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Preprints

- 2018 R.I.O., A. Pereira, R. Ribeiro
[Concentration in the Generalized Chinese Restaurant Process](#)
- R.I.O., Y. Peres
[Random walks on graphs: new bounds on hitting, meeting, coalescing and returning](#)
- R.I.O., G. Reis
[Interacting diffusions on random graphs with diverging degrees: hydrodynamics and large deviations](#)
- 2017 R.I.O., P. Thompson
[Sample average approximation with heavier tails II: non-asymptotic bounds with weak assumptions and stochastic constraints](#)
- R.I.O., P. Thompson
[Sample average approximation with heavier tails I: non-asymptotic bounds with weak assumptions and stochastic constraints](#)
- D. R. Figueiredo, G. Iacobelli, R.I.O., B. Reed, R. Ribeiro
[Building your path to escape from home \[preliminary version\]](#)
- 2016 A. Jofré, A. Iusem, R.I.O., P. Thompson
[Variance-based stochastic extragradient methods with line search for stochastic variational inequalities](#)

Accepted research papers

- 2018 R.I.O., R. Ribeiro, R. Sanchis
[Disparity of clustering coefficients in the Holme-Kim network model](#)
To appear in *Advances in Applied Probability*

Published research papers

- 2018 A. Ben-Hamou, R.I.O., Y. Peres
[Estimating graph parameters via random walks with restarts](#)
Proceedings of the Twenty-Ninth Annual ACM-SLAM Symposium on Discrete Algorithms. 2018, 1702-1714
- C. Duarte, R. Drumond, R.I.O. (* non-alphabetical author ordering)
[Small violations of Bell inequalities for multipartite pure random states \(arXiv version\)](#)
Journal of Mathematical Physics, Volume 59, Issue 5

B. Amaral, C. Duarte, R.I.O. (** non-alphabetical author ordering*)
 Necessary conditions for extended noncontextuality in general sets of random variables (arXiv version)
Journal of Mathematical Physics, Volume 59, 072202

2017

A. Jofré, A. Iusem, R.I.O., P. Thompson
 Extragradient method with variance reduction for stochastic variational inequalities (arXiv version)
SIAM Journal on Optimization, Volume 27, Number 2 (2017), 686-724.

E. Joly, G. Lugosi, R.I.O.
 On the estimation of the mean of a random vector
Electronic Journal of Statistics, Volume 11, Number 1 (2017), 440-451.

A. Belloni and R.I.O.
 Approximate group context tree (arXiv version)
Annals of Statistics, Volume 45, Number 1 (2017), 355-385.

Song Mei, Theodor Misiakiewicz, Andrea Montanari, R.I.O.
 Solving SDPs for synchronization and MaxCut problems via the Grothendieck inequality
Proceedings of Machine Learning Research, Volume 65: Conference on Learning Theory (2017) [NB: full refereed paper]

2016

L. Devroye, M. Lerasle, G. Lugosi, R.I.O.
 Sub-Gaussian mean estimators (arXiv version)
Annals of Statistics, Volume 44, Number 6 (2016), 2695-2725.

R.I.O.
 The lower tail of random quadratic forms with applications to ordinary least squares (arXiv version)
Probability Theory and Related Fields, Volume 166, Number 3 (2016) 1175–1194.

L. Addario-Berry, R.I.O., Y. Peres, P. Sousi
 Random walks colliding before getting trapped
Electronic Journal of Probability, Volume 21 (2016), paper no. 42, 19 pp.

2015

R.I.O.
 Stochastic Processes With Random Contexts: A Characterization and Adaptive Estimators for the Transition Probabilities (arXiv version)
IEEE Transactions on Information Theory, Volume: 61, Issue 12 (2015).

L. Addario-Berry, S. Bhamidi, S. Bubeck, L. Devroye, G. Lugosi, R.I.O.
 Exceptional rotations of random graphs: a VC theory
Journal of Machine Learning Research, Volume 16 (2015), p. 1893-1922.

2014

S. Griffiths, R. Kang, R.I.O., V. Patel

[Tight inequalities among set hitting times in Markov chains \(arXiv version\)](#)
Proceedings of the American Mathematical Society, Volume 142 (2014), p. 3285 - 3298.

2013

R.I.O.

[Mean field conditions for coalescing random walks](#)
Annals of Probability, Volume 41 (2013), p. 3420 - 3461.

R.I.O.

[Mixing of the symmetric exclusion processes in terms of the corresponding single-particle random walk](#)
Annals of Probability, Volume 41 (2013), p. 871 - 913.

2012

R.I.O.

[Mixing and hitting times for finite Markov chains](#)
Electronic Journal of Probability, Volume 7 (2012), paper no. 70, 16 pp.

R.I.O.

[On the coalescence time of reversible random walks \(arXiv version\)](#)
Transactions of the American Mathematical Society, Volume 364 (2012), p. 2109 - 2128.

R. C. Drumond, R.I.O.

[Small violations of full-correlation Bell inequalities for multipartite pure random states \(arXiv version\)](#)
Physical Review A, Volume 86 (2012), paper no. 012117.

2011

R.I.O.

[The spectrum of random k-lifts of large graphs \(with possibly large k\) \(arXiv version\)](#)
Journal of Combinatorics, Volume 1 (2011), p. 285 - 306.

2010

R.I.O.

[Sums of random Hermitian matrices and an inequality by Rudelson](#)
Electronic Communications in Probability, Volume 15 (2010), p. 203 - 212.

2009

R.I.O.

[On the convergence to equilibrium of Kac's random walk on matrices](#)
The Annals of Applied Probability, Volume 19 (2009), p. 1200 - 1231.

R.I.O.

[The onset of dominance in balls-in-bins processes with feedback \(arXiv version\)](#)
Random Structures and Algorithms, Volume 34 (2009), p. 454 - 477.

2008

R.I.O.

[Balls-in-bins processes with feedback and Brownian motion \(arXiv version\)](#)
Combinatorics, Probability & Computing, Volume 17 (2008), p. 87 - 110.

R.I.O., B. Terhal

[The complexity of quantum spin systems on the planar square lattice \(arXiv version\)](#)
Quantum Information & Computation, Volume 8 (2008), p.0900 - 0924.

S. Bravyi, D. DiVincenzo, R.I.O., B. Terhal

[The complexity of stoquastic local Hamiltonian problems \(arXiv version\)](#)

Quantum Information & Computation, Volume 8 (2008), p. 0361 - 0385.

- 2007** R.I.O., O. Dahlsten, M. Plenio (** non-alphabetical author ordering*)
[Generic entanglement can be generated efficiently \(arXiv version\)](#)
Physical Review Letters, Volume 98 (2007), paper no. 130502.
- O. Dahlsten, R.I.O., M. Plenio (** non-alphabetical author ordering*)
[The emergence of typical entanglement in two-party random processes \(arXiv version\)](#)
Journal of Physics A, Volume 40 (2006), Number 28.
- 2006** A. Harrow, R.I.O., B. Terhal
[Quantum bit commitment with misaligned reference frames \(arXiv version\)](#)
Physical Review A, Volume 73 (2006), Number 3, paper no. 032331.
- 2005** R.I.O., J. Spencer
[Connectivity transitions in networks with superlinear preferential attachment](#)
Internet Mathematics, Volume 2 (2005), Number 2, p. 121 - 163.
- 2004** M. Mitzenmacher, R.I.O., J. Spencer
[A scaling result for explosive processes](#)
Electronic Journal of Combinatorics, Volume 11 (2004), p. 1 - 14.

Other publications and reports

- Tech reports** R.I.O.
[Concentration of the adjacency matrix and of the Laplacian in random graphs with independent edges](#)
 arXiv: 0911.0600 (unpublished for various reasons, but cited quite often)
- Conference abstracts (refereed)** J. Langford, R.I.O., B. Zadrozny
[Predicting Conditional Quantiles via Reduction to Classification](#)
 In: 22nd Conference on Uncertainty in Artificial Intelligence (UAI), 2006, Cambridge, EUA.
- Y. Dodis, K. Pietrzak, R.I.O.
[On the Generic Insecurity of Full-Domain Hash](#)
 In: CRYPTO 2005 -- The 25th Annual International Cryptology Conference, 2005, Santa Barbara, CA - EUA.
- A. Elbaz, Y. Dodis, R.I.O., R. Raz,
[Improved Randomness Extraction from Two Independent Sources](#)
 In: Approximation, Randomization, and Combinatorial Optimization, Algorithms and Techniques: APPROX - RANDOM 2004, 2004, Cambridge, MA - EUA.
- Y. Dodis, R.I.O.
[On extracting private randomness over a public channel](#)
 Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques: APPROX - RANDOM 2003., 2003, Princeton, NJ - EUA.
- Lecture notes** R. Morris, R.I.O.

Extremal and Probabilistic Combinatorics
XXVII Colóquio Brasileiro de Matemática (SBM/IMPA)

M. R. Hilário, R.I.O.
A matemática de embaralhar cartas
VII Bienal Brasileira de Matemática (UNICAMP)