

Publications of the Oxford Condensed Matter theory Group, January 2002 – July 2005

1. Aarao Reis, F.D.A. and Stinchcombe, R.B., “Cluster growth in far-from-equilibrium particle models with diffusion, detachment, reattachment, and deposition”, *Phys. Rev. E* **70**, art. no. 036109 (2004).
2. Aarao Reis, F.D.A. and Stinchcombe, R.B., “Nonuniversal coarsening and universal distributions in far-from-equilibrium systems”, *Phys. Rev. E* **71**, art. no. 026110 (2005).
3. Aarao Reis, F.D.A. and Stinchcombe, R.B., “Logarithmic coarsening and glassy behaviour in a polymer model with mass-dependent diffusion”, submitted to *Phys. Rev. E*.
4. Abraham, D.B., Parry, A.O. and Wood, A.J., “Drumhead model of 2D wetting, filling and wedge covariance”, *Europhys. Lett.* **60**, 106-112 (2002).
5. Abraham, D.B., Cuerno, R. and Moro, E., “Microscopic model for thin film spreading”, *Phys. Rev. Lett.* **88**, 206101 (2002).
6. Abraham, D.B., and Maciolek, A.M., “Filling transition: exact result for Ising corners”, *Phys. Rev. Lett.* **89**, 286101 (2002).
7. Abraham, D.B., Mustonen, V. and Wood, A.J., “Triangular lattice solution for filling in a wedge”, *Europhys. Lett.* **63**, 408-414 (2003).
8. Abraham, D.B., Mustonen, V. and Wood, A.J., “Exact results on wetting and filling on a triangular lattice”, *Int. J. Thermal Phys.* **25**, 1051 (2004).
9. Abraham, D.B., Mustonen, V. and Wood, A.J., “Wetting effects at a grain boundary”, *Phys Rev. Lett.* **93**, 076101 (2004).
10. Abraham, D.B., Mustonen, V. and Wood, A.J., “Relaxation dynamics of a system with a grain boundary”, *Phys. Rev. E* **70**, 066138 (2004).
11. Abraham, D.B., Mustonen, V. and Wood, A.J., “SOS model for interface crossing grain boundary”, *J. Phys. A* **37**, L233-239, (2004).

12. Abraham, D.B., Mustonen, V. and Wood, A.J., “Equilibrium statistical mechanics of a grain boundary”, *Phys. Rev. E* **71**, 036106 (2005).
13. Abraham, D.B. and Maciolek, A-M., “Exact results for corner filling on a quadratic lattice”, *Phys Rev. E.*, in press.
14. Ali, I., Marenduzzo D. and Yeomans, J.M., “Dynamics of Polymer Packaging”, *J. Chem. Phys.*, **121** 8635 (2004) (selected for the Virtual Journal of Biological Physics Research).
15. Ali, I. and Yeomans, J.M., “Polymer translocation: the effect of back-flow”, submitted to *J. Chem. Phys.*
16. Ali, I., Marenduzzo, D., Micheletti, C. and Yeomans, J.M., “A coarse grained model for DNA and polymer packaging: statics and dynamics”, *J. Theor. Med.* **6**, 115 (2005).
17. Beamond, E.A., Chalker, J.T. and Cardy, J., “Quantum and Classical Localisation, the Spin Quantum Hall Effect and Generalisations”, *Phys. Rev. B.*, **65**, 214301, (2002).
18. Beamond, E.J., Owczarek, A.L. and Cardy, J.L., “Quantum and classical localisation and the manhattan lattice”, *J. Phys. A*, **36**, 10251, (2003).
19. Berkolaiko, G., Schanz, H. and Whitney, R.S., “Form factor for a family of quantum graphs: An expansion to third order”, *J. Phys A* **26**, 8373-8392, (2003).
20. Berthier, L. and Bouchaud, J.-P., “Geometrical aspects of aging and rejuvenation in the Ising spin glass: A numerical study”, *Phys. Rev. B* **66**, 054404 (2002).
21. Berthier, L. and Bouchaud, J.-P., “Comment on ‘Symmetrical Temperature-Chaos effect with Positive and Negative Temperature Shifts in a Spin Glass’ ”, *Phys. Rev. Lett.* **90**, 059701 (2003).
22. Berthier, L. and Garrahan, J.P., “Non-topographic description of inherent structure dynamics in glass formers”, *J. Chem. Phys.* **119**, 4367 (2003).

23. Berthier, L., “Finite size scaling analysis of the glass transition”, *Phys. Rev. Lett.* **91**, 055701 (2003).
24. Berthier, L., “A consequence of local equilibration and heterogeneity in glassy materials”, *J. Phys. A* **36**, 10667 (2003).
25. Berthier, L. and Young, P., “Energetics of clusters in the two-dimensional Ising spin glass”, *J. Phys. A* **36**, 10835 (2003).
26. Berthier, L. and Garrahan, J.P., “Real space origin of temperature crossovers in supercooled liquids”, *Phys. Rev. E* **68**, 041201 (2003).
27. Berthier, L., Viasnoff, V., White, O., Orlyanchik, V., Krzakala, F., “Hiking through glassy phases: physics beyond aging in ”Slow relaxations and nonequilibrium dynamics in condensed matter” Eds: J.-L. Barrat, J. Dalibard, M. Feigelman, J. Kurchan (Springer, Berlin, 2003).
28. Berthier, L., “Yield stress, heterogeneities and activated processes in soft glassy materials”, *J. Phys.: Condens. Matter* **15**, S933 (2003).
29. Berthier, L., “Time and length scales in supercooled liquids”, *Phys. Rev. E* **69**, 020201(R) (2004).
30. Berthier, L. and Young, P., “Aging dynamics of the Heisenberg spin glass”, *Phys. Rev. B* **69**, 184423 (2004).
31. Berthier, L. and Young, P., “Time and length scales in spin glasses”, *J. Phys.: Condens. Matter* **16**, S729 (2004).
32. Berthier, L., “A few bubbles in a glass”, *Proc. SPIE Int. Soc. Opt. Eng.* **5469**, 177 (2004).
33. Berthier, L., Chandler, D. and Garrahan, J.P., “Length scale for the onset of Fickian diffusion in supercooled liquids” *Europhys. Lett.* **69**, 320 (2005).
34. Berthier, L. and Garrahan, J.P., “Numerical study of a fragile three-dimensional kinetically constrained model”, *J. Phys. Chem. B* **109**, 3578 (2005).

35. Bhaseen, M.J., Essler, F.H.L. and Grage, A., "Itineracy Effects on Spin Correlations in 1D Mott Insulators" *Phys. Rev. B* **71**, 020405(R) (2005).
36. Chalker, J.T., Read, N., Kagalovsky, V., Horovitz, B., Avishai, Y. and Ludwig, A.W.W., "Thermal metal in network models of a disordered two-dimensional superconductor", *Phys. Rev. B* **65**, 012506 (2002).
37. Bocquet, M. and Chalker, J.T., "Network models for localization problems belonging to the chiral symmetry classes", *Phys. Rev. B* **67**, 054204 (2003).
38. Bocquet, M., and Chalker, J.T., "Network models for chiral symmetry classes of Anderson localisation", *Ann. Henri Poincaré* **4**, S539 Suppl. 2 (2003).
39. Briant, A.J., Wagner, A.J. and Yeomans, J.M., "Lattice Boltzmann simulations of contact line motion: I. Liquid-gas systems", *Phys. Rev. E* **69**, 031602, (2004).
40. Briant, A.J. and Yeomans, J.M. "Lattice Boltzmann simulations of contact line motion: II. Binary fluids", *Phys. Rev. E* **69**, 031603, (2004).
41. Buhot, A., Garrahan, J.P. and Sherrington, D., "Simple strong glass forming models: mean-field solution with activation", *J. Phys. A* **36**, 307-328, (2003).
42. Calabrese, P., Pelissetto, A. and Vicari, E., "Spin models with random anisotropy and reflection symmetry", *Phys. Rev. E* **70**, 036104 (2004).
43. Calabrese, P. and Parruccini, P., "Five-loop epsilon expansion for $U(n) \times U(m)$ models: Finite-temperature phase transition in light QCD", *JHEP* **0405**, P018 (2004).
44. Calabrese, P., Orlov, E.V., Pakhnin, D.V. and Sokolov, A.I., "Critical behavior of two-dimensional cubic and MN models in the five-loop renormalization-group approximation", *Phys. Rev. B* **70**, 094425 (2004).

45. Calabrese, P., Parruccini, P., Pelissetto, A. and Vicari, E., “Critical behavior of $O(2)\times O(N)$ symmetric models”, *Phys. Rev. B* **70**, 174439 (2004).
46. Calabrese, P. and Gambassi, A., “On the definition of a unique effective temperature for non-equilibrium critical systems”, *JSTAT* **0407**, P013 (2004).
47. Calabrese, P. and Cardy, J., “Entanglement entropy in quantum field theory”, *J. Stat. Mech.*, **P06002**, (2004).
48. Calabrese, P. and Cardy, J., “Entanglement Entropy and Quantum Field Theory: A Non-technical Introduction, talk given at the conference “Quantum Entanglement in Physical and Information Sciences”, December 14-18, 2004, Centro Ennio de Giorgi, Pisa (Italy), quantph/0505193, to appear on International Journal of Quantum Information Theory.
49. Calabrese, P., Pelissetto, A. and Vicari, E., “Multicritical behavior in frustrated spin systems with noncollinear order”, *Nucl. Phys. B* **709**, 550, (2005).
50. Calabrese, P. and Gambassi, A., “Ageing properties of critical systems” *J. Phys. A* **38**, R133, (2005).
51. Calabrese, P. and Parruccini, P., “Harmonic Crossover exponents in $O(n)$ models with the pseudo- ϵ expansion approach”, *Phys. Rev. B* **71**, 064416, (2005).
52. Calabrese, P. and Cardy, J., “Evolution of entanglement entropy in one-dimensional systems”, *JSTAT* **0504**, P010, (2005).
53. Cardy, J., Cappelli, A. and Mussardo, G., “The stress tensor in quenched random systems, in *Statistical Field Theories*”, Proceedings of NATO Workshop, Como, June 2001, (Kluwer, 2002).
54. Cardy, J., “Crossing Formulae for Critical Percolation in an Annulus”, *J. Phys. A*, **35**, L565, (2002).
55. Cardy, J. and Katori, M., “Families of Vicious Walkers”, *J. Phys. A*, **36**, 609, (2003).

56. Cardy, J. and Ziff, R.M., “Exact Results for the Universal Area Distribution of Clusters in Percolation, Ising and Potts Models”, *J. Stat. Phys.*, **110**, 1, (2003).
57. Cardy, J., “Crossover Scaling Functions for $2d$ Vesicles, and the Yang-Lee Edge Singularity”, in Proceedings of 86th Statistical Mechanics Conference, Rutgers, December 2001, to honor the 70th birthday of Michael Fisher, *J. Stat. Phys.*, 110, 519, (2003).
58. Cardy, J., “Stochastic Loewner evolution and Dyson’s circular ensembles”, *J. Phys. A*, **36**, L379, 2003; erratum *J. Phys. A*, 36, 12343, (2003).
59. Cardy, J., “Calogero-Sutherland model and bulk-boundary correlations in conformal field theory”, *Phys. Lett. B*, **582**, 121, (2004).
60. Cardy, J., Iagolnitzer, D., Rivasseau, V. and Zinn-Justin, J., “Conformal invariance in percolation, self-avoiding walks and related problems”, Proceedings of the International Conference on Theoretical Physics, Paris, 2002, (Birkhauser, 2004).
61. Cardy, J., “Exact Results for Many-Body Problems Using Few-Body Methods”, to appear in Proceedings of Recent Progress in Many-Body Theory, Santa Fe, 2004 (World Scientific).
62. Cardy, J., “Network Models in Class C on Arbitrary Graphs”, *Comm. Math. Phys.* 1432-0916 (Online), (2005).
63. Cardy, J., “Boundary Conformal Field Theory”, to appear in *Encyclopedia of Mathematical Physics*, J.-P. Francoise, G. Naber and T.S. Tsun, eds. (Elsevier, 2005.)
64. Cardy, J., “SLE for theoretical physicists”, *Ann. Phys.* 318(1), **81**, (2005).
65. Cardy, J., “SLE(κ, ρ) and Conformal Field Theory”, math-ph/0412033.
66. Caux, J.-S., Essler, F.H.L. and Löw, U., “Dynamical Structure Factor of the anisotropic Heisenberg chain in a transverse field”, *Phys. Rev. B***68**, 134431 (2003).

67. Chakravorty, H., Coolen, A.C.C. and Sherrington, D., “Coupled dynamics of sequence selection and compactification in mean-field heteropolymers”, *J. Phys. A* **35**, 8647-8671, (2002).
68. Chalker, J.T., Polyakov, D.G., Evers, F., Mirlin, A.D. and Wölfle, P., Quantum Hall ferromagnets, cooperative transport anisotropy, and the random field Ising model *Phys. Rev. B* **66**, 161317 (2002).
69. Chalker, J.T., Polyakov, D.G., Evers, F., Mirlin, A.D. and Wölfle, P.W., “Disordered quantum Hall ferromagnets and cooperative transport anisotropy”, *Physica E* **22**, 82 (2004).
70. Chalker, J.T., “Quantum hall ferromagnets, cooperative transport anisotropy, and the random field Ising model”, *Fundamental Problems of Mesoscopic Physics*, Ed. I. V. Lerner B. L. Altshuler, and Y. Gefen (Kluwer), p.239 (2004).
71. Challet, D. and Johnson, N.F., “Optimal Combinations of Imperfect Objects”, *Phys. Rev. Lett.* **89**, 028701, (2002).
72. Challet, D. and Stinchcombe, R.B., “Exclusion particle models of limit order financial markets”, *cond-mat/0208025* (2002)
73. Challet, D. and Stinchcombe, R.B., “Limit order market analysis and modelling: on a universal cause for over-diffusive prices”, *Physica A* **324**, 141-145 (2003) [Contribution to the proceedings of the Econophysics Conference, Bali, 2002].
74. Challet, D. and Stinchcombe, R.B., “Non-constant rates and overdiffusive prices in simple models of limit order markets”, *Quant. Fin.***3**, 165 (2003).
75. Challet, D. and Marsili, M., “Criticality and finite size effects in a realistic model of stock market”, *Phys. Rev. E* **68**, 036132, (2003).
76. Challet, D., Marsili, M. and Ottino, G., “Shedding light on El Farol”, *Physica A* **332**, 469-482, (2004).
77. Challet, D. and Lombardoni, A., “Bug propagation and debugging in asymmetric software structures”, *Phys. Rev. E* **70**, 046109, (2004).

78. Challet, D. and Pérez Castillo, I., “Optimal static and dynamic recycling of defective binary devices”, *J. Stat. Mech.: Theor. Exp.*, P11003, (2004).
79. Chandler D. and Garrahan, J.P., Thermodynamics of Coarse Grained Models of Super-Cooled Liquids, to appear in *J. Chem. Phys.*; cond-mat/0501544.
80. Chatterjee, A., Chakrabarti, B.K. and Stinchcombe, R.B., “Master equation for a kinetic model of trading markets and its analytic solution”, cond-mat/0501413, to appear in *Phys. Rev. E*.
81. Chatterjee, A., Chakrabarti, B.K. and Stinchcombe, R.B., “Analyzing money distributions” in ‘ideal gas’ models of markets, To appear in *Practical Fruits of Econophysics*, Ed. H. Takayasu (Springer-Verlag Tokyo), Proc. 3rd Nikkei Econophysics Symposium, Tokyo, Nov 2004; physics/0505047.
82. Controzzi, D. and Essler, F.H.L., “Dynamical density correlation function of 1D Mott insulators in a magnetic field”, *Phys. Rev.* **B66**, 165112 (2002).
83. Coolen, A.C.C., Heimerl, J.A.F. and Sherrington, D., “Dynamics of the batch minority game with inhomogeneous decision noise”, *Phys. Rev. E***65**, 01626, (2002).
84. Coolen, A., Skantzos, N.S., Perez Castillo, I., Perez Vicente, C.J., Hatchett, J.P.L., Wemmenhove, B. and Nikolettopoulos, T., “Finitely connected vector spin systems with random matrix interactions”, submitted to *J. Phys. A*.
85. Coolen, A., Skantzos, N.S., Perez Castillo, I., Perez Vicente, C.J., Hatchett, J.P.L., Wemmenhove, B. and Nikolettopoulos, T., “Dynamical replica analysis of disordered Ising spin systems on finitely connected random graph”, submitted to *Phys. Rev. Lett.*
86. Das, A., Chakrabarti, B.K. and Stinchcombe, R.B., “Quantum annealing in a kinetically constrained system”, *Phys. Rev. E* **72**, to be published (2005).

87. Dean, D.S. and Lefevre, A., “Self-diffusion in a system of interacting Langevin particles”, *Phys. Rev. E* **69**, 061111 (2004).
88. Dean, D.S., Drummond, I.T., Horgan, R.R. and Lefevre, A., “Perturbation theory for the effective diffusion constant in a medium of random scatterers”, *J. Phys. A* **37**, 10459 (2004).
89. Denniston, C., Marenduzzo, D., Orlandini, E. and Yeomans, J.M. “Lattice Boltzmann algorithm for three dimensional liquid crystal hydrodynamics”, *Phil. Trans. Royal Soc. A* **362** 175 (2004).
90. Depken, M. and Stinchcombe, R.B., “Exact joint density-current probability function for the asymmetric exclusion process”, *Phys. Rev. Lett.* **93**, art. no. 040602, (2004).
91. Depken M. and Stinchcombe, R.B., “Exact probability function for bulk density and current in the asymmetric exclusion process”, *Phys. Rev. E* **71**, art. no. 036120 (2005).
92. Depken, M. and Stinchcombe, R.B., “Fluctuation-dissipation relation and the Edwards entropy for a glassy granular compaction model”, *Phys. Rev. E* **71**, art. no. 065102(R) (2005).
93. de Queiroz, S.L.A. and Stinchcombe, R.B., “Correlation-function distributions at the Nishimori point of two-dimensional Ising spin glasses”, *Phys. Rev. B* **68**, art. no.144414 (2003).
94. Dupuis, A., Briant, A.J., Pooley, C.M. and Yeomans, J.M., “Droplet spreading on heterogeneous surfaces using a three-dimensional lattice Boltzmann model”, *Lect. Notes in Comput. Sc.* **2657** 1024 (2003).
95. Dupuis, A. and Yeomans, J.M., “Lattice Boltzmann modelling of droplets on chemically heterogeneous surfaces”, *Future Generation Computing Systems* **20**, 993, (2004).
96. Dupuis, A., Marenduzzo, D. and Yeomans, J.M., “Numerical calculations of the phase diagram of cubic blue phases in cholesteric liquid crystals”, *Phys Rev E* **71** 011703 (2005).
97. Dupuis A. and Yeomans, J.M., “Modelling droplets on superhydrophobic substrates: equilibrium states and transitions”, A. Dupuis and J.M. Yeomans, *Langmuir*, **21** 2624 (2005).

98. Dupuis, A. and Yeomans, J.M., “Droplets on patterned substrates: water off a beetle’s back”, Proc. of the ICFD Conference 2004, in press.
99. Dupuis, A. and Yeomans, J.M., “Droplet dynamics on patterned substrates”, Proc. Statphys 22, Pramana, in press.
100. Dupuis, A., Marenduzzo, D., Orlandini E. and Yeomans, J.M., “Rheology of cholesteric blue phases”, submitted to Phys. Rev. Lett.
101. Dupuis, A., Leopoldes, J., Bucknall, D.G. and Yeomans, J.M., “Control of droplet wetting using chemical patterning”, App. Phys. Lett., in press.
102. England, J.L. and Cardy, J., “Morphogen gradients from a noisy source”, Phys. Rev. Lett., **94**, 078101, (2005).
103. Essler, F.H.L. and Tsvelik, A.M., “Weakly coupled one-dimensional Mott insulators” Phys. Rev. **B65**, 115117 (2002).
104. Essler, F.H.L. and Tsvelik, A.M., “Spectral Function of a quarter-filled one-dimensional CDW insulator” Phys. Rev. Lett. **88**, 096403 (2002).
105. Essler, F.H.L. and Tsvelik, A.M., “Finite Temperature Spectral Function of Mott Insulators and Charge Density Wave States”, Phys. Rev. Lett. **90**, 126401 (2003).
106. Essler, F.H.L., Furusaki A. and Hikiyara, T., “Dynamical Structure factor in Cu Benzoate and other spin-1/2 antiferromagnetic chains”, Phys. Rev. **B68**, 064410 (2003).
107. Essler, F.J.L., and Affleck, I., “Haldane-gap Chains in a Magnetic Field”, JSTAT P12006, (2004).
108. Essler, F.H.L., Frahm, H., Göhmann, F., Klümper, A. and Korepin, V.E., “The One-Dimensional Hubbard Model” 690 pages, Cambridge University Press, Cambridge 2005. ISBN-10: 0521802628 — ISBN-13: 9780521802628
109. Essler, F.H.L. and Tsvelik, A.M., “Theory of Hybrid State in a Metal with a Small Fermi Surface and Strong Collective Excitations” Phys. Rev. **B71**, 195116 (2005).

110. Essler, F.H.L. and Konik, R.M., “Applications of Massive Integrable Quantum Field Theories to Problems in Condensed Matter Physics” in Ian Kogan Memorial Collection “From Fields to Strings: Circumnavigating Theoretical Physics”, eds M. Shifman, A. Vainshtein and J. Wheeler, World Scientific Singapore 2005; 150 pages, cond-mat/0412421;
111. Essler, F.H.L., Frahm H. and Saleur, H., “Continuum Limit of the Integrable $sl(2/1) \ 3 - \bar{3}$ Superspin Chain”, Nucl. Phys. B712, 513 (2005).
112. Galla, T., Coolen, A.C.C. and Sherrington, D., “Dynamics of a spherical minority game”, J. Phys. A: Math. Gen. **36**, 11159-11172, (2003).
113. Galla, T. and Sherrington, D., “The minority game: effects of strategy correlations and timing of adaptation”, Physica A**324**, 25, (2003).
114. Galla, T. and Sherrington, D., “Strategy correlations and timing of adaptation in Minority Games”, cond-mat/0503743 (2005).
115. Garrahan, J.P. and Chandler, D., “Coarse-grained microscopic model of glass formers”, PNAS **100**, 9710 (2003).
116. Golosov., D.I., “Spin Waves, Phase Separation and Interphase Boundaries in Double Exchange Magnets”, J. Appl. Phys. **91**, 7508-7510 (2002).
117. Golosov, D.I., “Magnetic domain walls in single-phase and phase-separated double exchange systems”, Phys. Rev. Vol. B **67**, 064404 (2003).
118. Golosov, D.I., “Effects of the On-Site Coulomb Repulsion in Double Exchange Magnets”, Phys. Rev. **B71**, 014428 (2005).
119. Goncalves, L.L., de Haro, M.L., Taguena-Martinez, J. and Stinchcombe, R.B., “Nagel scaling, relaxation, and universality in the kinetic Ising model on an alternating isotopic chain”, Phys. Rev. Lett. **88**, art. no. 089901 (2002).
120. Grynberg, M.D. and Stinchcombe, R.B., “Quantum approach to nucleation times of kinetic Ising ferromagnets”, Phys. Rev. E **71**, art. no. 066104 (2005).

121. Gurarie, V. and Chalker, J.T., “Some generic aspects of bosonic excitations in disordered systems”, *Phys. Rev. Lett.* **89**, 136801 (2002).
122. Gurarie, V. and Chalker, J.T., “Bosonic excitations in random media”, *Phys. Rev. B* **68**, 134207 (2003).
123. Hanke, A. and Metzler, R., “Entropy loss in long-distance DNA looping”, *Biophys. J.* **85**, 167, (2003).
124. Hanney, T. and Stinchcombe, R.B., “Quantum Scaling Approach to Nonequilibrium Models”, *cond-mat/0502383*.
125. Harris R.J. and Stinchcombe, R.B., “Disordered asymmetric simple exclusion process: mean field treatment”, *Phys. Rev. E* **70**, art. no. 016108 (2004).
126. Harris, R.J. and Stinchcombe, R.B., “Erratum: Disordered asymmetric simple exclusion process: mean field treatment”, [*Phys. Rev. E* **70**, 016108 (2004)], *Phys. Rev. E* **71**, art. no. 019904 (2005).
127. Harris, R.J. and Stinchcombe, R.B., “Ideal and disordered two-lane traffic models”, *Physica A* **354**, 582 (2005).
128. Haydock, D. and Yeomans, J.M., “Acoustic enhancement of diffusion in a porous material”, *Ultrasonics* **41** 531 (2003).
129. Haydock, D. and Yeomans, J.M. “Lattice Boltzmann simulations of attenuation-driven acoustic streaming”, *J. Phys. A* **36** 5683 (2003).
130. Hogan, P.M. and Chalker, J.T., “Path integrals, diffusion on $SU(2)$ and the fully frustrated antiferromagnetic spin cluster”, *J. Phys. A: Math. Gen.* **37**, 11751 (2004).
131. Jack, R.L., Lee, D.K.K. and Cooper, N.R., “Dissipation and Tunnelling in Quantum Hall Bilayers”, *Phys. Rev. Lett.* **93**, 126803 (2004).
132. Jack, R.L., Lee, D.K.K. and Cooper, N.R., “Quantum and Classical Dissipative Effects on Tunnelling in Quantum Hall Bilayers”, *Phys. Rev. B* **P71**, 085310 (2005).

133. Jack, R.L., Garrahan, J.P. and Sherrington, D., “Glassy behaviour in an exactly solved spin system with a ferromagnetic transition”, *Phys. Rev. E* **71**, 036112, (2005).
134. Jack, R., Berthier L. and Garrahan, J.P., “Static and dynamic length-scales in a simple glassy plaquette model”, to appear in *Phys. Rev. E*; cond-mat/0502120.
135. Jung, J., Denniston, C., Orlandini, E. and Yeomans, J.M., “Anisotropy of domain growth in nematic liquid crystals”, *Liquid Crystals* **30** 1455 (2003).
136. Jung, Y., Garrahan, J.P. and Chandler, D., “Excitation lines and the breakdown of Stokes-Einstein relations in supercooled liquids”, *Phys. Rev. E* **69**, 061205, (2004).
137. Jung, Y., Garrahan, J.P. and Chandler, D., “Dynamical Exchanges in Facilitated Models of Supercooled liquids”, cond-mat/0504535.
138. Kikuchi, N., Pooley, C.M., Ryder, J. and Yeomans, J.M., “Transport coefficients of a mesoscopic fluid dynamics model”, *J. Chem. Phys.*, **119** 6388 (2003).
139. Kikuchi, N., Ryder, J., Pooley, C.M. and Yeomans, J.M., “Kinetics of the polymer collapse transition”, *Phys. Rev. E.*, in press.
140. Kim, Y.-J., Hill, J.P., Benthien, H., Essler, F.H.L., Jeckelmann E., et al. “Resonant Inelastic X-Ray Scattering Study of Holon-Antiholon Continuum in SrCuO₂”, *Phys. Rev. Lett.* **92**, 134402 (2004).
141. Kuksenok, O., Jasnow, D., Yeomans, J.M. and Balazs, A.C., “Periodic droplet formation in chemically patterned microchannels”, *Phys. Rev. Lett.*, **91** 108303 (2003).
142. Lee, D.K.K., Rapsch, S. and J. T. Chalker, J.T., “Dirty quantum Hall ferromagnets and quantum Hall spin glasses”, *Phys. Rev. B* **67**, 195322 (2003).
143. Lefevre, A., Berthier, L. and Stinchcombe, R.B., “Spatially heterogeneous dynamics in granular compaction”, cond-mat/0410741, *Phys. Rev. E* **72**, to be published, (2005).

144. Leopoldes, J., Dupuis, A., Bucknall D. and Yeomans, J.M., “Jetting micron-scale droplets onto chemically heterogeneous surfaces”, *Langmuir* **19** 9818 (2003).
145. Lilliehook D. and Furneaux J.E., “Scaling limits for the two-dimensional metal-insulator transition at $B=0$ in Si-MOSFET’s”, *Phys Rev. B* **66**, 165328, (2002).
146. Linna, R.P., Åström, J.A. and Timonen, J., “Unconstrained periodic boundary conditions for solid state elasticity”, *Comp. Phys. Comm.* **158**, 26 (2004).
147. Linna, R.P., Åström, J.A. and Timonen, J., “Dimensional Effects in Dynamic Fragmentation of Brittle Materials”, accepted in *Phys.Rev.E Rapid Comm.*
148. Marenduzzo, D., Orlandini, E. and Yeomans, J.M., “Rheology of distorted nematic liquid crystals”, *Europhys. Lett.* **64** 406 (2003).
149. Marenduzzo, D., Orlandini, E. and Yeomans, J.M., “Permeative flows in cholesteric liquid crystals”, *Phys. Rev. Lett.*, **92** 188301 (2004).
150. Marenduzzo, D., Orlandini, E. and Yeomans, J.M., “Interplay between shear flow and elastic deformations in liquid crystals”, *J. Chem. Phys.*, **121**, 582 (2004).
151. D. Marenduzzo, E. Orlandini and J. M. Yeomans, “Switching dynamics in multi-domain, twisted nematic, liquid crystal devices”, *Europhys. Letts*, in press.
152. Marenduzzo, D., Dupuis, A., Orlandini, E. and Yeomans, J.M., “Lattice Boltzmann simulations of cholesteric liquid crystals: permeative flows, doubly twisted textures and cubic blue phases”, *Mol. Cryst. Liq. Cryst.*, in press (2005).
153. Mayer, P., Berthier, L., Garrahan, J.P. and Sollich, P., “Fluctuation-dissipation relations in the non-equilibrium critical dynamics of Ising models”, *Phys. Rev. E* **68**, 016116 (2003).
154. Mayer, P., Berthier, L, Garrahan, J.P. and Sollich, P., “Reply to Comment on “Fluctuation-dissipation relations in the non-equilibrium critical dynamics of Ising models”, *Phys. Rev. E* **70**, 018102 (2004).

155. Mayer, P., Bissig, H., Berthier, L., Cipelletti, L., Garrahan, J.P., Sollich, P. and Trappe, V., “Heterogeneous Dynamics of Coarsening Systems”, *Phys. Rev. Lett.* **93**, 115701 (2004).
156. Mayer, P., Sollich, P., Berthier, L. and Garrahan, J.P., “Dynamic Heterogeneity in the Glauber-Ising chain”, *J. Stat. Mech.* P05002 (2005).
157. Merolle, M., Garrahan, J.P. and Chandler, D., “Space-time Thermodynamics of the Glass Transition”, *cond-mat/0501180*.
158. Merz F., and Chalker, J.T., “The two-dimensional random-bond Ising model, free fermions and the network model”, *Phys. Rev. B* **65**, 054425 (2002).
159. Merz, F. and Chalker, J.T., “Negative scaling dimensions and conformal invariance at the Nishimori point in the +/-J random-bond Ising model”, *Phys. Rev. B.* **66**, 054413 (2002).
160. Oganessian, V., Chalker, J.T. and Sondhi, S.L., “Deconstructing the Liouvillian approach to the quantum Hall plateau transition”, *Phys. Rev. B* **68**, 045318 (2003).
161. Oppermann, R. and Sherrington, D., “Fermionic Sherrington-Kirkpatrick models with Hubbard interaction: magnetism and electronic structure”, *Phys. Rev. B* **67** (24): art. no. 245111 (2003).
162. Oppermann, R., Sherrington, D. and Kiselev, M., “Modulated replica symmetry breaking schemes for antiferrimagnetic spin glasses”, *Eur. Phys. J B* **37** (2): 187-192 (2004).
163. Orlandini, E., Marenduzzo, D. and Yeomans, J.M., “Shear dynamics in cholesterics”, *Comp. Phys. Comm.* **169**, 122 (2005).
164. Pan, A.C., Garrahan, J.P. and Chandler, D., “Heterogeneity, growing lengthscales, and universality in the dynamics of kinetically constrained lattice gases in two dimensions”, *cond-mat/0410525*.
165. Pan, A.C., Garrahan, J.P. and Chandler, D., “Decoupling of self-diffusion and structural relaxation during a fragile-to-strong crossover in a kinetically constrained lattice gas”, to appear in *Chem. Phys. Chem.*; *cond-mat/0501739*.

166. Pérez Castillo, I. and Sherrington, D., “On exact mappings between fermionic Ising spin glass and classical spin glass models”, submitted to Phys. Rev. B. Cond-mat/0506514.
167. Pereira, A.L.C. and J. T. Chalker, J.T., “Electrostatic theory for imaging experiments on local charges in quantum Hall systems”, cond-mat/0502304.
168. Pooley, C. and Yeomans, J.M., “Stripe formation in differentially forced binary systems”, Phys. Rev. Lett., **93** 118001 (2004).
169. Pooley, C. and Yeomans, J.M., “A kinetic theory derivation of the transport coefficients of stochastic rotation dynamics”, J. Phys. Chem. B **109** 6505 (2005).
170. Pooley, C.M., Balazs, A.C. and Yeomans, J.M., “Pattern formation arising from the condensation of a homogeneous gas into a binary phase separating liquid”, Phys Rev E, in press.
171. Rapsch, S., Chalker, J.T. and Lee, D.K.K., “Spin textures, screening and excitations in dirty quantum Hall ferromagnets”, Phys. Rev. Lett. **88** 036801 (2002).
172. Riva, V. and Cardy, J., “Scale and conformal invariance: a physical counterexample”, hep-th/0504197, Phys. Lett. B, to appear.
173. Schlesener, F., Hanke, A. and Dietrich, S., “Critical Casimir forces in colloidal suspensions”, J. Stat. Phys. **110**, 98, (2003).
174. Sherrington, D., Moro, E. and Garrahan, J.P., “Statistical Physics of Induced Correlation in a Simple Market”, Physica A **311**, 527-535 (2002).
175. Sherrington, D., Davison, L., Buhot, A. and Garrahan, J.P., “Glassy behaviour in simple kinetically constrained models: topological networks, lattice analogues and annihilation-diffusion”, J.Phys. Cond. Mat. **14**, 1673-1682, (2002).
176. Sherrington, D., Moro, E. and Garrahan, J.P., “Statistical physics of induced correlation in a simple market”, Physica A **311**, 527-535, (2002).

177. Sherrington, D., Coolen, A.C.C. and Heilmel, J.A.F., “Stochastic decision-making in the minority game”, *Physica A* **314**, 83-91, (2002).
178. Sherrington, D., “A mean martini” in *Walter Kohn* (ed. M. Scheffler and P. Weinberger)(Springer 2003) 238-240.
179. Sherrington, D., “Sistemi disordinati (Disordered Systems)”, in *Enciclopedia Italiana: Vol. IX, La Grande Scienza, storia della scienza* (treccani; 2003) 851-857.
180. Sherrington, D., “Glassy behaviour due to kinetic constraints: From topological foam to backgammon”, to appear in “Current Topics in Physics”, eds. R.A. Barrio and K. Kaski, (Imperial College Press 2004) 152-173.
181. Sherrington, D., “Edwards-Anderson: opening the door to Complexity”, in “Stealing the Gold: A Celebration of the Pioneering Physics of Sir Sam Edwards” eds. P.M. Goldbart et al. (OUP 2004).
182. Sherrington, D., “Magnetic Ordering in Solids”, to appear in *Encyclopedia of Physics* (2nd edition) McGraw Hill (2004).
183. Sherrington, D., “Spin Glasses: a Perspective”, to appear in Proc. Conf. Spin Glasses, Ascona.
184. Sherrington, D., “Stealing the Gold: A Celebration of the Pioneering Physics of Sir Sam Edwards”, eds. P.M. Goldbart, N. Goldenfeld and D. Sherrington (OUP 2004).
185. Stinchcombe, R.B. and Depken, M., “Marginal scaling scenario and analytic results for a glassy compaction model”, *Phys. Rev. Lett.* **88**, art. no. 125701 (2002).
186. Stinchcombe, R.B., “Nonequilibrium Systems”, in *Nonextensive Entropy: Interdisciplinary Applications*, edited by Murray Gell-Mann and Constantino Tsallis, 139–158 (Oxford University Press, New York, 2004)
187. Stinchcombe, R.B., “Flow on regular and disordered networks”, *Physica A* **346**, 1-12, (2005).

188. Stinchcombe, R.B., “Quantum many-body approach to nonequilibrium collective phenomena, in *Highlights in the quantum theory of condensed matter*, ed. F. Beltran, to appear.
189. Stinchcombe, R.B., “Transitions, Dynamics, and Disorder: from equilibrium to nonequilibrium collective systems”, in *Current Topics in Physics* ed R.A. Barrio and K. Kaski (Imperial College Press, London), to be published 2005.
190. Tomlinson, J.W., Caux, J.-S. and Chalker, J.T., “Electron interactions and transport between coupled quantum Hall edge states”, *Phys. Rev. Lett.* **94**, 086804 (2005).
191. Tomlinson, J.W., Caux, J.-S. and Chalker, J.T., “Transport between edge states in multilayer integer quantum Hall systems: exact treatment of Coulomb interactions and disorder”, cond-mat/0506223.
192. Toth, G., Denniston, C. and Yeomans, J.M., “Hydrodynamics of domain growth in nematic liquid crystals”, *Phys. Rev. E* **67** 051705 (2003).
193. Varnik, F., Bocquet, L., Barrat, J.-L. and Berthier, L., “Shear localization in a model glass” *Phys. Rev. Lett.* **90**, 095702 (2003).
194. Veillette, M.Y., Chalker, J.T. and Coldea, R., Ground states of a frustrated spin-1/2 antiferromagnet: Cs_2CuCl_4 in a magnetic field *Phys. Rev B*, **71**, 214426 (2005).
195. Veillette, M.Y., James A.J.A. and Essler, F.H.L., “Spin dynamics of the quasi two dimensional spin- $\frac{1}{2}$ quantum magnet Cs_2CuCl_4 ”, preprint cond-mat/0506667, (2005).
196. Verberg, R., Pooley, C.M., Yeomans, J.M. and Balazs, A.C., “Pattern formation in binary fluids confined between rough, chemically heterogeneous surfaces”, *Phys. Rev. Lett.*, **93** 184501 (2004).
197. Wang, Y.-J., Essler, F.H.L., Fabrizio, M. and Nersisyan, A.A., “Quantum Criticalities in a Two-Leg Antiferromagnetic $S=1/2$ Ladder Induced by a Staggered Magnetic Field” *Phys. Rev. B* **66**, 024412 (2002).

198. Webster, M.A. and Yeomans, J.M., “Modelling a tethered polymer in Poiseuille flow”, *J. Chem. Phys.*, **122** 164903 (2005).
199. Whitelam, S., Berthier, L. and Garrahan, J.P., “Dynamic criticality in glass-forming liquids” *Phys. Rev. Lett.* **92**, 185705 (2004).
200. Whitelam, S. and Garrahan, J.P., “Geometrical picture of dynamical facilitation”, *J. Phys. Chem. B* **108**, 6611 (2004).
201. Whitelam S. and Garrahan, J.P., “Facilitated spin models in one dimension: a real-space renormalization group study”, *Phys. Rev. E* **70**, 046129 (2004).
202. Whitelam, S., Berthier, L. and Garrahan, J.P. “Renormalization group study of a kinetically constrained model for strong glasses” *Phys. Rev. E* **71**, 026128 (2005).
203. Whitney, R.S. and Gefen, Y., “Berry phase in a non-isolated system”, *Phys.Rev. Lett.* **90** (19): art. no. 190402, (2003).
204. Whitney, R.S., Makhlin, Y., Shnirman, A. and Gefen, Y., “Geometric nature of the environment-induced Berry phase and geometric dephasing”, *Phys. Rev. Lett.* **94**, 070407 (2005).
205. Whitney, R.S., Makhlin, Y., Shnirman, A. and Gefen, Y., “Berry phase with environment: classical versus quantum”, *cond-mat/0401376*.
206. Willmann, R.D., Schütz, G.M. and Challet,D., “Exact Hurst Exponent and Crossover Behavior in a Limit Order Market Model”, *Physica A* **316**, 526, (2002).
207. Zang, H.-L., Bucknall, D.G. and Dupuis, A., “Uniform nanoscopic polystyrene patterns produced from a microscopic mold”, *Nano Lett.*, **4**, 1513, 2004.
208. Zheludev, A., Raymond, S., Regnault, L.-P., Essler, F.H.L., Kakurai, K., Matsuda T. and Uchinokura, K., “Polarization Dependence of spin excitations in BaCu₂Si₂O₇”, *Phys. Rev. B***67**, 134406 (2003).