeting of the Econometric Society, Providence, RI
May 2004	Second Erich L. Lehmann Symposium, Houston TX
Jan 2004	National Meeting of American Mathematical Society, Phoenix AZ
Jun 2003	North American Summer Meeting of the Econometric Society, Evanston IL
Jun 2001	North American Summer Meeting of the Econometric Society, Washington DC
Jul 1997	International Conference on Game Theory, Stony Brook NY

Refereeing/Reviewing

Reviewing for MathSciNet		approximately 90 reviews
Refereeing Journals:	for	Annals of Mathematics, Annals of Probability, Bernoulli, Electronic Communications in Probability, Electronic Journal of Probability, Journal of Physics A,

	Journal of Futures Markets, Journal of Mathematical Analysis and Applications, Journal of Theoretical Probability, Probability Theory and Related Fields, Proceedings of the Royal Society A, Statistics and Probability Letters

Teaching

Binghamton University

Advanced Probability (graduate)	F2016, F2019, F2023
Applied Probability and Stochastic Processes (graduate)	F2018
Linear Algebra for Statistics/Computational Linear Algebra (graduate)	F2020, F2021, F2022
Actuarial Mathematics I	F2016, F2017
Actuarial Mathematics II	S2017
Advanced Linear Algebra	S2024
Introduction to Probability	F2015, S2016, F2018, S2018, F2020, S2021
Introduction to Statistical Learning	F2021, F2023
Mathematical Statistics	F2019, S2019, S2020, F2022
Multivariate Calculus	F2015, F2017

University of Cambridge

Random Matrices (graduate)	F2011
Stochastic Finance Models	F2011

Stanford University

Discrete Probabilistic Methods (graduate)	W2011
Free Probability (graduate)	S2009
Elementary Functional Analysis	S2010
Introduction to Probability Theory	W2010, W2011
Linear Algebra and Multivariate Calculus	F2008, W2009, S2009, F2009
Ordinary Differential Equations	S2011

New York University

Probability and Statistics	S2008
Calculus III (Functions of Several Variables)	F2007
Calculus II (Integration, Analytic Geometry, Series)	Summer2007
Calculus I (Derivatives, Integrals, Transcendentals)	Summer2008

Graduate Advising

Yinsong Chen (Ph.D. 2020)

Administrative Service

Member of Graduate committee	2019 – present
Member of Statistics committee	2018 – present
Ph. D. Qualifying Exam committee	2019 (Yinsong Chen – chair), 2020 (Kexuan Li, Wei Yang), 2025 (Zhongyuan Zhao)
Ph. D. Thesis committee	2018 (P. Milano), 2020 (Yinsong Chen – chair), 2021 (Kexuan Li)
Member of Junior Personnel committee	2017 – present
Member of Undergraduate Advising committee	2016 – 2019, 2023-present
Member of Hiring committee	2015/16, 2024/25
Chair of Hiring committee (Applied Mathematics)	2024/25
Member of Colloquium committee	2015 – present (2016/2017 – chair)
Member of Actuarial committee	2015 – present
Member of the admission committee for the Financial Mathematics Program	2008/09, 2009/10
Organizer of the Stanford probability seminar	2009/10

Other Professional Activities

Organized a section at AMS regional meeting at Binghamton U., Fall 2019.

Fellowships & Awards

Collaboration Grant by Simons Foundation ($42,000)	2017 – 2022
Postoctoral Fellowship by MSRI, Berkeley	Spring 2012
Postoctoral Fellowship by MSRI, Berkeley (declined due to a conflict of interests)	Fall 2010
Stipend by the Mathematics Department of NYU	2006/07, 2007/08
Research Assistantship by the Economics Department of Boston U.	1998/99, 1999/2000, 2000/01
Teaching Fellowship by the Economics Department of Boston U.	1996/97