

LIST OF PUBLICATIONS OF FABIO TONINELLI

PHD THESIS AND HABILITATION

- Habilitation à Diriger des Recherches en Mathématiques.
Title: *Polymères en milieu aléatoire: Localisation, Phénomènes critiques et Critère de Harris*
http://perso.ens-lyon.fr/fabio-lucio.toninelli/hdr_18mai2010.pdf
- PhD thesis: *Rigorous results for mean field spin glasses: thermodynamic limit and sum rules for the free energy*
<http://perso.ens-lyon.fr/fabio-lucio.toninelli/tesidott.pdf>

PREPRINTS

1. S. Chhita, F. L. Toninelli, *The domino shuffling algorithm and Anisotropic KPZ stochastic growth*, arXiv:1906.07231
2. A. Giuliani, V. Mastropietro, F. L. Toninelli, *Non-integrable dimers: Universal fluctuations of tilted height profiles*, arXiv:1904.07526

PUBLISHED ARTICLES

1. A. Giuliani, F. L. Toninelli, *Non-integrable dimer models: universality and scaling relations*, J. Math. Phys. **60**, 103301 (2019), arXiv:1905.04011
2. F. L. Toninelli, *Dynamique d'interfaces aléatoires et limites hydrodynamiques*, La Gazette des mathématiciens **160** (2019), 15-26.
3. S. Chhita, F. L. Toninelli, *A (2 + 1)-dimensional Anisotropic KPZ growth model with a smooth phase*, Comm. Math. Phys. **367** (2019), 483-516
4. A. Borodin, F. L. Toninelli, *Two-dimensional Anisotropic KPZ growth and limit shapes*, J. Stat. Mech. (2018) 083205
5. M. Legras, F. L. Toninelli, *Hydrodynamic limit and viscosity solutions for a 2D growth process in the anisotropic KPZ class*, Comm. Pure Appl. Math. **72** (2018), 620-666.
6. B. Laslier, F. L. Toninelli, *Lozenge tiling dynamics and convergence to the hydrodynamic equation*, Comm. Math. Phys. **358** (2018), 1117-1149.

7. S. Chhita, P. L. Ferrari, F. L. Toninelli, *Speed and fluctuations for some driven dimer models*, Ann. Inst. H. Poincaré D 2019 (Online First), arXiv:1705.07641
8. F. L. Toninelli, *(2 + 1)-dimensional interface dynamics: mixing time, hydrodynamic limit and Anisotropic KPZ growth*, Proceedings of the International Congress of Mathematicians 2018, Rio de Janeiro, vol. 2 (2719-2744), arXiv:1711.05571
9. P. Caputo, F. Martinelli, F. L. Toninelli, *Entropic repulsion in $|\nabla\phi|^p$ surfaces: a large deviation bound for all $p \geq 1$* , Boll. Unione Matematica Italiana **10** (2017), 451-466.
10. A. Giuliani, V. Mastropietro, F. L. Toninelli, *Haldane relation for interacting dimers*, J. Stat. Mech. (2017) 034002
11. B. Laslier, F. Toninelli, *Hydrodynamic Limit Equation for a Lozenge Tiling Glauber Dynamics*, Ann. Henri Poincaré: Theor. Math. Phys, vol. **18** (2017), 2007-2043.
12. F. L. Toninelli, *A (2+1)-dimensional growth process with explicit stationary measures*, Annals of Probability **45** (2017), 2899–2940.
13. A. Borodin, I. Corwin, F. L. Toninelli, *Stochastic heat equation limit of a (2+1)d growth model*, Comm. Math. Phys. **350** (2017), 957-984.
14. I. Corwin, F. L. Toninelli, *Stationary measure of the driven two-dimensional q-Whittaker particle system on the torus*, Elect. Comm. Probab. 2016, Vol. 21, paper no. 44, 1-12.
15. F. Caravenna, F. L. Toninelli, N. Torri, *Universality for the pinning model in the weak coupling regime*, Annals of Probability **45** (2017), 2154-2209.
16. P. Caputo, F. Martinelli, F. Toninelli, *Multi-level pinning problems for random walks and self-avoiding lattice paths*, Elect. J. Probab. **20** (2015), 1–29
17. A. Giuliani, V. Mastropietro, F. Toninelli, *Height fluctuations in non-integrable classical dimers*, Europhys. Lett. **109** (2015), 60004
18. D. Ioffe, S. Shlosman, F. Toninelli, *Interaction versus entropic repulsion for low temperature Ising polymers*, J. Stat. Phys. **158** (2015), 1007–1050.

19. P. Caputo, F. Martinelli, F. L. Toninelli, *On the probability of staying above a wall for the (2+1)-dimensional SOS model at low temperature*, Probab. Theory Rel. Fields **163** (2015), 803-831
20. B. Laslier, F. L. Toninelli, *Lozenge tilings, Glauber dynamics and macroscopic shape*, Comm. Math. Phys. **338** (2015), 1287–1326.
21. A. Giuliani, V. Mastropietro, F. L. Toninelli, *Height fluctuations and interacting dimers*, Ann. Inst. Henri Poincaré (Prob. Stat) **53** (2017), 98-168.
This article was awarded the “2016-2017 Best article AIHP B prize”, <http://www.ihp.fr/en/publications/prizes/annalsb>
22. P. Caputo, E. Lubetzky, F. Martinelli, A. Sly, F. L. Toninelli, *Scaling limit and cube-root fluctuations in SOS surfaces above a wall*, J. Eur. Math. Soc. **18** (2016), 931-995
23. B. Laslier, F. L. Toninelli, *How quickly can we sample a uniform domino tiling of the $2L \times 2L$ square via Glauber dynamics?*, Probab. Theory Rel. Fields **161** (2015), 509–559
24. H. Lacoïn, F. Simenhaus, F. L. Toninelli, *The heat equation shrinks Ising droplets to points*, Comm. Pure Appl. Math. **68** (2015), 1640–1681
25. P. Caputo, E. Lubetzky, F. Martinelli, A. Sly, F. L. Toninelli, *Dynamics of 2+1 dimensional SOS surfaces above a wall: slow mixing induced by entropic repulsion*, Ann. Probab. **42** (2014), 1516–1589
26. H. Lacoïn, F. Simenhaus, F. L. Toninelli, *Zero-temperature 2D Ising model and anisotropic curve-shortening flow*, J. Eur. Math. Soc. **16** (2014), 2557–2615
27. Q. Berger, F.L. Toninelli, *Hierarchical pinning model in correlated random environment*, Ann. Institut Henri Poincaré Probab. Statist., **49** No. 3 (2013), 781–816.
28. C. Bernardin, F. L. Toninelli, *A one-dimensional coagulation-fragmentation process with a dynamical phase transition*, Stoc. Proc. Appl. **122** (2012), 1672–1708.
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34. G. Giacomin, H. Lacoïn, F. L. Toninelli, *Disorder relevance at marginality and critical point shift*, Ann. Institut Henri Poincaré Probab. Statist. **47** (2011), 148–175.
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37. G. Giacomin, H. Lacoïn, F.L. Toninelli, *Hierarchical pinning models, quadratic maps and quenched disorder*, Probab. Theory Rel. Fields. **147**, 185–216 (2010).
38. G. Giacomin, H. Lacoïn, F.L. Toninelli, *Marginal relevance of disorder for pinning models*, Commun. Pure Appl. Math. **63**, 233–265 (2010).
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59. S. Franz, M. Leone, F.L. Toninelli, *Replica bounds for diluted non-Poissonian spin systems*, J. Phys. A **36** (2003), 10967–10985.
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PROCEEDINGS

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2. F. L. Toninelli, *Disorder relevance for pinning/wetting models: a review*, Proceedings of ICMP 2009 (Prague).
3. H. Lacoin, F. L. Toninelli, *A smoothing inequality for hierarchical pinning models*, Proceedings of the Summer School "Spin glasses" (Paris, June 2007).
4. S. Franz, F. L. Toninelli, *The Kac limit for diluted spin glasses*, Int. Jou. Mod. Phys. B **18**, 675-679 (2004).
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