Vladislav Kargin's Published Papers

Papers related to random matrices are marked 😄 Papers on free probability are ♥

2026

▪ **The smallest singular value of large random rectangular Toeplitz and circulant matrices** 😄

(joint with A. Onatski)
Electronic Journal of Probability **31** (2026), #2 1–30.
DOI: 10.1214/25-EJP1462

2025

▪ **An upper bound on the per-tile entropy of ribbon tilings**

(joint with S. R. Blackburn and Y. Chen)
Combinatorial Theory **5** (2025), #14 1-10
PDF (journal version)
DOI:10.5070/C65365562

2024

▪ **On the joint distribution of the area and the number of peaks for Bernoulli excursions**

Bernoulli **30** (2024), 2700–2720.
PDF (journal version)
DOI: 10.3150/23-BEJ1691

2023

▪ **Scaling limits of slim and fat trees**

Journal of Theoretical Probability **36** (2023), 2192–2228.
PDF (journal version)
DOI: 10.1007/s10959-023-01261-w

▪ **The number of ribbon tilings for strips**

(joint with Y. Chen)
Discrete Applied Mathematics **340** (2023), 85–103.
arXiv: 2307.00767 · Journal link (paywall)

▪ **On enumeration and entropy of ribbon tilings**

(joint with Y. Chen)

Electronic Journal of Combinatorics **30**(2) (2023), P2.15.
PDF (journal version)

2020

- **Cycles in random meander systems**

Journal of Statistical Physics **181** (2020), 2322–2345.
PDF (journal version)
arXiv: 2011.13449

2018

- **A 3D Ginibre point field**

Journal of Statistical Physics **171** (2018), 1067–1095.
PDF (journal version)
arXiv: 1705.03118

2016

- **On variation of word frequencies in Russian literary texts**

Physica A: Statistical Mechanics and its Applications **445** (2016), 328–334.
PDF (journal version)
arXiv: 1503.00339

2015

- **Limit theorems for linear eigenvalue statistics of overlapping matrices** 😃

Electronic Journal of Probability **20** (2015), Art. 121, 1–30.
PDF (journal version)
arXiv: 1407.4743

- **On estimation in the reduced-rank regression with a large number of responses and predictors** 😃

Journal of Multivariate Analysis **140** (2015), 377–394.
PDF (journal version)
arXiv: 1409.6779

- **Subordination of the resolvent for a sum of random matrices** 😃

Annals of Probability **43** (2015), 2119–2150.
PDF (journal version)
arXiv: 1109.5818

2014

▪ On the largest Lyapunov exponent for products of Gaussian matrices 😃

Journal of Statistical Physics **157** (2014), 70–83.
PDF (journal version)
arXiv: 1306.6576

▪ Statistical properties of zeta functions' zeros

Probability Surveys **11** (2014), 121–160.
PDF (journal version)
arXiv: 1302.1452

▪ On Pfaffian random point fields

Journal of Statistical Physics **154** (2014), 681–704.
PDF (journal version)
arXiv: 1210.6603

2013

▪ An inequality for the distance between densities of free convolutions ♥

Annals of Probability **41** (2013), 3241–3260.
PDF (journal version)
arXiv: 1107.0477

▪ On fluctuations of Riemann's zeta zeros

Probability Theory and Related Fields **157** (2013), 575–604.
PDF (journal version)
arXiv: 1203.5309

2012

▪ A concentration inequality and a local law for the sum of two random matrices 😃

Probability Theory and Related Fields **154** (2012), 677–702.
PDF (journal version)
arXiv: 1010.0353

▪ On eigenvalues of the sum of two random projections 😃

Journal of Statistical Physics **149** (2012), 246–258.
PDF (journal version)
arXiv: 1205.0993

2011

▪ On free stochastic differential equations ♥

Journal of Theoretical Probability **24** (2011), 821–848.
PDF (journal version)
arXiv: 1101.2697

▪ Relaxation time is monotone in temperature in the mean-field Ising model

Statistics and Probability Letters **81** (2011), 1094–1097.
PDF (journal version)
arXiv: 1103.0327

2010

▪ Free point processes and free extreme values ♥

(joint with G. Ben Arous)
Probability Theory and Related Fields **147** (2010), 161–183.
PDF (journal version)
arXiv: 0903.2672

▪ Bounds for mixing time of quantum walks on finite graphs

Journal of Physics A: Mathematical and Theoretical **43** (2010), 335302.
PDF (journal version)
arXiv: 1004.0188

▪ Continuous-time quantum walk on integer lattices and homogeneous trees

Journal of Statistical Physics **140** (2010), 393–408.
PDF (journal version)
arXiv: 0912.0232

▪ Products of random matrices: Dimension and growth in norm 😃

Annals of Applied Probability **20** (2010), 890–906.
PDF (journal version)
arXiv: 0903.0632

2009

▪ Spectrum of random Toeplitz matrices with band structure 😃

Electronic Communications in Probability **14** (2009), 412–423.
PDF (journal version)

2008

▪ Curve forecasting by functional autoregression

(joint with A. Onatski)
Journal of Multivariate Analysis **99** (2008), 2508–2526.
PDF (journal version)

▪ Lyapunov exponents of free operators ♥

Journal of Functional Analysis **255** (2008), 1874–1888.
PDF (journal version)
arXiv: 0712.1378

▪ A limit theorem for products of free unitary operators ♥

Probability Theory and Related Fields **141** (2008), 603–623.
PDF (journal version)
arXiv: 0805.0374

▪ On the asymptotic growth of the support of free multiplicative convolutions ♥

Electronic Communications in Probability **13** (2008), 415–421.
PDF (journal version)

▪ Coordination Games with Quantum Correlations

International Journal of Game Theory **37** (2008), 211–218.
PDF (journal version)
Preliminary version

2007

▪ The norm of products of free random variables ♥

Probability Theory and Related Fields **139** (2007), 397–413.
PDF (journal version)
arXiv: math/0611593

▪ A proof of a non-commutative central limit theorem by the Lindeberg method ♥

Electronic Communications in Probability **12** (2007), 36–50.
PDF (journal version)
arXiv: math/0703345

▪ Berry-Esseen for free random variables ♥

Journal of Theoretical Probability **20** (2007), 381–395.
PDF (journal version)
arXiv: math.PR/0610072
Comment: this paper has a mistake; see Theorem 2.4 in Chistyakov–Götze (Ann. Probab. 36 (2008), 54–90).

- **On superconvergence of convolutions of free random variables ♥**

Annals of Probability **35** (2007), 1931–1949.
PDF (journal version)
arXiv: math.PR/0610075

- **A large deviation inequality for vector functions on finite reversible Markov chains**

Annals of Applied Probability **17** (2007), 1202–1221.
PDF (journal version)
arXiv: 0508538
Comment: published version contains a gap; the original correct proof is in arXiv v1 (PDF).

2005

- **On the Chernoff bound for efficiency of quantum hypothesis testing**

Annals of Statistics **33** (2005), 959–976.
PDF (journal version)

- **Lattice Option Pricing by Multidimensional Interpolation**

Mathematical Finance **15** (2005), 635–647.
PDF (journal proof version)

- **Uncertainty of the Shapley Value**

International Game Theory Review **7**(4) (2005), 517–529.
PDF (journal proof version)

2003

- **Prevention of Herding by Experts**

Economics Letters **78**(3) (2003), 401–407.
PDF (journal proof version)

- **Optimal Asset Allocation with Asymptotic Criteria**

IJTAF **6**(6) (2003), 593–604.
PDF (arXiv version)

2002

- **Value Investing in Emerging Markets: Risks and Benefits**

Emerging Markets Review **3**(3) (2002), 233–244.
PDF (journal proof version)

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