

## PUBLICATION LIST

- [1] *W. Gasser and U.C.T.*, “Collective excitations of a layered electron gas in a strong magnetic field”, *Z. Phys. B – Condensed Matter* **69**, 87 – 96 (1987).
- [2] *W. Gasser and U.C.T.*, “Spin waves of a layered ferromagnetic electron gas and of a paramagnetic electron gas in a strong magnetic field”, in: “ICM 88”, D. Givord (Ed.), *Proceedings of the International Conference on Magnetism, Part II*, *J. Phys. (Paris)* **49**, C 8 — 1611 – 1612 (1988).
- [3] *U.C.T.*, “Elastische Phasenübergänge zweiter Ordnung in inhomogenen Medien”, *Diplomarbeit*, Technische Universität München (1988).
- [4] *F. Schwabl and U.C.T.*, “Local condensation at elastic phase transitions”, in: “PHONONS 89”, S. Hunklinger, W. Ludwig and G. Weiss (Eds.), *Proceedings of the 3rd International Conference on Phonon Physics and the 6th International Conference on Phonon Scattering in Condensed Matter*, Vol. **2** (World Scientific), 1138 – 1140 (1990).
- [5] *F. Schwabl and U.C.T.*, “Elastic phase transitions in inhomogeneous media”, *Phase Transitions* **34**, 69 – 103 (1991).
- [6] *F. Schwabl and U.C.T.*, “Defect-induced condensation and central peak at structural transitions”, *Phys. Rev. B* **43**, 11 112 – 11 135 (1991).
- [7] *U.C.T.*, “Koexistenzanomalien in der Dynamik isotroper Systeme”, *Dissertation*, Technische Universität München (1992).
- [8] *U.C.T. and F. Schwabl*, “Critical dynamics of the O(n)-symmetric relaxational models below the transition temperature”, *Phys. Rev. B* **46**, 3337 – 3361 (1992).
- [9] *U.C.T. and F. Schwabl*, “Influence of cubic and dipolar anisotropies on the static and dynamic coexistence anomalies of the time-dependent Ginzburg–Landau models”, *Phys. Rev. B* **48**, 186 – 209 (1993) [cond-mat/9303044].
- [10] *E. Frey, U.C.T., and F. Schwabl*, “Crossover from self-similar to self-affine structures in percolation”, *Europhys. Lett.* **26**, 413 – 418 (1994) [cond-mat/9403093].
- [11] *E. Frey, U.C.T., and F. Schwabl*, “Crossover from isotropic to directed percolation”, *Phys. Rev. E* **49**, 5058 – 5072 (1994) [cond-mat/9404004].
- [12] *E. Frey and U.C.T.*, “Two-loop renormalization group analysis of the Burgers—Kardar—Parisi—Zhang equation”, *Phys. Rev. E* **50**, 1024 – 1045 (1994) [cond-mat/9406068].
- [13] *F. Schwabl and U.C.T.*, “Phase transitions: Renormalization and scaling”, in: “Encyclopedia of Applied Physics”, G.L. Trigg (Ed.), Vol. **13** (VCH Publishers), 343 – 371 (1995).
- [14] *U.C.T., H. Dai, D.R. Nelson, and C.M. Lieber*, “Coulomb gap and correlated pinning in superconductors”, *Phys. Rev. Lett.* **74**, 5132 – 5135 (1995) [cond-mat/9412021].

- [15] *U.C.T. and E. Frey*, “Reply to Comment on ‘Two-loop renormalization group analysis of the Burgers—Kardar—Parisi—Zhang equation’ ”, *Phys. Rev. E* **51**, 6319 – 6322 (1995).
- [16] *U.C.T. and D.R. Nelson*, “Interactions and pinning energies in the Bose glass phase of vortices in superconductors”, *Phys. Rev. B* **52**, 16 106 – 16 124 (1995) [cond-mat/9505024].
- [17] *F. Schwabl and U.C.T.*, “Continuous elastic phase transitions in pure and disordered crystals”, *Phil. Trans. R. Soc. Lond. A* **354**, 2847 – 2873 (1996) [cond-mat/9607028].
- [18] *E. Frey, U.C.T., and T. Hwa*, “Mode-coupling and renormalization group results for the noisy Burgers equation”, *Phys. Rev. E* **53**, 4424 – 4438 (1996) [cond-mat/9601049].
- [19] *M. Bulenda, F. Schwabl, and U.C.T.*, “Defect-induced condensation and central peak at elastic phase transitions”, *Phys. Rev. B* **54**, 6210 – 6221 (1996) [cond-mat/9606040].
- [20] *U.C.T.*, “Localized flux lines and the Bose glass”, in: “Complex Behaviour of Glassy Systems”, M. Rubí and C. Pérez-Vicente (Eds.), Proceedings of the XIV Sitges Conference (Springer), 298 – 307 (1997) [cond-mat/9607109].
- [21] *J.L. Cardy and U.C.T.*, “Theory of branching and annihilating random walks”, *Phys. Rev. Lett.* **77**, 4780 – 4783 (1996) [cond-mat/9609151].
- [22] *U.C.T. and D.R. Nelson*, “Superfluid bosons and flux liquids: Disorder, thermal fluctuations, and finite-size effects”, *Phys. Rep.* **289**, 157 – 233 (1997); Err.: *Phys. Rep.* **296**, 337 – 338 (1998) [cond-mat/9608057].
- [23] *U.C.T. and Z. Rácz*, “Critical behavior of O(n)-symmetric systems with reversible mode-coupling terms: Stability against detailed-balance violation”, *Phys. Rev. E* **55**, 4120 – 4136 (1997) [cond-mat/9610159].
- [24] *C. Wengel and U.C.T.*, “Weakly pinned Bose glass vs Mott insulator phase in superconductors”, *Phys. Rev. Lett.* **78**, 4845 – 4848 (1997) [cond-mat/9612093].
- [25] *M.J. Howard and U.C.T.*, “ ‘Real’ vs ‘imaginary’ noise in diffusion-limited reactions”, *J. Phys. A: Math. Gen.* **30**, 7721 – 7731 (1997) [cond-mat/9701069].
- [26] *J.L. Cardy and U.C.T.*, “Field theory of branching and annihilating random walks”, *J. Stat. Phys.* **90**, 1 – 56 (1998) [cond-mat/9704160].
- [27] *U.C.T., M.J. Howard, and H. Hinrichsen*, “Multicritical behavior in coupled directed percolation processes”, *Phys. Rev. Lett.* **80**, 2165 – 2168 (1998) [cond-mat/9709057].
- [28] *C. Wengel and U.C.T.*, “Properties of the Bose glass phase in irradiated superconductors near the matching field”, *Phys. Rev. B* **58**, 6565 – 6579 (1998) [cond-mat/9801264].

- [29] *U.C.T., M.J. Howard, and H. Hinrichsen*, “Reply to Comment on ‘Multicritical behavior in coupled directed percolation processes’ ”, *Phys. Rev. Lett.* **81**, 2179 (1998).
- [30] *E. Frey, U.C.T., and H.K. Janssen*, “Scaling regimes and critical dimensions in the Kardar–Parisi–Zhang problem”, *Europhys. Lett.* **47**, 14 – 20 (1999) [cond-mat/9807087].
- [31] *U.C.T., J.E. Santos, and Z. Rácz*, “Non-equilibrium critical behavior of O(n)-symmetric systems: Effect of reversible mode-coupling terms and dynamical anisotropy”, *Eur. Phys. J. B* **7**, 309 – 330 (1999); Err.: *Eur. Phys. J. B* **9**, 567 – 568 (1999) [cond-mat/9807207].
- [32] *H.K. Janssen, U.C.T., and E. Frey*, “Exact results for the Kardar–Parisi–Zhang equation with spatially correlated noise”, *Eur. Phys. J. B* **9**, 491 – 511 (1999) [cond-mat/9808325].
- [33] *Y.Y. Goldschmidt, H. Hinrichsen, M.J. Howard, and U.C.T.*, “Nonequilibrium critical behavior in unidirectionally coupled stochastic processes”, *Phys. Rev. E* **59**, 6381 – 6408 (1999) [cond-mat/9809166].
- [34] *B.A. Kaufmann, F. Schwabl, and U.C.T.*, “Critical dynamics at incommensurate phase transitions and NMR relaxation experiments”, *Phys. Rev. B* **59**, 11 226 – 11 243 (1999) [cond-mat/9811167].
- [35] *U.C.T.*, “Phasenübergänge und Skalenverhalten in Nichtgleichgewichtssystemen”, Habilitationsschrift, Technische Universität München (1998).
- [36] *M. Bulenda, U.C.T., and F. Schwabl*, “Dimensional crossover in dipolar magnetic layers”, *J. Phys. A: Math. Gen.* **33**, 1 – 21 (2000) [cond-mat/9907029].
- [37] *B. Schmittmann, H.K. Janssen, U.C.T., R.K.P. Zia, K.-t. Leung, and J.L. Cardy*, “Viability of competing field theories for the driven lattice gas”, *Phys. Rev. E* **61**, 5977 – 5980 (2000) [cond-mat/9912286].
- [38] *S. Trimper, U.C.T., and G.M. Schütz*, “Reaction-controlled diffusion”, *Phys. Rev. E* **62**, 6071 – 6077 (2000) [cond-mat/0001387].
- [39] *T. Aspelmeier, J. Magnin, W. Graupner, and U.C.T.*, “Random walks with imperfect trapping in the decoupled-ring approximation”, *Eur. Phys. J. B* **28**, 441 – 450 (2002) [cond-mat/0107434].
- [40] *U.C.T., B. Schmittmann, and R.K.P. Zia*, “Critical behaviour of driven bilayer systems: A field-theoretic renormalisation group study”, *J. Phys. A: Math. Gen.* **34**, L583 – L589 (2001) [cond-mat/0108094].
- [41] *U.C.T. and E. Frey*, “Universality classes in the anisotropic Kardar-Parisi-Zhang model”, *Europhys. Lett.* **59**, 655 – 661 (2002) [cond-mat/0108306].
- [42] *U.C.T., V.K. Akkineni, and J.E. Santos*, “Effects of violating detailed balance on critical dynamics”, *Phys. Rev. Lett.* **88**, 045702 – 1-4 (2002) [cond-mat/0109433].

- [43] *J.E. Santos and U.C.T.*, “Non-equilibrium behavior at a liquid-gas critical point”, *Eur. Phys. J. B* **28**, 423 – 440 (2002) [cond-mat/0204195].
- [44] *J. Das, T.J. Bullard, and U.C.T.*, “Vortex transport and voltage noise in disordered superconductors”, in: “Statphys-Kolkata IV”, Proceedings of the International Conference on Statistical Physics Statphys-Kolkata IV, *Physica A* **318**, 48 – 54 (2003) [cond-mat/0205023].
- [45] *U.C.T.*, “Dynamic phase transitions in diffusion-limited reactions”, in: “RG02”, M. Hnatič, V.B. Priezhev, and D.V. Shirkov (Eds.), Proceedings of the 5th International Conference on Renormalization Group 2002, *Acta Physica Slovaca* **52**, 505 – 513 (2002) [cond-mat/0205327].
- [46] *O. Deloubrière, H.J. Hilhorst, and U.C.T.*, “Multispecies pair annihilation reactions”, *Phys. Rev. Lett.* **89**, 250601 – 1-4 (2002) [cond-mat/0209471].
- [47] *E. Shaw, D.R. Hill, N. Brittain, D.J. Wright, U.C.T., H. Marand, R.F. Helm, and M. Potts*, “Unusual water flux in the extracellular polysaccharide of the cyanobacterium *Nostoc commune*”, *Appl. Environ. Microbiol.* **69**, 5679 – 5684 (2003).
- [48] *U.C.T.*, “Scale invariance and dynamic phase transitions in diffusion-limited reactions”, in: “Advances in Solid State Physics”, B. Kramer (Ed.), Vol. **43** (Springer-Verlag Berlin), 659 – 675 (2003) [cond-mat/0304065].
- [49] *T.J. Bullard, J. Das, and U.C.T.* “Dynamics of magnetic flux lines in the presence of correlated disorder”, in: “Trends in Superconductivity Research”, P.S. Lewis (Ed.) (Nova Science Publishers), 63 – 72 (2004) [cond-mat/0305061].
- [50] *B.A. Reid, U.C.T., and J.C. Brunson*, “Reaction-controlled diffusion: Monte Carlo simulations”, *Phys. Rev. E* **68**, 046121 – 1-19 (2003) [cond-mat/0306014].
- [51] *M. Gopalakrishnan, K. Forsten-Williams, and U.C.T.*, “Ligand-induced coupling versus receptor pre-association: Cellular automaton simulations of FGF-2 binding”, *J. Theor. Biol.* **227**, 239 – 251 (2004) [cond-mat/0308348].
- [52] *V.K. Akkineni and U.C.T.*, “Non-equilibrium critical dynamics of the relaxational models C and D”, *Phys. Rev. E* **69**, 036113 – 1-25 (2004) [cond-mat/0309562].
- [53] *H.K. Janssen, F. van Wijland, O. Deloubrière, and U.C.T.*, “Pair contact process with diffusion: Failure of master equation field theory”, *Phys. Rev. E* **70**, 056114 – 1-7 (2004) [cond-mat/0312463 withdrawn; cond-mat/0408064].
- [54] *H.J. Hilhorst, O. Deloubrière, M.J. Washenberger, and U.C.T.*, “Segregation in diffusion-limited multispecies pair annihilation”, *J. Phys. A: Math. Gen.* **37**, 7063 – 7093 (2004) [cond-mat/0403246].
- [55] *M. Gopalakrishnan, K. Forsten-Williams, T.R. Cassino, L. Padro, T.E. Ryan, and U.C.T.*, “Ligand rebinding: Self-consistent mean-field theory and numerical simulations applied to surface plasmon resonance studies”, *Eur. Biophys. J.* **34**, 943 – 958 (2005) [q-bio.QM/0406004].

- [56] *M. Gopalakrishnan, K. Forsten-Williams, M.A. Nugent, and U.C.T.*, “Effects of receptor clustering on ligand dissociation kinetics: Theory and simulations”, *Bio-phys. J.* **89**, 3685 – 3700 (2005) [q-bio.SC/0407015].
- [57] *H.J. Hilhorst, M.J. Washenberger, and U.C.T.*, “Symmetry and species segregation in diffusion-limited pair annihilation”, *J. Stat. Mech.* P10002 – 1-19 (2004) [cond-mat/0409079].
- [58] *H.K. Janssen and U.C.T.*, “The field theory approach to percolation processes”, *Ann. Phys. (NY)* **315**, 147 – 192 (2005) [cond-mat/0409670].
- [59] *U.C.T., M.J. Howard, and B.P. Vollmayr-Lee*, “Applications of field-theoretic renormalization group methods to reaction-diffusion problems”, *J. Phys. A: Math. Gen.* **38**, R79 – R131 (2005) [cond-mat/0501678].
- [60] *U.C.T.*, Book Review “Renormalization Methods: A Guide for Beginners”, by W.D. McComb, *Physics Today* June 2005, 62 – 63 (2005).
- [61] *M. Mobilia, I.T. Georgiev, and U.C.T.*, “Fluctuations and correlations in lattice models for predator–prey interaction”, *Phys. Rev. E* **73** (Rapid Communications), 040903(R) – 1-4 (2006) [q-bio.PE/0508043].
- [62] *T.J. Bullard, J. Das, G.L. Daquila, and U.C.T.*, “Vortex washboard voltage noise in type-II superconductors”, *Eur. Phys. J. B* **65**, 464 – 484 (2008) [cond-mat/0511509].
- [63] *U.C.T.*, “Field theory approaches to nonequilibrium dynamics”, in: “Ageing and the Glass Transition”, M. Henkel, M. Pleimling, and R. Sanctuary (Eds.), *Lecture Notes in Physics* **716** (Springer-Verlag Berlin, 2007), Chap. 7, 295 – 348 [cond-mat/0511743].
- [64] *M. Mobilia, I.T. Georgiev, and U.C.T.*, “Phase transitions and spatio-temporal fluctuations in stochastic lattice Lotka–Volterra models”, *J. Stat. Phys.* **128**, 447 – 483 (2007) [q-bio.PE/0512039].
- [65] *M.J. Washenberger, M. Mobilia, and U.C.T.*, “Influence of local carrying capacity restrictions on stochastic predator–prey models”, *J. Phys. Condens. Matter* **19**, 065139 – 1-14 (2007) [cond-mat/0606809].
- [66] *M. Mobilia, I.T. Georgiev, and U.C.T.*, “Spatial stochastic predator–prey models”, *Banach Center Publ.* **80**, J. Miekisz (Ed.), Institute of Mathematics, Polish Academy of Sciences, Warsaw, 253 – 257 (2008) [q-bio.PE/0609039].
- [67] *V. Lecomte, U.C.T., and F. van Wijland*, “Current distribution in systems with anomalous diffusion: renormalization group approach”, *J. Phys. A: Math. Theor.* **40**, 1447 – 1465 (2007) [cond-mat/0611265].
- [68] *U.C.T.*, “Field-theoretic methods”, in: “Encyclopedia of Complexity and System Science”, R.A. Meyers (Ed.), 3360 – 3374 (Springer-Verlag New York, 2009) [arXiv:0707.0794]

- [69] *U. Dobramysl and U.C.T.*, “Spatial variability enhances species fitness in stochastic predator–prey interactions”, *Phys. Rev. Lett.* **101**, 258102 – 1-4 (2008) [arXiv:0804.4127]
- [70] *T. Klongcheongsan, T.J. Bullard, and U.C.T.*, “Nonequilibrium steady states of driven magnetic flux lines in disordered type-II superconductors”, submitted to *Supercond. Sci. Technol.* (2009) [arXiv:0911.4066]
- [??] *U.C.T.*, “Critical dynamics — A field theory approach to equilibrium and non-equilibrium scaling behavior”, in preparation (Cambridge University Press 200?).