

STEFANO OLLA - LISTE DE PUBLICATIONS

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- Livres

- (1) *Fluctuations in Markov Processes*, avec T. Komorowski et C. Landim, accepté pour la publications dans la serie **Grundlehren der mathematischen Wissenschaften**, Springer. Publication prevue en 2010/11.

- Publications dans des journaux internationaux:

- (1) *Thermal Conductivity of the Toda Lattice with Conservative Noise*, avec A. Iacobucci, F. Legoll, G. Stoltz, <http://fr.arxiv.org/abs/0912.3416v1>, **J. Stat. Phys.**, 140, 2, 2010, 336-348.
- (2) *A limit theorem for an additive functionals of Markov chains*, avec M. Jara et T. Komorowski, **Annals of Applied Probability**, Vol. 19, No. 6, 2270-2300, 2009. DOI: 10.1214/09-AAP610
- (3) *Energy transport in stochastically perturbed lattice dynamics*, avec G. Basile et H. Spohn, **Arch. Rat. Mech.**, Vol. 195, no. 1, 171-203, 2009. DOI 10.1007/s00205-008-0205-6.
- (4) *Heat Conduction and Entropy Production in Anharmonic Crystals with Self-Consistent Stochastic Reservoirs*, avec F. Bonetto, J. L. Lebowitz et J. Lukkarinen, **J. Stat. Phys.**, 134, vol.5, 2009, 1097–1119, DOI 10.1007/s10955-008-9657-1.
- (5) *Thermal conductivity for a momentum conserving model*, avec G. Basile et C. Bernardin, **Comm.Math.Phys.**, 287, 1, 67-98, 2009.
- (6) *Stationary and Non-equilibrium Fluctuations in Boundary Driven exclusion processes*, avec C. Landim et A Milanese, **Markov Proc. Rel. Fields**, vol. 14, 165-184, 2008.
- (7) *Anomalous transport and relaxation in classical one-dimensional models*, avec G. Basile, L. Delfini, S. Lepri, R. Livi, A. Politi, **European Journal of Physics Special Topics**, vol.151, n.1, 85–93 (2007).
- (8) *Momentum conserving model with anomalous thermal conductivity in low dimensional systems*, avec G. Basile et C. Bernardin, **Phys. Rev. Lett.** 96, 204303, 2006.
- (9) *Equilibrium Fluctuations for a System of harmonic oscillators with conservative noise*, avec J. Fritz et K. Nagy. **J. Stat. Phys.**, vol. 122, no.3, 399-415, 2006.
- (10) *Fourier law and fluctuations for a microscopic model of heat conduction*, avec C. Bernardin. **J. Stat. Phys.**, vol.118, nos.3/4, 271-289, 2005.
- (11) *Einstein Relation for Random Walks in random environment*, avec T. Komorowski. **Stoch. Proc. and Appl.**, vol. 115, 1279-1301, 2005.
- (12) *Fluctuation in the weakly asymmetric simple exclusion with open boundaries*, avec B.Derrida, C. Enaud, C. Landim, **J. Stat. Phys.**, vol. 118, nos. 5/6, 795-811, 2005.

- (13) *Diffusive Behaviour of the Equilibrium Fluctuations in the Asymmetric Exclusion Processes.* avec C.Landim and S.R.S.Varadhan, **Advanced Studies in Pure Mathematics**, vol. 39, *Stochastic Analysis on large Scale Interacting Systems*, 307-324, 2004.
- (14) *On Mobility and Einstein Relation for Tracers in Time Mixing random Environments* , avec T. Komorowski, **J. Stat. Phys.**, Vol. 118, N. 3/4, February 2005.
- (15) *On the viscosity and fluctuation-dissipation in exclusion processes.* avec C.Landim and S.R.S.Varadhan, **J. Stat. Phys.**, vol.115, N.1/2, 323-363 (Avril 2004).
- (16) *Homogenization of a bond diffusion in a locally ergodic random environment*, avec P. Siri, **Stochastic Processus and Application**, vol.109, 317-326, 2004.
- (17) *Equilibrium Fluctuations for Interacting Ornstein–Uhlenbeck particles*, avec C. Tremoulet, **Commun. Math. Phys.**, vol. 233, 463-491, 2003.
- (18) *A note on the central limit theorem for two-fold stochastic random walks in a random environment*, avec T. Komorowski, **Bull. Pol. Acad. Sci.**, vol 51 (2), 2003.
- (19) *On the Sector Condition and Homogenization of Diffusions with a Gaussian Drift*, avec T. Komorowski, **J. Funct. Anal.**, vol. 197, no.1, 179-211, 2003.
- (20) *Invariant measures for passive tracer dynamics in Ornstein-Uhlenbeck flows*, avec Tomasz Komorowski **Stochastic Processes and Applications**, vol. 105, n.1, 139-173, 2003.
- (21) *On the Superdiffusive Behavior of Passive Tracer with a Gaussian Drift.* avec T. Komorowski, **J. Stat. Phys.**, vol. 108, Nos. 3/4, 647-668, 2002.
- (22) *Finite-Dimensional Approximation of the Self-Diffusion coefficient for the Exclusion Process.* avec C.Landim and S.R.S.Varadhan, **Annals of Prob.** vol. 30, No. 2, 1-26, 2002.
- (23) *Symmetric Simple Exclusion: Regularity of the Self-Diffusion coefficient.* avec C.Landim and S.R.S.Varadhan, **Comm.Math.Phys.**, vol. 224, 302-321, 2001.
- (24) *Fluctuation for Weakly Massive $\nabla\phi$ Interface Model and Applications to the Interface on a Wall.* avec T.Funaki, **Stochastic Processes and Applications**, Vol. 94, 1-27, 2001.
- (25) *Diffusive Behavior of Interacting Particle Systems*, **Monte Carlo Methods and Applications** Vol. 7, No. 3-4, pp. 329-338, 2001.
- (26) *On Homogenization of Time Dependent Random Flows.* avec T. Komorowski, **Probability Theory and Related Fields**, vol. 121, 98-116, 2001.
- (27) *Equilibrium Fluctuation of Asymmetric Simple Exclusion processes in Dimension $d \geq 3$,* avec C.C. Chang and C. Landim, **Probability Theory and Related Fields**, Vol. 119, 381-409, 2001.
- (28) *Equilibrium Fluctuation for a Ginzburg-Landau Interface Model*, avec G.B. Giacomin and H. Spohn, **Annals of Probability**, Vol. 29, No. 3, 1138-1172, 2001.
- (29) *Asymptotic Behaviour of a Tagged Particle in Simple Exclusion Processes* avec C.Landim and S.R.S.Varadhan, **Bol. Soc. Bras. Mat.** vol. 31, No.3, 241-275, 2000.

- (30) *Driven Tracer Particle in One-Dimensional Symmetric Simple Exclusion*, avec C. Landim and S.B. Volchan, **Comm.Math.Phys.**, vol.192, 287-307, 1998.
- (31) *Homogenization of Convection-Diffusion Equation with Space-Time Ergodic Random Flow.*, avec C. Landim et H.T. Yau, **Probability Theory and Related Fields**, vol.112, 203-220, 1998.
- (32) *Microscopic derivation of the Cahn-Hilliard equations*, avec L.Bertini et C. Landim, **J.Stat.Physics**, vol.88, Nos.1/2, 365-381, 1997.
- (33) *Reversibility in Infinite Hamiltonian Systems with Conservative Noise*, avec J. Fritz and C. Liverani, **Comm.Math.Phys.**, vol.189, 481-496, 1997.
- (34) *Some properties of the diffusion coefficient for the Asymmetric Simple Exclusion Processes*, avec C. Landim et H.T. Yau, **Annals of Probability**, vol.24, n.4, 1779-1808, 1997.
- (35) *First Order Correction for the Hydrodynamic Limit of Asymmetric Simple Exclusion Processes in dimension $d \geq 3$* , avec C. Landim et H.T. Yau, **Comm.Pure Appl.Math**, vol.50, n.2, 149-203, 1997.
- (36) *Ergodicity of Infinite Hamiltonian Systems with Conservative Noise*, avec C. Liverani, **Probability Theory and Related Fields**, n.106, 401-445, 1996.
- (37) *Macroscopic Properties of a Stationary Non-Equilibrium Distribution for a Non-Gradient Interacting Particles System*, avec C. Kipnis et C. Landim, **Ann. Inst. H. Poincaré, probabilités et statistiques**, vol. 31, n.1, 191-221, 1995.
- (38) *Hydrodynamic Limit for a Non-Gradient System: the Generalised Symmetric Exclusion Process*, avec C. Kipnis et C. Landim, **Comm. Pure Appl. Math.**, vol. 47, n.11, 1475-1545, 1994.
- (39) *Hydrodynamic Limit for a Hamiltonian System with Weak Noise* avec H. T. Yau et S.R.S. Varadhan, **Comm. Math. Phys.** **155**, 523-560, 1993.
- (40) *Scaling Limits for Interacting Ornstein-Uhlenbeck Processes*, avec S.R.S. Varadhan, **Comm. Math. Phys.** **135**, 335-378, 1991.
- (41) *Large Deviation from the Hydrodynamic Limit for a System of Independent Brownian Particles*, avec C. Kipnis, **Stochastics and Stochastic Reports** **33**, 17-25, 1990.
- (42) *Hydrodynamics and Large Deviation for Exclusion Processes*, avec C. Kipnis et S.R.S. Varadhan, **Comm. Pure Appl. Math.** **42**, 115-137, 1989.
- (43) *Large Deviations for Gibbs Random Fields*, **Probability Theory and Related Fields** **77**, 343-357, 1987.
- (44) *Large Deviations for Almost Markovian Processes*, **Probability Theory and Related Fields** **76**, No.3, 395-409, 1987.
- (45) *Large Deviation for Stationary Processes*, avec L. Accardi, **Milan Journal of Mathematics** **57**, N.1, 381-433, 1987.

- Publications dans des journaux nationaux:
 - (1) *Driven Tracer and Einstein Relation in One-Dimensional Symmetric Simple Exclusion*, avec C. Landim and S.B. Volchan, **Resenhas do Instituto de Matematica e Estatistica da Universidade de Sao Paulo**, vol.3, N.2, 173–209, 1997.
- Conférences internationales avec comité de lecture et publication des actes
 - (1) *Heat Equation from Microscopic Dynamics: a weak coupling Approach*, avec C. Liverani, Proceedings of the **International Conference of Mathematical-Physics**, Prague 2009.
 - (2) *Energy Diffusion and Superdiffusion in Oscillators Lattice network*, in *New Trends in Mathematical Physics*, V. Sidoravicious ed., Springer 2009. <http://fr.arxiv.org/abs/0809.1496>, Proceedings of the **International Conference of Mathematical-Physics**, Rio de Janeiro 2006.
 - (3) *Hydrodynamic Limits and Ergodicity for Hamiltonian Systems with small noise*, in "Cellular Automata and Cooperative Systems", Boccara et al. editors, Nato Asi series, Kluwer Academic Pub., 1993.
 - (4) *On the Polaron Asymptotics at Finite Couplings Constant*, avec L. Accardi, in Quantum Probability and Applications II, **Lecture Notes in Mathematics 1136**, Springer (1985).
- Autres publications:
 - (1) *Entropy Methods for the Boltzmann Equation, Foreword*, avec F. Golse, *Lect. Notes in Math. 1916*, v-x, Springer 2008.
 - (2) *Central Limit Theorems for Tagged Particles and for Diffusion in Random Environment*. Notes du cours donné à *Etats de la recherche: Milieux Aléatoires*, 23-25 Novembre 2000, **Panorama et Synthèses 12**, 2001.
 - (3) *Lectures on Homogenization of Diffusion Processes in Random Fields*, publications de l'Ecole Doctorale de l'Ecole Polytechnique, 1994.
 - (4) *Large Deviation Problems in Statistical Mechanics*, Ph.D. Dissertation, Rutgers University, octobre 1987.
- Prépublications soumises
 - (1) *Toward the Fourier law for a weakly interacting anharmonic crystal*, avec C. Liverani, arXiv:1006.2900, 2010.
 - (2) *Hydrodynamic Limit for an Hamiltonian System with Boundary Conditions and Conservative Noise*, avec N. Even, <http://fr.arXiv.org/abs/1009.2175>
- En préparation
 - (1) *Non-equilibrium Stationary State for Chains of Anharmonic Oscillators with conservative Noise*, avec C. Bernardin.
 - (2) *Effective velocity and Einstein relation for a random walk in a Galton-Watson random tree*, avec G. Benarous et O. Zeitouni.
 - (3) *Thermal Conductivity in Rotor model*, avec A. Iacobucci, F. Legoll, G. Stoltz.
 - (4) *Non-equilibrium Macroscopic Dynamics of Chains of Anharmonic Oscillators*, avec C. Bernardin, monographie.