

Des Johnston

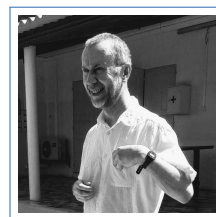
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Education

1986 **PhD**, *Imperial College, London*, Theoretical Physics.

1983 **BA**, *Trinity College, Cambridge*, 1st Class Hons, Physics and Theoretical Physics.

PhD Thesis

Title *Gauge Properties and Convexity of the Effective Potential*

Supervisor Dr. H. F. Jones

Employment

1999-present Professor of Mathematics, Heriot-Watt University

2002-2006 Head of Department, Mathematics, Heriot-Watt University

1990-1999 Lecturer, Senior Lecturer, Reader, Mathematics, Heriot-Watt University

1989-1990 Temporary Lecturer, Physics, Lancaster University

Postdoctoral/Fellowship Experience

1999 SOEID/RSE fellowship, Heriot-Watt

1993-1994 Marie Curie fellowship, LPTHE, Université Paris XI, France

1989-1990 DAAD funded RA, Free University of Berlin, West Berlin

1987-1989 SERC/NATO postdoctoral fellowship, Caltech, Pasadena, USA

1986-1987 Royal Society European Exchange Fellowship, LPTHE, Université Paris XI, France

Teaching Activities

Undergraduate

1990-present 1st to 4th year undergraduate courses, mathematics and service

1990-present Undergraduate project supervision

MSc

1992-present MSc project supervision

Supervision of PhD Students

1998-2001 M. Stathakopoulos

1994-1997 R. Malmini

Outreach

- 2017-19 AIMS-Senegal, Quantum Mechanics and Quantum Computing course
- 2015 AIMS-SA, Quantum Mechanics and Quantum Computing course
- 2013-16 AIMS-Ghana, Introductory course on computing and \LaTeX
- 1990-present Mathematics Masterclasses (schools lectures), Lothian and Aberdeen regions

University Awards

- 2010 University Teaching Oscar
- 2019 University Teaching Excellence Award

Professional Activities

- 2017-2020 External Examiner, Theoretical Physics, Honours Undergraduate and MSc, Maynooth University
- 2012-2016 External Examiner, Mathematical Physics, Honours Undergraduate and MSc, University of Nottingham
- Fellow of the Institute of Physics
- Member of the Higher Education Academy

Nationality

British

Languages

- English Native
- French Working knowledge
- German Basic

Computer Languages

- C Competent
- Fortran Competent
- Maple Competent
- Mathematica Basic
- Matlab Basic
- Python Beginner

Grants Awarded

EPSRC grants

2018-2021 EP/R009465/1, Co-Investigator, (PI: Robert Weston, COI: A. Doikou), “Baxter Relations for Open Integrable Quantum Spin Chains”, £342,412

EC grants

2005-2009 Participant, Framework 6 network grant “ENRAGE - European Network on Random Geometries”: €211,000 to Heriot-Watt

2005-2007 Host, Marie Curie individual fellowship for Dr Martin Weigel: €144,000

2000-2003 Coordinator, Improving Human Potential network grant “Discrete Random Geometries”: €1,492,000 distributed over 12 EC sites

1993-1996 Coordinator, Human Capital and Mobility network grant “Analytical and Numerical Investigation of Random Geometries”: €300,000

1993-1994 Fellowship, Human Capital and Mobility, LPTHE, Universite Paris Sud, Orsay, France: £35,000

ESF grants

2000-2003 Coordinator, ESF network grant “Geometry and Disorder: From Membranes to Quantum Gravity”: 500,000FF

Nato grants

1995-1996 NATO grant CRG 951253 for collaborative research with Dr. Clive Baillie on “Quantum Gravity and Disordered Systems”: £2500

1991-1994 NATO grant CRG 910091 for collaborative research with Dr. Clive Baillie on “Random surface models in Physics”: £5800

British Council grants

2000 Enterprise Ireland Collaborative Research Grant with Prof. R. Kenna, Trinity College Dublin: £1000

2000 Enterprise Ireland Collaborative Research Grant with Dr B. Dolan, University of Ireland, Maynooth: £1000

1999-2001 Collaborative research with Prof. Domenec Espriu: £2000

1998-9 Collaborative Research Grant with Profs. P. Bialas and Z. Burda, Krakow: £2000

1998-9 ARC Collaborative Research Grant with Prof W. Janke, Leipzig: £2000

1998 Travel grant to visit Prof. R. Loll, Albert Einstein Insitute, Potsdam: £580

1998 Travel grant to visit Prof J. Smit, University of Amsterdam: £600

1997 Travel grant to visit Prof. G. Savvidy, NCSR “Demokritos” Athens: £600

1995 Travel grant to visit Prof. H. Markum, TU Vienna: £300

1993-1994 Collaborative research with Prof. Enzo Marinari: 5 million Lira

1993-1994 Collaborative research with Prof A. Krzywicki: £800

1992-1994 Collaborative research with Prof. Domenec Espriu: £2800

1992-1994 Collaborative research with Prof. Wolfhard Janke: £1000

1991-1992 Collaborative research with Prof. Jan Ambjorn: £2000

Royal Society grants

- 2005 Research visit Dr Brian Dolan: £2100
- 2001 Travel grant: £300
- 2000 Research grant for computing equipment: £6085
- 1997 Travel grant: £468
- 1996 Travel grant: £625
- 1996 Research grant for computing equipment: £9994
- 1995 Research visit to Japan: £2125
- 1993 Research visit to Australia: £1700
- 1992 Research grant for computing equipment: £6915
- 1992 Travel grant: £500
- 1991 Travel grant: £800

Leverhulme Trust grants

- 1998 Research fellowship: £8372

Royal Society of Edinburgh grants

- 1999 SOEID/RSE support research fellowship: £17,000

Serc grants

- 1992-1994 SERC grants GR/H54904,GR/J21941 of 230+250 hours cpu time on Cray X/YMP at Rutherford Lab
- 1991-1994 Participant in GR/J03466 (Principal Investigator Prof. J. M. Ball)
- 1994 Award of “pump-priming” time on Edinburgh Cray T3D

Other grants

- 2015 James-Clerk-Maxwell-AIMS fund: £3000
- 2014 James-Clerk-Maxwell-AIMS fund: £5000
- 2013 James-Clerk-Maxwell-AIMS fund: £5000
- 2012 Carnegie Summer Studentship grant: £1000
- 2011 Carnegie Summer Studentship grant: £840
- 1997 EMS centenary fund for visit by Prof. M. Bowick: £300

Journal Publications

- [1] D. A. Johnston and R. P. K. C. M. Ranasinghe, (Four) Dual Plaquette 3D Ising Models, *Entropy* 22(6), 633 (2020)
- [2] D. A. Johnston, Lattice SUSY for the DiSSEP at $\lambda^2 = 1$ (and $\lambda^2 = -3$), *J. Phys. Commun.* 3, 105011 (2019)
- [3] M. Mueller, W. Janke and D. A. Johnston, Plaquette Ising models, degeneracy and scaling, *Eur. Phys. J. Special Topics*, 226, Issue 4, 749–764 (2017)
- [4] M. Mueller, W. Janke and D. A. Johnston, Boundary conditions subtleties in plaquette models (and the 1d Ising model), *Nucl. Phys. B* 914, 388-404 (2017)
- [5] M. Mueller, W. Janke and D. A. Johnston, Macroscopic degeneracy and order in the 3D plaquette Ising model, *Modern Physics Letters B* Vol. 29 1550109 (2015)
- [6] M. Mueller, W. Janke and D. A. Johnston, Planar ordering in the plaquette-only gonihedric Ising model, *Nucl. Phys. B* 894, 1-14 (2015)
- [7] D. A. Johnston, \mathbb{Z}_2 Lattice Gerbe Theory, *Phys. Rev. D* 90, 107701 (2014)
- [8] M. Mueller, W. Janke and D. A. Johnston, Multicanonical analysis of the plaquette-only gonihedric Ising model and its dual, *Nucl. Phys. B* 888, 214-235 (2014)
- [9] M. Mueller, W. Janke and D. A. Johnston, Nonstandard Finite-Size Scaling at First Order Phase Transitions, *Phys. Rev. Lett.* 112, 200601 (2014)
- [10] N. Ananikian, N. Sh. Izmailyan, D. A. Johnston, R. Kenna and R. P. K. C. M. Ranasinghe, Potts models with invisible states on general Bethe lattices, *J. Phys. A* 46 385002 (2013)
- [11] D. A. Johnston and R. P. K. C. M. Ranasinghe, Potts Models with (17) Invisible States on Thin Graphs, *J. Phys. A* 46 225001 (2013)
- [12] D. A. Johnston, Gonihedric (and Fuki-Nuke) Order, *J. Phys. A* 45 405001 (2012)
- [13] D. A. Johnston and R. P. K. C. M. Ranasinghe, The Dual Gonihedric 3D Ising Model, *J. Phys. A* 44 295004 (2011)
- [14] W. Janke, D. Johnston and R. Kenna, Geometrothermodynamics of the Kehagias-Sfetsos Black Hole, *J. Phys. A* 43 425206 (2010)
- [15] R. Blythe W. Janke, D. Johnston and R. Kenna, Continued Fractions and the Partially Asymmetric Exclusion Process, *J. Phys. A* 42 325002 (2009)
- [16] M. Weigel and D. Johnston, Frustration effects in antiferromagnets on planar random graphs, *Phys. Rev. B* 76 054408 (2007)
- [17] W. Janke, D. Johnston and R. Kenna, Self-consistent Scaling Theory for Logarithmic Correction Exponents, *Phys. Rev. Lett.* 97, 155702 (2006)
- [18] W. Janke, D. Johnston and R. Kenna, Scaling Relations for Logarithmic Corrections, *Phys. Rev. Lett.* 96 115701 (2006)
- [19] W. Janke, D. Johnston and R. Kenna, Properties of Higher Order Phase Transitions, *Nucl. Phys. B* 736, 319 (2005)

- [20] R. Blythe W. Janke, D. Johnston and R. Kenna, Dyck Paths, Motzkin Paths and Traffic Jams, *J. Stat.Mech.* P10007 (2004)
- [21] M. Baig, J. Clua, D.A. Johnston, R. Villanova, Fixed boundary conditions analysis of the 3d Gonihedric Ising model with $\kappa = 0$, *Phys. Lett. B* 585, 180 (2004)
- [22] R. Blythe W. Janke, D. Johnston and R. Kenna, The Grand Canonical Asymmetric Exclusion Process and the One-Transit Walk, *J. Stat.Mech.* P06001 (2004)
- [23] W. Janke, D. Johnston and R. Kenna, Phase Transition Strength through Density of General Distributions of Zeros, *Nucl. Phys. B [FS]* 682/3, 618-634 (2004)
- [24] W. Janke, D. Johnston and R. Kenna, The Information Geometry of the Spherical Model, *Phys. Rev. E* 67, 046106 (2003)
- [25] W. Janke, D. Johnston and R.P.K.C. Malmini, The Information Geometry of the Ising Model on Planar Random Graphs, *Phys. Rev. E* 66, 056119 (2002)
- [26] B. Dolan, D. Johnston and R. Kenna, The Information Geometry of the 1D Potts Model, *J. Phys. A* 35, 9025-9035 (2002)
- [27] W. Janke, D. Johnston and M. Stathakopoulos, A Kertesz Line on Planar Random Graphs?, *J. Phys. A* 35, 7575 (2002)
- [28] D. Johnston and R.P.K.C. Malmini, Decorating Random Quadrangulations, *J. Phys. A* 35 L1-L6 (2002)
- [29] P. Svenson and D. Johnston, Damage spreading in small world Ising models, *Phys. Rev. E* 65, 036105 (2002)
- [30] Z. Burda, D. Johnston, J. Jurkiewicz, M. Kaminski, M.A. Nowak, G. Papp, I. Zahed, Wealth Condensation in Pareto Macro-Economies, *Phys. Rev. E* 65, 026102 (2002)
- [31] B. Dolan and D. Johnston, 1D Potts, Lee-Yang Edges and Chaos, *Phys. Rev. E* 65, 057103 (2002)
- [32] A. Lipowski and D. Johnston, Tensionless structure of glassy phase, *Phys. Rev. E* 65, 017103 (2001)
- [33] A. Lipowski and D. Johnston, Crystallization of a supercooled liquid and of a glass - Ising model approach, *Phys. Rev. E* 64 041605 (2001)
- [34] W. Janke, D. Johnston and M. Stathakopoulos, Fat Fisher Zeroes, *Nucl. Phys. B* 614 494-512 (2001)
- [35] B. Dolan, W. Janke, D. Johnston and M. Stathakopoulos, Thin Fisher Zeroes, *J. Phys. A* 34 6211-6223 (2001)
- [36] A. Lipowski, D. Johnston and D. Espriu, Slow dynamics of Ising models with energy barriers, *Phys Rev. E* 62 3404-3410 (2000)
- [37] P. Bialas, L. Bogacz, Z. Burda and D. Johnston, Finite Size Scaling in the Balls in Boxes Model, *Nucl. Phys. B* 575 599-612 (2000)
- [38] A. Lipowski and D. Johnston, Cooling rate effects in a model of glass *Phys Rev. E* 61 6375 (2000)

- [39] W. Janke, D. Johnston and R. Villanova, Spin Models on Random Lattices, *Physica A*281 207-220 (2000)
- [40] W. Janke and D. Johnston, Non-self-averaging in autocorrelations: Ising and Potts Models on Quenched Random Gravity Graphs, *J. Phys. A*33 2653-2662 (2000)
- [41] A. Lipowski and D. Johnston, Metastability in 4-spin Ising model, *J. Phys. A*33 4451-4460 (2000)
- [42] W. Janke and D. Johnston, Ising and Potts Models on Quenched Random Gravity Graphs, *Nucl. Phys. B*578 681-698 (2000)
- [43] W. Janke and D. Johnston, The Wrong Kind of Gravity, *Phys. Lett. B*460 271-275 (1999)
- [44] D. Johnston, A Potts/Ising Correspondence on thin graphs, *J. Phys. A*32 5029-5036 (1999)
- [45] D. Johnston, Symmetric Vertex Models on Planar Random Graphs, *Phys. Lett. B*463 9-18 (1999)
- [46] P. Bialas, Z. Burda and D. Johnston, Phase Diagram of the Mean Field Model of Simplicial Quantum Gravity, *Nucl. Phys. B*542 413-424 (1999)
- [47] D. Johnston and P. Plechac, Vertex Models on Feynman Diagrams, *Phys. Lett. A*248 37-45 (1998)
- [48] D. Johnston, Thin Animals, *J. Phys. A*31 9405-9417 (1998)
- [49] D. Johnston, The Yang Lee Edge Singularity on Feynman Diagrams: *J. Phys. A*31 5461-5469 (1998)
- [50] D. Johnston and P. Plechac, Equivalence of Ferromagnetic Spin Models on Trees and Random Graphs: *J. Phys. A*31 475-482 (1998)
- [51] D. Johnston and P. Plechac, Potts Models on Feynman Diagrams: *J. Phys. A*30, 7349-7363 (1997)
- [52] M. Baig, D. Espriu, D. Johnston and R.K.P.C. Malmimi, String tension in goniuhedric 3D Ising models: *J. Phys. A*30 7695-7706 (1997)
- [53] P. Bialas, Z. Burda and D. Johnston, Condensation in the Backgammon Model: *Nucl. Phys. B*493, 505-516 (1997)
- [54] E. Cirillo, G. Gonnella A. Pelizzola and D. Johnston, The phase diagram of the 3D goniuhedric Ising model via CVM: *Phys. Lett. A*226, 59-64 (1997)
- [55] M. Baig, D. Espriu, D. Johnston and R.K.P.C. Malmimi, Evidence for a first order transition in a plaquette 3d Ising-like action: *J. Phys. A*30, 405-412 (1997)
- [56] C. Baillie, D. Johnston, E. Marinari and C. Naitza, Dynamic Behavior of Spin Glasses on Quenched ϕ^3 graphs: *J. Phys. A*29, 6683-6691 (1996)
- [57] C. Baillie, W. Janke and D. Johnston, Softening of Phase Transitions on Quenched Random Gravity Graphs: *Phys. Lett. B*388, 14-20 (1996)

- [58] D. Johnston and R.K.P.C. Malmini, Gonihedric 3D Ising Models: Phys. Lett. B378, 87-96 (1996)
- [59] C. Baillie, N. Dorey, W. Janke and D. Johnston, The Villain Model on Thin Graphs: Phys. Lett. B369, 123-9 (1996)
- [60] C. Baillie and D. Johnston, Square Gravity: Phys. Lett. B357, 287-294 (1995).
- [61] C. Baillie, W. Janke, D. Johnston and P. Plechac, Spin Glasses on Thin Graphs: Nucl. Phys. B450 [FS], 730-752 (1995)
- [62] D. Johnston, A Remark on the Renormalization Group Equation for the Penner Model: Phys. Rev. D51, 2014-6 (1995)
- [63] C. Baillie, D. Johnston and J-P. Kownacki, Ising Spins on Thin Graphs: Nucl. Phys. B432, 551-570. (1994)
- [64] D. Johnston, Frustrating and Diluting Dynamical Lattice Ising Spins: Phys. Lett. B336, 229-36, (1994)
- [65] C. Baillie, K. Hawick and D. Johnston, Quenching 2D Quantum Gravity: Phys. Lett. B328, 284-90 (1994)
- [66] C. Baillie and D. Johnston, Damaging 2D Quantum Gravity: Phys. Lett. B326, 51-6, (1994)
- [67] C. Baillie, A. Irbach, W. Janke and D. Johnston, Scaling in Steiner Random Surfaces : Phys. Lett. B325, 45-50, (1994)
- [68] C. Baillie and D. Johnston, Smooth Random Surfaces from Tight Immersions?: Phys. Rev. D49, 4139-43, (1994)
- [69] C. Baillie and D. Johnston, 2D O(3) model coupled to 2D Quantum Gravity: Phys. Rev. D49, 603-6 (1994)
- [70] C. Baillie, W. Janke and D. Johnston, Solid on Solid on Fluid Lattices : Phys Lett. B318, 424-32 (1993)
- [71] D. Johnston Ising (anti-)ferromagnet on dynamical triangulations and quadrangulations: Phys. Lett. B314, 69-73, (1993)
- [72] C. Baillie and D. Johnston, Freezing Fluid Random Surfaces: Phys. Rev. D48, 5025-8, (1993).
- [73] C. Baillie, D. Espriu and D. Johnston, Steiner Variations on Random Surfaces: Phys. Lett. B305, 109-114, (1993)
- [74] C. Baillie and D. Johnston Crossover Between Weakly and Strongly Self-Avoiding Random Surfaces: Phys. Lett. B295, 249-55, (1992)
- [75] C. Baillie and D. Johnston, The XY Model Coupled to Two-Dimensional Quantum Gravity: Phys. Lett. B291, 233-40, (1992)
- [76] C. Baillie and D. Johnston, An Effective Model for Crumpling in Two-Dimensions: Phys. Rev. D46, 4761-4, (1992)

- [77] C. Baillie and D. Johnston, Multiple Potts Models Coupled to Two-Dimensional Quantum Gravity: Phys. Lett. B286, 44-52, (1992)
- [78] C. Baillie and D. Johnston, A Modified Steiner Functional String Action: Phys. Rev. D45, 3326-30 (1992)
- [79] C. Baillie and D. Johnston, Strong Self-Avoidance and Crumpling in Random Surfaces with Extrinsic Curvature : Phys. Lett. B283, 55-62 (1992)
- [80] D. Johnston, Zero Potts Models Coupled to Two-Dimensional Gravity: Phys. Lett. B277, 405-10, (1992)
- [81] C. Baillie and D. Johnston, A Numerical Test of KPZ Scaling: Potts Models Coupled to 2D Quantum Gravity: Mod. Phys. Lett. A7, 1519-31, (1992)
- [82] C. Baillie and D. Johnston, Weak Self Avoidance and Crumpling in Random Surfaces with Extrinsic Curvature: Phys. Lett. B273, 380-8, (1991)
- [83] C. Baillie, D. Johnston, Crumpling Dynamically Triangulated Random Surfaces in Two Dimensions: Phys. Lett. B258, 346-52, (1991)
- [84] D. Johnston, Spiky Projective Planes: Phys. Lett. B257, 51-5, (1991)
- [85] J. Ambjorn, A. Bellini and D. Johnston, Spiky Higher Genus Strings: Mod. Phys. Lett. A6, 2467-74, (1991)
- [86] C. Baillie, S. Catterall, D. Johnston and R. Williams, Further Investigations of the Crumpling Transition in Dynamically Triangulated Random Surfaces): Nucl. Phys. B348, 543, (1991)
- [87] C. Baillie, D. Johnston and R. Williams, Non-Universality in Dynamically Triangulated Random Surfaces with Extrinsic Curvature: Mod. Phys. Lett. A5, 1671-8, (1990)
- [88] C. Baillie, D. Johnston and R. Williams, Crumpling Dynamically Triangulated Random Surfaces in Higher Dimensions: Phys. Lett. B243, 358-364, (1990)
- [89] D. Johnston, Tubes and Supertubes: Phys. Lett. B241, 41-44, (1990)
- [90] D. Johnston, Superspikes: Phys. Lett. B235, 291-294, (1990)
- [91] C. Baillie, D. Johnston and R. Williams, Computing Aspects of Simulating Dynamically Triangulated Random Surfaces: Comp. Phys. Comm. 58-65, 105, (1990)
- [92] C. Baillie G. Kilcup and D. Johnston, Computational Status and Prospects of Lattice Calculations in High Energy Physics: Jour. of Supercomputing (1990) 277-300
- [93] C. Baillie, D. Johnston and R. Williams, Crumpling in Dynamically Triangulated Random Surfaces with Extrinsic Curvature: Nucl. Phys. B335, 469-501, (1990)
- [94] D. Johnston, Putting Liouville into Superstrings: Phys. Lett. B232, 180-183, (1989)
- [95] D. Johnston, Phase Transition in Liouville theory: Phys. Rev. D40, 3402-7, (1989)
- [96] C. Baillie and D. Johnston, Metropolis and Langevin time: Phys. Rev. D39, 1246-1248, (1989)

- [97] D. Johnston, A local fermionic ghost number anomaly for the Kallosh quantization of the heterotic string?: Phys. Lett. B209, 239-241, (1988)
- [98] G. Gilbert and D. Johnston, Equivalence of the Kallosh and Carlip quantizations of the Green-Schwartz action for the heterotic string: Phys. Lett. B205, 273-280, (1988)
- [99] D. Johnston, Sedentary ghost poles in higher derivative gravity: Nucl. Phys. B297, 721-732, (1988)
- [100] D. Johnston, Gauge independence of mass counterterms in the abelian Higgs model and gravity: Nucl. Phys. B293, 229-240, (1987)
- [101] D. Johnston, Coleman-Weinberg, Nielsen and daisies: Phys. Lett. B186, 185-188, (1987)
- [102] D. Johnston, Gauge dependence of the one-loop effective action in gravity: Phys. Lett. B189, 311-314, (1987)
- [103] D. Johnston, Nielsen identities for gauge-fixing vectors and effective actions containing composite operators: Nucl. Phys. B283, 317-330, (1987)
- [104] D. Johnston, The Wess-Zumino gauge is a "Good" gauge: Phys. Lett. B182, 177-180, (1986)
- [105] H. F. Jones and D. Johnston, X-space sum rules and the pion wavefunction in Q.C.D. : Zeit. fur Phys. C33, 281, (1986)
- [106] D. Johnston, Convexity and tadpoles: Zeit fur Phys. C31,129-133, (1986)
- [107] M. Hindmarsh and D. Johnston, Convexity of the effective potential: J. Phys. A19, 1-20, (1986)
- [108] D. Johnston, Nielsen identities in the 't Hooft gauge: Nucl. Phys. B253, 687-700, (1985)

Conference Proceedings

- [1] M. Mueller, W. Janke, and D. A. Johnston, Finite-Size Scaling and Latent Heat at the Gonihedric First-Order Phase Transition, *Journal of Physics: Conference Series* 640 012002 (2015)
- [2] M. Mueller, W. Janke, and D. A. Johnston, Transmuted Finite-size Scaling at First-order Phase Transitions, 27th Annual CSP Workshop, *Physics Procedia* 57 68-72 (2014)
- [3] W. Janke, D. Johnston and R. Kenna, Properties of phase transitions of higher order, *Proceedings of Science (Lattice 2005)*, 244 (2005)
- [4] Z. Burda, D. Johnston, J. Jurkiewicz, M. Kaminski, M.A. Nowak, G. Papp, I. Zahed, Wealth Condensation and “Corruption” in a Toy Model, *Acta Phys. Pol.* 36 2442 (2005)
- [5] W. Janke, D. Johnston and R. Kenna, Phase Transition Strength from General Distributions of Zeroes, *Computer Physics Communications* 169, proceedings of CCP-2004, 457-461 (2005)
- [6] W. Janke, D. Johnston and R. Kenna, Information Geometry and Phase Transitions, *Physica A*, 336 181-186 (2004)
- [7] W. Janke, D. Johnston and R. Kenna, Information Geometry, One, Two, Three and Four, *Acta Phys. Pol.* 34 4923-4937 (2003)
- [8] W. Janke, D. Johnston and R. Kenna, New Methods to Measure Phase Transition Strength, *Nucl. Phys. B (Proc. Suppl.)* (2002)
- [9] P. Bialas, Z. Burda and D. Johnston, Surplus Anomaly and Random Geometries: NATO ASI series B366 751-760, Plenum Press, ed. Poul Damgaard and J. Jurkiewicz (2002)
- [10] W. Janke, D. Johnston and M. Stathakopoulos, Fat and Thin Fisher Zeroes, *Nucl. Phys. B (Proc. Suppl.)* (2001)
- [11] W. Janke and D. Johnston, Non-Self-Averaging Autocorrelations for Quenched Connectivity Disorder, *Computer Simulation Studies in Condensed-Matter Physics XIII Springer Proceedings in Physics Volume 86*, 128-133 (2001)
- [12] P. Bialas, Z. Burda and D. Johnston, Balls in Boxes and Quantum Gravity: *Nucl. Phys. B (Proc. Suppl.)* 63A-C 763-765 (1998)
- [13] C. Baillie, W. Janke and D. Johnston, Softening Transitions with (Quenched) Gravity: *Nucl. Phys. B53 (Proc. Suppl.)* 732-735 (1997)
- [14] D. Johnston and R.K.P.C. Malmimi, Gonihedric 3D Ising Models: *Nucl. Phys. B53 (Proc. Suppl.)* 773-777 (1997)
- [15] C. Baillie and D. Johnston, Spin Models on Thin Graphs: *Nucl. Phys. B47 (Proc. Suppl. “Lattice95, Melbourne”)* 649-652 (1996)
- [16] D. Johnston, J-P. Kownacki and A. Krzywicki, Random Geometries and Real Space Renormalization Group, *Nucl. Phys. B42. (Proc. Suppl. “Lattice94, Bielefeld”)* 728-730 (1995)

Invited Review Papers

- [1] D. A. Johnston, A. Lipowski and Ranasinghe P. K. C. Malmini, The Gonihedric Ising Model and Glassiness, in *Rugged Free-Energy Landscapes - An Introduction*, Springer Lecture Notes in Physics, 736, ed. W. Janke, (2008)
- [2] W. Janke, D. Johnston and M. Weigel, Two-dimensional quantum gravity – a laboratory for fluctuating graphs and quenched connectivity disorder, *Condensed Matter Physics*, Vol. 9, No 2(46) (2006)
- [3] D. Johnston, Gravity and Random Surfaces: A Review, *Nucl. Phys. B53 (Proc. Suppl.)* 43-55 (1997)