

PUBLICATIONS

- 59 F. Grossmann and T. Prellberg, “Non-standard period-doubling in a non-unimodal piecewise continuous map,” in preparation
- 58 T. Prellberg, P. Kleban, and J. Fiala, “The Farey fraction Spin Chain: Effects of an External Field,” in preparation
- 57 E. J. Janse van Rensburg, T. Prellberg, and A. Rechnitzer, “Partially directed walks in a wedge,” submitted to J. Comb. Th. A
- 56 J. Krawczyk, A. L. Owczarek, T. Prellberg, and A. Rechnitzer, “Simulation of Lattice Polymers with Hydrogen-Like Bonding,” in preparation
- 55 R. Brak, A. L. Owczarek, T. Prellberg, A. Rechnitzer, and S. G. Whittington, “Finite-size scaling functions for directed polymers confined between sticky walls,” in preparation
- 54 A. L. Owczarek and T. Prellberg, “Collapse transition of self-avoiding trails on the square lattice,” *Physica A* **373** (2007) 433-438
- 53 J. Krawczyk, T. Prellberg, A. L. Owczarek, and A. Rechnitzer, “Self-avoiding random walk with multiple site weightings and restrictions,” *Phys. Rev. Lett.* **96** (2006) 240603; selected for *Virt. J. Biol. Phys. Res.* **12** (2006)
- 52 P. Cameron, T. Prellberg, and D. Stark, “Asymptotic enumeration of incidence matrices,” *J. Phys.: Conf. Ser.* **42** (2006) 59-70
- 51 P. Cameron, T. Prellberg, and D. Stark, “Asymptotics for incidence matrix classes,” *Electron. J. Combin.* **13** (2006) R85
- 50 J. Krawczyk, A. L. Owczarek, T. Prellberg, and A. Rechnitzer, “Pulling adsorbing and collapsing polymers off a surface,” *Journal of Statistical Mechanics: theory and experiment*, JSTAT (2005) P05008
- 49 J. Krawczyk, A. L. Owczarek, T. Prellberg and A. Rechnitzer, “Layering transitions for adsorbing polymers in poor solvents,” *Europhys. Lett.* **70** (2005) 726-732
- 48 J. Krawczyk, T. Prellberg, A. L. Owczarek, and A. Rechnitzer, “Stretching of a chain polymer adsorbed at a surface,” *Journal of Statistical Mechanics: theory and experiment*, JSTAT (2004) P10004
- 47 T. Prellberg, J. Krawczyk, and A. Rechnitzer, “Polymer simulations with a flat histogram stochastic growth algorithm,” *Computer Simulation Studies in Condensed Matter Physics XVII*, pages 122-135, Springer Verlag, 2006
- 46 T. Prellberg, P. Kleban, and J. Fiala, “Cluster approximation for the Farey fraction spin chain,” *J. Stat. Phys.* **123** (2006) 455-471
- 45 T. Prellberg and J. Krawczyk, “Flat histogram version of the pruned and enriched Rosenbluth method,” *Phys. Rev. Lett.* **92** (2004) 120602; selected for *Virt. J. Biol. Phys. Res.* **7** (2004)
- 44 T. Prellberg and A. L. Owczarek, “Polymer Collapse in High Dimensions: Monte Carlo Simulation of Lattice Models,” in *Computer Simulation Studies in Condensed Matter Physics XVI*, pages 147-151, Springer Verlag, 2004
- 43 A. L. Owczarek and T. Prellberg, “Scaling near the θ -point for isolated polymers in solution,” *Phys. Rev. E* **67** (2003) 032801
- 42 A. L. Owczarek and T. Prellberg, “Monte Carlo Investigation of Lattice Models of Polymer Collapse in Five Dimensions,” *Int. J. Mod. Phys. C* **14** (2003) 621-633
- 41 T. Prellberg and D. Stanton, “Proof of a Monotonicity Conjecture,” *J. Comb. Th. A* **103** (2003) 377-381

- 40 S. Berg, T. Prellberg, and D. Johannsmann, “Non-linear Contact Mechanics based on Ring-Down Experiments with Quartz Crystal Resonators,” *Rev. Sci. Instr.* **74** (2003) 118-126
- 39 T. Prellberg, “Scaling of Self-Avoiding Walks and Self-Avoiding Trails in Three Dimensions,” *J. Phys. A* **34** (2001) L599-L602
- 38 T. Prellberg, “Towards a Complete Determination of the Spectrum of a Transfer Operator associated with Intermittency,” *J. Phys. A* **36** (2003) 2455-2461
- 37 T. Prellberg and A. L. Owczarek, “Pseudo-First-Order Transition in Interacting Self-avoiding Walks and Trails,” *Comp. Phys. Commun.* **147** (2002) 629-632
- 36 T. Prellberg and A. L. Owczarek, “Four-dimensional polymer collapse II: Interacting self-avoiding trails,” *Physica A*, **297** (2001) 275-290
- 35 A. L. Owczarek and T. Prellberg, “Scaling of Self-Avoiding Walks in High Dimensions,” *J. Phys. A*, **34** (2001) 5773-5780
- 34 T. Prellberg, “On the Asymptotics of the Takeuchi Numbers,” in *Symbolic Computation, Number Theory, Special Functions, Physics and Combinatorics* (Development in Mathematics, vol. 4), pages 231-242, Kluwer Acad. Pub., 2001.
- 33 M. C. Marchetti, A. A. Middleton, and T. Prellberg, “Viscoelastic Depinning of Driven Systems: Mean-Field Plastic Scallop,” *Phys. Rev. Lett.* **85** (2000) 1104-1107
- 32 A. L. Owczarek and T. Prellberg, “First-order scaling near a second-order phase transition: Tricritical polymer collapse,” *Europhysics Lett.* **51** (2000) 602-607
- 31 T. Prellberg and A. L. Owczarek, “Four-dimensional polymer collapse: Pseudo-First-Order Transition in Interacting Self-avoiding Walks,” *Phys. Rev. E* **62** (2000) 3780-3789
- 30 A. L. Owczarek and T. Prellberg, “Existence of four-dimensional polymer collapse I: Kinetic growth Trails,” *Physica A* **260** (1998) 20-30
- 29 T. Prellberg and A. L. Owczarek, “On the Asymptotics of the Finite-perimeter Partition Function of Two-dimensional Lattice Vesicles,” *Commun. Math. Phys.* **201** (1999) 493-505
- 28 B. Drossel and T. Prellberg, “Particle in a Horizontally Shaken Box, Period-doubling, Chaos, and Chattering,” in *Traffic and Granular Flow*, pages 109-122, Springer Verlag, 1998.
- 27 B. Drossel and T. Prellberg, “Dynamics of a Single Particle in a Horizontally Shaken Box,” *Eur. Phys. J. B* **1** (1998) 533-543
- 26 T. Prellberg and B. Drossel, “Winding Angles for Two-dimensional Polymers with Orientation Dependent Interactions,” *Phys. Rev. E* **57** (1998) 2045-2052
- 25 T. Prellberg and B. Drossel, “Winding Angle Distribution for Two-dimensional Polymers at the θ -point,” *Physica A* **249** (1998) 337-341
- 24 T. Prellberg, “The Statistical Mechanics of Vesicles,” *Math. Comp. Mod.* **26** (1997) 321
- 23 A. J. Guttmann, A. L. Owczarek, D. Bennett-Wood, and T. Prellberg, “Recent Developments in the Study of Walks, Polygons, and the Ising Model,” *Nucl. Phys. B* **42** (1995) 911-913
- 22 T. Prellberg, “Uniform q -Series Asymptotics for Staircase Polygons,” *J. Phys. A: Math. Gen.* **28** (1995) 1289-1304
- 21 T. Prellberg and A. L. Owczarek, “Stacking Models of Vesicles and Compact Clusters,” *J. Stat. Phys.* **80** (1995) 755-779
- 20 T. Prellberg and A. L. Owczarek, “Models of Polymer Collapse in Three Dimensions: Evidence from Kinetic Growth Simulations,” *Phys. Rev. E* **51** (1995) 2142-2149
- 19 A. L. Owczarek and T. Prellberg, “The Collapse Point of Interacting Trails in Two Dimensions from Kinetic Growth Simulations,” *J. Stat. Phys.* **79** (1995) 951-967

- 18 T. Prellberg and A. L. Owczarek, “Partially Convex Lattice Vesicles: Methods and Recent Results,” in *Confronting the Infinite*, pages 204-214, World Scientific, 1995
- 17 A. L. Owczarek, T. Prellberg, D. Bennett-Wood, and A. J. Guttmann, “Universal Distance Ratios for Interacting Two-dimensional Polymers,” *J. Phys. A: Math. Gen.* **27** (1994) L919-925
- 16 T. Prellberg and R. Brak, “Critical Exponents from Non-Linear Functional Equations for Partially Directed Cluster Models,” *J. Stat. Phys.* **78** (1995) 701-730
- 15 R. Brak, A. L. Owczarek, and T. Prellberg, “Exact Scaling Behaviour of Partially Convex Vesicles,” *J. Stat. Phys.* **76** (1994) 1101-1128
- 14 D. Bennett-Wood, A. L. Owczarek, and T. Prellberg, “Crossover in Smart Kinetic Growth Walks,” *Physica A* **206** (1994) 283-288
- 13 T. Prellberg and A. L. Owczarek, “Manhattan Lattice Θ -point Exponents from Kinetic Growth Walks and Exact Results from the Nienhuis $O(n)$ Model,” *J. Phys. A: Math. Gen.* **27** (1994) 1811-1826
- 12 A. L. Owczarek and T. Prellberg, “Interacting Partially Directed Walks: A Model for Polymer Collapse,” Conference Proceedings of “The Second Taipei International Symposium on Statistical Physics”, *Physica A* **205** (1994) 203-213
- 11 D. Bennett-Wood, R. Brak, A. J. Guttmann, A. L. Owczarek, and T. Prellberg, “Low Temperature 2D Polymer Partition Function Scaling: Series Data Analysis Results,” *J. Phys. A: Math. Gen.* **27** (1994) L1-8
- 10 A. L. Owczarek, T. Prellberg, and R. Brak, “Reply to ‘Exact Scaling Form for the Collapsed 2D Polymer Phase’ by B. Duplantier,” *Phys. Rev. Lett.* **71** (1993) 4275
- 9 A. J. Guttmann, A. L. Owczarek, and T. Prellberg, “On the Symmetry Classes of Planar Self-Avoiding Walks,” *J. Phys. A: Math. Gen.* **26** (1993) 6615-6623
- 8 T. Prellberg, A. L. Owczarek, R. Brak, and A. J. Guttmann, “Finite Length Scaling of Collapsing Directed Walks,” *Phys. Rev. E* **48** (1993) 2386-2396
- 7 R. Brak, A. L. Owczarek, and T. Prellberg, “A Scaling Theory of the Collapse Transition in Geometric Cluster Models of Polymers and Vesicles,” *J. Phys. A: Math. Gen.* **26** (1993) 4565-4579
- 6 A. L. Owczarek, T. Prellberg, and R. Brak, “The Tricritical Behaviour of Self-Interacting Partially Directed Walks,” *J. Stat. Phys.* **72** (1993) 737-772
- 5 A. L. Owczarek, T. Prellberg, and R. Brak, “New Scaling Form for the Collapsed Polymer Phase,” *Phys. Rev. Lett.* **70** (1993) 951-953
- 4 A. J. Guttmann and T. Prellberg, “Staircase polygons, Elliptic integrals, Heun functions and Lattice Green functions,” *Phys. Rev. E* **47** (1993) R2233-2236
- 3 A. L. Owczarek and T. Prellberg, “Exact Solution of the Discrete (1+1)-dimensional SOS Model with Field and Surface Interactions,” *J. Stat. Phys.* **70** (1993) 1175-1194
- 2 T. Prellberg and J. Slawny, “Maps of Intervals with Indifferent Fixed Points: Thermodynamic Formalism and Phase Transitions,” *J. Stat. Phys.* **66** (1992) 503-514
- 1 H. Harborth, P. Oertel, and T. Prellberg, “No-Three-In-Line for Seventeen and Nineteen,” *Discrete Mathematics* **73** (1988-1989) 89-90