

SHORT CV AND LIST OF PUBLICATIONS OF
MARCO ZANNETTI

Born in Rome, Italy, May 24, 1942

Education:

1967: Laurea Degree in Physics from the University of Rome, Italy, with a Thesis on The Stationary States of a Plasma Diode, Thesis Advisor Professor Arrigo Sestero.

1972: Ph.D. in Physics from Brandeis University, USA, with a Thesis on The Field Theory for Continuous Phase Transitions, Thesis Advisor Professor Daniel J. Amit.

Employment:

1972-1973: Post Doctoral position at CEA-Saclay, France.

1973-1983: Assistant Professor at The University of Salerno, Italy

1983-1987: Associate Professor at The University of Salerno, Italy

1987-1990: Associate Professor at The University of Naples, Italy

1990- present: Professor at The University of Salerno, Italy

Main Research Interests:

Plasma Physics - Critical Phenomena - Dissipative Quantum Systems - Dynamics of First Order Transitions and Phase Ordering - Aging in Slow Relaxation Phenomena.

List of Publications:

1. A.Sestero, M.Zannetti "Stationary regimes of a plasma diode" Il Nuovo Cimento, 51B,230,(1967)
2. A.Sestero, M.Zannetti "Kinetic models of plasma columns" Il Nuovo Cimento, 53B, 512, (1968)
3. A.Sestero, M.Zannetti "Self-consistent Astron E layer with spread in energy and angular momentum", Phys.Rev.Lett.,19,1377, (1967)
4. D.J.Amit, M.Zannetti "Field theory description of continuous phase transitions", J.Stat.Phys. 7,31,(1973)

5. D.J.Amit, M.Zannetti "Self-consistent treatment of a phase transition" J.Stat.Phys., 9, 1, (1973)
6. M.Zannetti "Self-consistent treatment of a phase transition in a system with a vector order parameter" J.Stat.Phys., 10,1,(1974)
7. D.J.Amit, M.Zannetti "Approach to two dimensions in the n-vector model", J.Stat.Phys., 11,133,(1974)
8. F.Mancini, M.Marinaro, M.Zannetti "Boson method in superconductivity: study of systems containing scalar impurities", Physica, 93B, 291, (1978)
9. M.Zannetti, C.Di Castro "Non-linear solutions of the renormalization group equations in the large-n limit", J.Phys.A 10,1175,(1977)
10. M.Zannetti "Scalingh field description of the first order transition in tricritical systems", J.Phys.C 11,L755,(1978)
11. M.Zannetti "Absence of dimensional crossover at the zero temperature transition in a Bose system", Phys.Rev.B 22,5267,(1980)
12. P.Ruggiero, M.Zannetti "Critical Phenomena at T=0 and stochastic quantization", Phys.Rev.Lett. 47,1231,(1981)
13. P.Ruggiero, M.Zannetti "Stochastic description of the quantum thermal mixture", Phys.Rev.Lett. 48,963,(1982)
14. P.Ruggiero, M.Zannetti "Quantum-classical crossover in critical dynamics", Phys.Rev. B27,3001,(1983)
15. P.Ruggiero, M.Zannetti "Microscopic derivation of the stochastic process for the quantum Brownian oscillator", Phys.Rev.A 28, 987,(1983)
16. P.Ruggiero, M.Zannetti "Stochastic quantization and critical dynamics", in "Statics and Dynamics of nonlinear systems" p.90, G.Benedek, H.Bilz, R.Zeyer Editors, Springer Verlag 1983
17. F. de Pasquale, P.Ruggiero, M.Zannetti "Noise spectrum of the quantum Langevin equation", J.Phys.A 17,1489,(1984)

18. R.Figari, P.Ruggiero, M.Zannetti "Relaxation of the quantum Brownian oscillator", J.Phys.A 17,L419,(1984)
19. F.De Pasquale, P.Ruggiero, M.Zannetti "Stochastic quantization of a system with quenched random fields", Phys .Rev.B 30,2695,(1984)
20. T.Schneider, M.Zannetti, R.Badii, H.R.Jauslin "Stochastic simulation of quantum systems and critical dynamics", Phys. Rev. Lett. 53, 2191, (1984)
21. T.Schneider, M.Zannetti, R.Badii "Stochastic simulation of quantum systems and critical dynamics", Phys.Rev.B 31,2941,(1985)
22. G.F.Mazenko, M.Zannetti "Growth of order in a system with continuous symmetry", Phys.Rev.Lett. 53,2106,(1984)
23. P.Ruggiero, M.Zannetti "Stochastic quantization at finite temperature", La Rivista del Nuovo Cimento 8,1,(1985)
24. G.F.Mazenko, M.Zannetti "Instability, spinodal decomposition and nucleation in a system with continuous symmetry", Phys.Rev. B32, 4565,(1985)
25. A.Aharony, E.Domany, R.M.Hornreich, T.Schneider, M.Zannetti "Novel Lifshitz tricritical point and critical dynamics", Phys. Rev. B32, 3358, (1985)
26. P.Ruggiero, M.Zannetti "Linear response and fluctuations in stochastic mechanics", J.Phys.A18,L513,(1985)
27. T.Schneider. M.Zannetti "Equivalence of real space renormalization groups for quantum systems and for critical dynamics", Phys.Rev.B32, 6108,(1985)
28. T.Schneider, M.P.Soerensen, A.Politi, M.Zannetti "Relationship between classical motion in random media and quantum localization", Phys.Rev.Lett. 56,2341,(1986)
29. T.Schneider, M.P.Soerensen, E.Tosatti, M.Zannetti "Relationship between classical diffusion, 1/f noise and the motion of a quantum particle", Europhysics Lett. 2,167, (1986)

30. M.Zannetti, G.F.Mazenko "Anomalous time correlations in quenched systems with continuous symmetry", Phys.Rev.B35,5043,(1987)
31. L.Pietronero, A.P.Siebesma, E.Tosatti, M.Zannetti "Multifractal and normal fluctuations of wave functions localized by disorder" Phys. Rev. B36, 5635, (1987)
32. T.Schneider, D.Wurtz, A.Politi, M.Zannetti "The Schroedinger problem for hierarchical heterostructures", Phys.Rev.B36,1789,(1987)
33. F.De Pasquale, G.F.Mazenko, P.Tartaglia, M.Zannetti "Random fields effect on the kinetics of a magnetic system with continuous symmetry Phys.Rev.B37, ,(1988)
34. G.F.Mazenko, O.T.Valls, M.Zannetti "Field Theory for growth kinetics", Physical Revue B38,520,(1988)
35. T.Schneider, M.P.Soerensen, E.Tosatti, M.Zannetti "Classical diffusion in a random environment and quantum mechanics with a random potential" Physica Scripta 38, 125, (1988)
36. F.Marchesoni, P.Sodano, M.Zannetti "Supersymmetry and bistable soft potentials", Phys.Rev.Lett. 61,1143,(1988)
37. M.P.Soerensen, T.Schneider, A.Politi, E.Tosatti, M.Zannetti "Numerical results on the relationship between classical diffusion and quantum systems" Proceedings MIDT 1986 Workshop on "Structure, Coherence and Chaos in Dynamical Systems" held at Technical University of Denmark, published by Manchester University Press Series on Nonlinear Science, Manchester 1988, p.467, P.L.Christiansen e R.D.Parmentier Editors
38. D.Wurtz, T.Schneider, A.Politi, M.Zannetti "Renormalization group and dynamical maps for the hierarchical tight binding problem", Phys. Rev. B 39, 7829, (1989)
39. E.Tosatti, M.Zannetti, L.Pietronero "Exponentiated random walks, supersymmetry and localization", Z.Physik B63,273,(1988)
40. F.Marchesoni, P.Sodano, P.Biccheri, C.Presilla, M.Zannetti "Classical diffusion in soft potentials and supersymmetric quantum mechanics", J. de Physique C3, 53, (1989)

41. S. De Martino, S. De Siena, P.Ruggiero, M.Zannetti "Low temperature properties in the stochastic quantization of the Brownian oscillator", J.Phys. A 22, (1989)
42. G.F.Mazenko, O.T.Valls, M.Zannetti "Field Theory of Spinodal Decomposition: Comparison with Numerical Simulations", Phys.Rev. B 40, (1989)
43. E.Tosatti, A.Vulpiani, M.Zannetti "Quantum Mapping of Classical Diffusion in Random Media" Physica A 164, 705, (1990)
44. M.Zannetti, T.Schneider "Violation of Universality induced by Critical Dynamics", J.Phys. A 22, L597, (1989)
45. A.Coniglio and M.Zannetti "Multiscaling in Growth Kinetics" Europhys. Lett. 10, 575, (1989)
46. A.Coniglio and M.Zannetti "Multiscaling and Multifractality", Physica D 38, 37, (1989)
47. A.Coniglio and M.Zannetti "Novel Dynamic Scaling in Kinetic Growth Phenomena" Physica A 163, 325, (1990)
48. A.Coniglio and M.Zannetti "Renormalization Group for Growth Kinetics in the large-N limit" Phys. Rev. B 42,6873, (1990)
49. C.Amitrano, A.Coniglio, P. Meakin and M.Zannetti "Multiscaling in diffusion-limited aggregation" Phys. Rev. B 44, 4974, (1991)
50. A.Coniglio and M.Zannetti "Analytical Study of Scaling Behaviour in Growth Kinetics" G.Gyorgyi, I.Kondor, L.Sasvari, T.Tel Editors, World Scientific (1992)
51. A.Coniglio and M.Zannetti "Multiscaling in Spinodal Decomposition" Proceedings of International Workshop on Probabilistic Methods in Mathematical Physics, F.Guerra, M.I.Loffredo, C.Marchioro Editors, World Scientific (1992)
52. A.Coniglio, Y.Oono, A.Shinozaki and M.Zannetti "On the Nature of Dynamic Scaling in Spinodal Decomposition" Europhysics Letters 18, 5992,(1992)

53. M.Zannetti "Transverse ordering in off-critical quenches of a system with continuous symmetry", *J. of Physics A: Math. Gen.* 26, 3037, (1993)
54. C.Amitrano, A.Coniglio, P.Meakin and M.Zannetti "Evidence for multiscaling in large DLA clusters", *Fractals* 1, 840, (1993)
55. A.Coniglio, P.Ruggiero and M.Zannetti, "Scaling and crossover in the large-N model for growth kinetics", *Phys. Rev. E* 50, 1046, (1994)
56. A.Coniglio, P.Ruggiero and M.Zannetti, "Competing scaling behaviors in the late stage of growth kinetics", *Proceedings of the "XIII Sitges Conference on Statistical Mechanics"*, June 1994, J.J.Brey, J.Marro, J.M.Rubi and M.San Miguel Eds., *Lecture Notes in Physics*, Springer Verlag 1995.
57. S.De Siena and M.Zannetti, "The nature of the gaussian approximations in phase ordering kinetics", *Phys. Rev. E* 50, 2621, (1994)
58. F.Corberi, A.Coniglio and M.Zannetti, "Early stage scaling in phase ordering kinetics", *Phys. Rev. E* 51, 5469, (1995)
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63. C.Castellano and M.Zannetti, "Preasymptotic multiscaling in the phase-ordering dynamics of the kinetic Ising model" *Europhysics Lett.* 47, 158 (1999)

64. C.Castellano and M.Zannetti, "Crossover from multiscaling to standard scaling in systems with conserved scalar order parameter" *Computer Phys. Comm.* 121-122, 317 (1999)
65. E.Lippiello and M.Zannetti, "Fluctuation dissipation ratio in the one dimensional kinetic Ising model", *Phys. Rev. E* 61, 3369 (2000)
66. F.Corberi, E.Lippiello and M.Zannetti, "Interface fluctuations, bulk fluctuations and dimensionality in the off-equilibrium response of coarsening systems", *Phys. Rev. E* **63**, 061506 (2001)
67. C.Castellano and M.Zannetti, "Standard scaling and multiscaling in phase ordering dynamics", *Scaling and Disordered Systems* p.197, F.Family, M.Daoud, H.J.Hermann, H.E.Stanley Eds., World Scientific, 2002.
68. F.Corberi, E.Lippiello and M.Zannetti, "On the connection between off-equilibrium response and statics in non disordered coarsening systems", *Eur. Phys. J. B* **24**, 359 (2001)
69. F.Corberi, A. de Candia, E.Lippiello and M.Zannetti, "Off equilibrium response function in the one dimensional random field Ising model", *Phys. Rev. E* **65**, 046114 (2002)
70. F.Corberi, E.Lippiello and M.Zannetti, "Slow relaxation in the large N model for phase ordering", *Phys. Rev. E* **65**, 046136 (2002)
71. F.Corberi, A. de Candia, E.Lippiello and M.Zannetti, "Off equilibrium response function for coarsening systems", proceedings "Horizons in complex systems" - *Physica A* **314**, 454 (2002).
72. F.Corberi, C. Castellano, E.Lippiello and M.Zannetti, "Universality of the fluctuation-dissipation ratio in the kinetic Ising chain", *Phys. Rev. E* **65**, 066114 (2002)
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74. N.Fusco and M.Zannetti, "Relaxation and overlap probability function in the spherical and mean spherical model", *Phys. Rev. E.* **66**, 066113 (2002).

75. F. Corberi, E. Lippiello and M. Zannetti, “Comment on *Aging, phase ordering and conformal invariance*”, Phys. Rev. Lett. **90**, 099601 (2003).
76. F. Corberi, G. Gonnella, E. Lippiello and M. Zannetti, “Correlation functions and fluctuation-dissipation relation in driven mixtures: an exactly solvable model”, J. Phys. A: Math. Gen. **36**, 4729 (2003).
77. F. Corberi, E. Lippiello and M. Zannetti, “Scaling of the linear response function from zero-field-cooled and thermoremanent magnetization in phase-ordering kinetics”, Phys. Rev. E **68**, 046131 (2003).
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84. F.Corberi, E.Lippiello and M.Zannetti, “Correction to scaling in the response function of the 2d Ising model”, Phys.Rev. E **72**, 056103 (2005). cond-mat/0410712.
85. F.Corberi, E.Lippiello and M.Zannetti, “Scaling and universality in the aging kinetics of the two-dimensional clock model”, Phys.Rev. E **74**, 041106 (2006).
86. E.Lippiello, F.Corberi and M.Zannetti, “Test of Local Scale Invariance from the direct measurement of the response function in the Ising model quenched to and to below T_C ”, Phys.Rev. E **74**, 041113 (2006).
87. F.Corberi, E.Lippiello and M.Zannetti, “Fluctuation dissipation relations far from equilibrium”, Journal of Statistical Mechanics: Theory and Experiment (2007) P07002.
88. F.Corberi, A.Gambassi, E.Lippiello and M.Zannetti, “The non-equilibrium response of the critical Ising model: Universal scaling properties and Local Scale Invariance”, Journal of Statistical Mechanics: Theory and Experiment (2008) P02013, arXiv:0711.1527
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90. F.Corberi, E.Lippiello and M.Zannetti, “Influence of thermal fluctuations on the geometry of the interfaces of the quenched Ising model”, Phys. Rev. E **78**, 011109 (2008), arXiv:0807.0402
91. E.Lippiello, F.Corberi, A.Sarracino and M.Zannetti, “Nonlinear response and fluctuation dissipation relations”, Phys. Rev. E **78**, 041120 (2008), arXiv:0809.3328
92. T.Ferraro, A.Coniglio and M.Zannetti, “Self tuning phase separation in a model with competing interactions inspired by biological cell polarization”, Phys. Rev. E **79**, 031125 (2009), arXiv:0812.2807
93. M.Zannetti, “Aging in Domain Growth”, in *Kinetics of Phase Transitions*, S.Puri and V.Wadhawan Editors, CRC Press (2009)