

Daniel S. Fisher

David Starr Jordan Professor of Science in Department of Applied Physics
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Personal

Born Nov, 21, 1956 in London, England

Married to Tessa M. Fisher, *née* Levy; two children

Education

B.A. in Mathematics and Physics *summa cum laude*, Cornell University, 1975

Churchill Scholar, Churchill College, Cambridge University, 1975-76

A.M. in Physics, Harvard University, 1978

Ph.D. in Physics, Harvard University, 1979

Employment

AT&T Bell Laboratories

Member of Technical Staff, Theoretical Physics Research Department, 1979-90

Princeton University

Professor of Physics, 1987-90

Associated Faculty Member, Program in Applied and Computational Mathematics 1989-90

Harvard University

Professor of Physics, 1990 - 2007

Master of Dudley House, 1994-97

Professor of Applied Physics, Division of Engineering and Applied Sciences, 1996 - 2007

Acting Senior Fellow, Society of Fellows, 1998-2000

Visiting Professor of Molecular and Cellular Biology, 2002

Stanford University, Professor of Applied Physics and, by Courtesy, of Biology, 2007-present

and, by Courtesy, of Bioengineering, 2010-present

Selected Honors

National Science Foundation Graduate Fellow, 1976-79

Bergman Memorial Grant (with Haim Sompolinsky), 1985

Fellow of American Physical Society, 1986

Exceptional Contribution Award, AT&T Bell Laboratories, 1986

Sloan Research Fellow, 1988-92

Fellow of American Academy of Arts and Sciences, 1999

Onsager Prize of American Physical Society, 2013

Member, National Academy of Sciences, 2015

Short-Term Visiting Positions

HC Orsted Institute, Copenhagen University, 1981
Princeton University, 1981
Institute for Theoretical Physics, Santa Barbara, 1982, 1992, and 1997
California Institute of Technology, 1983
Bar-Ilan University, Tel-Aviv, 1984
Ecole Normale Superieure, Paris, 1989 and 1992
Centre Etudes Nucleaires, Saclay, France, 1989
Institute for Advanced Study, Princeton, 1997
Rockefeller University, 2004
New York University, 2006
New York University, 2013
Simons Institute for the Theory of Computing, Berkeley, 2014

Selected Professional Activities

Scientific

Bell Laboratories Advisory Council on Research, 1981 and 1985-87
Aspen Center for Physics, Trustee, 1984-93, Executive Committee, 1987-88
Gordon Research Conference, Chairman, 1986
Advisory Board, NSF Institute for Theoretical Physics, Santa Barbara, 1988-92, Chair 1990-91
Journal of Low Temperature Physics, Editorial Board, 1989-94
Faculty Council, Harvard, 1993-4
Center for Brain Science, Harvard, 2000-03, Coordinator of planning and searches, 2001-02
Fellows Selection Committee, Center for Genomics Research, Harvard, 2000-05
External Advisory Committee, Center for Nonlinear Studies, Los Alamos, 2008-10
Leadership Council, Bio-X, Stanford, 2008-17
Journal of Statistical Mechanics: Theory & Experiment, special issue editor, 2011-12
Paul Allen Institute for Brain Science Workshop to Evaluate Quantitative Biology. 2012
Site Review Committee, BioComputational Evolution in Action Consortium,
NSF Science and Technology Center, 2012
Simons' Foundation Advisory Group on Quantitative and Theoretical Biology, 2013-14
Onsager Prize Selection Committee, American Physical Society, 2000-01 & 2014
Simons' Foundation Theoretical Physics, Mathematics, Computer Science,
and Mathematical Modeling of Living Systems, Fellows selection committee, 2011-14
Research Corporation and Moore Foundation, Scialog advisory committee, 2015-17
Paul G. Allen Family Foundation, Design Charette on Future of Quantitative Life Sciences, 2015
Board on Physics and Astronomy, National Academy of Sciences, 2015-present

Public Policy

“Open Letter to Congress” on the Strategic Defense Initiative,
from scientists and engineers at industrial and government labs, Co-organizer, 1986-87
Common Cause, National Governing Board, 1987-90
Union of Concerned Scientists, Board of Directors, 1987-97
Council on Foreign Relations, Term Member, 1989-94
Woodrow Wilson School Undergraduate Policy Task Force on Arms Control in Space,
Leader, Spring 1990
Panel on Public Policy, American Physical Society, 1992-94;
National Security Subcommittee, Chair, 1992-94
Undergraduate Seminar on Energy and Energy Policy, Harvard, Leader, Spring 1995
Educational Foundation for Nuclear Science (publisher of *Bulletin of Atomic Scientists*),
Board of Directors 1998-2001

Publications

Physics

1. Daniel S. Fisher and David R. Nelson, “Low-Temperature Recursion Relations and High-Temperature Series Expansions”, Phys. B16, 2300 (1977).
2. David R. Nelson and Daniel S. Fisher, “Dynamics of Classical XY Spins in One and Two Dimensions”, Phys. Rev. B16, 4945 (1977).
3. M. C. Cross and Daniel S. Fisher, “A New Theory of the Spin-Peierls Transition with Special Relevance to the Experiments on TTFCuBDT”, Phys. Rev. B19, 402 (1979).
4. Daniel S. Fisher, B.I. Halperin, and P.M. Platzman, “Phonon-Ripplon Coupling and the 2-D Electron Solid on a Liquid Helium Surface”, Phys. Rev. Lett. 42, 798 (1979).
5. Daniel S. Fisher, B. I. Halperin and R. Morf, “Defects in the Two-Dimensional Electron Solid and Implications for Melting”, Phys. Rev. B20, 4692 (1979).
6. Daniel S. Fisher, “Flux Lattice Melting in Thin Film Superconductors”, Proceedings of Conference on Inhomogeneous Superconductors, D. U. Gubser et. al., ed, (AIP, New York 1980).
7. D. D. Osheroff, M. C. Cross, and D. S. Fisher, “Nuclear Antiferromagnetic Resonance in Solid ^3He ”, Phys. Rev. Lett. 44, 792 (1980).
8. Daniel S. Fisher, “Flux Lattice Melting in Thin Film Superconductors”, Phys. Rev. B22, 1190 (1980).
9. Daniel S. Fisher, “Two Dimensional Wigner Crystallization and Electrons on Helium”, in Proceedings of International Conference on Ordering in Two Dimensions, S.K. Sinha, ed.,(North Holland, New York 1980).
10. P.W. Anderson, D.J. Thouless, E. Abrahams, and D. S. Fisher, “New Method for a Scaling Theory of Localization”, Phys. Rev. B22, 3519 (1980).
11. Daniel S. Fisher and V. B. Shikin, “The Spectrum of the Electron Ripplon System at the Surface of Liquid Helium in a Perpendicular Magnetic Field”, J.E.T.P. Lett. 31, 209(1980)
12. S. N. Coppersmith, Daniel S. Fisher, B. I. Halperin, P. A. Lee, and W. F. Brinkman, “Dislocations and the Commensurate-Incommensurate Transition in Two Dimensions”, Phys.Rev. Lett. 46, 549 (1981).
13. Daniel S. Fisher and Patrick A. Lee, “A Relation Between Conductivity and Transmission Matrix”, Phys. Rev. B23, 6853 (1981) (Rapid Comm.).
14. Patrick A. Lee and Daniel S. Fisher, “ Anderson Localization in Two Dimensions”, Phys. Rev. Lett . 47, 882 (1981).
15. S. N. Coppersmith, Daniel S. Fisher, B.I. Halperin, P. A. Lee and W. F. Brinkman, “Dislocations and the Commensurate-Incommensurate Transition in Two Dimensions”, Phys.Rev. B25, 347 (1982).
16. Leigh Sneddon, M. C. Cross, and Daniel S. Fisher, “Sliding Conductivity of Charge Density Waves”, Phys. Rev. Lett. 49, 292 (1982).
17. Daniel S. Fisher, “Shear Moduli and Melting Temperatures of Two Dimensional Electron Crystals: Low Temperatures and High Magnetic Fields”, Phys. Rev. B26, 5009 (1982).
18. Michael E. Fisher and Daniel S. Fisher, “Wall Wandering and the Dimensionality Dependence of the Commensurate-Incommensurate Transition”, Phys. Rev. B25, 3192 (1982).
19. Matthew P. A. Fisher, Daniel S. Fisher and John D. Weeks. “Agreement of Capillary Wave Theory with Exact Results for the Interface Profile of the 2D Ising Model”, Phys. Rev.Lett 48, 368 (1982) (Comment).

20. W. F. Brinkman, Daniel S. Fisher, and D. E. Moncton, "Melting of Two Dimensional Solids", *Science* 217, 693 (1982).
21. Daniel S. Fisher, "Threshold Behavior of Charge Density Waves Pinned by Impurities," *Phys. Rev. Lett* 50, 1486 (1983).
22. Daniel S. Fisher and John D. Weeks, "The Shape of Crystals at Low Temperatures: Absence of Quantum Roughening," *Phys. Rev. Lett* 50, 1077 (1983).
23. S. N. Coppersmith and D. S. Fisher, "Pinning Transition of the Discrete Sine-Gordon Equation", *Phys. Rev.* B28, 2566 (1983).
24. Daniel S. Fisher, "Random Walks in Random Environments", *Phys. Rev.* A30, 960 (1984)
25. Daniel S. Fisher, S. N. Coppersmith and M. C. Cross, Comment on "Dynamics of Charge-Density Waves Pinned by Impurities", *Phys. Rev. Lett* 52, 481 (1984).
26. Daniel S. Fisher, Jrg Frhlich and Thomas Spencer, "The Ising Model in a Random Magnetic Field", *J. Stat. Phys.* 34, 863 (1984).
27. Daniel S. Fisher, "Sliding Charge Density Waves as a Dynamic Critical Phenomenon", *Phys. Rev.* B31, 1396 (1985).
28. Daniel S. Fisher, "Sliding Charge Density Waves as a Dynamic Critical Phenomenon" , in "Proceedings of the 17th International Conference on Low Temperature Physics, Part III-Invited Papers", *Physica* 126B, 409 (1984).
29. Daniel S. Fisher, "Random Fields, Random Anisotropies, Non-linear σ -Models and Dimensional Reduction", *Phys. Rev.* 31, 7233 (1985).
30. Daniel S. Fisher and H. Sompolinsky, "Scaling in Spin Glasses", *Phys. Rev. Lett.* 54,1063 (1985).
31. Daniel S. Fisher, Daniel Friedan, Zongan Qiu, Scott J. Shenker and Stephen H. Shenker, "Random Walks in Two-Dimensional Random Environments with Constrained Drift Forces", *Phys. Rev.* A31, 3841 (1985).
32. Daniel S. Fisher and David A. Huse, "Wetting Transitions: A Functional Renormalization Group Approach", *Phys. Rev.* B32, 247 (1985).
33. M. C. Cross and Daniel S. Fisher, "Magnetism in Solid 3He . Confrontation Between Theory and Experiment". *Rev. Mod. Phys.* 57, 881 (1985).
34. Daniel S. Fisher, "Scaling and Critical Slowing Down in Random Field Ising Systems", *Phys. Rev. Lett.* 56, 416 (1986).
35. David A. Huse, Christopher L. Henley and Daniel S. Fisher, "Exact Exponents for an Interface in a Two-Dimensional Random Exchange Ising Model", (response to Comment on "Pinning and Roughening of Domain Walls in Ising Systems Due to Random Impurities"), *Phys. Rev. Lett.* 55, 2924 (1985).
36. Daniel S. Fisher, "Interface Fluctuations in Disordered Systems: $5-\epsilon$ Expansion and Failure of Dimensional Reduction", *Phys. Rev. Lett.* 56, 1964 (1986).
37. Daniel S. Fisher and David A. Huse, "Ordered Phase of Short-Range Ising Spin Glasses", *Phys. Rev. Lett.* 56, 1601 (1986).
38. David A. Huse and Daniel S. Fisher, "Residual Energies After Slow Cooling of Disordered Systems", *Phys. Rev. Lett.* 57, 2203 (1986).
39. J.T. Chayes, L. Chayes, Daniel S. Fisher and T. Spencer, "Finite-Size Scaling and Correlation Lengths for Disordered Systems", *Phys. Rev. Lett.* 57, 299 (1986).
40. David A. Huse and Daniel S. Fisher "Pure States in Spin Glasses", *J. Phys. A. Lett.* 20, L 997 (1987).

41. Daniel S. Fisher and David A. Huse, "Absence of Many States in Realistic Spin Glasses", *J. Phys. A. Lett.* 20, L 1005 (1987).
42. Daniel S. Fisher, "Friction and Forced Flow: Collective Transport in Disordered Media", in "Nonlinearity in Condensed Matter", ed. by A. R. Bishop, D.K. Campbell, P.Kumar and S. Trullinger, (Springer-Verlag, New York, 1987).
43. David A. Huse and Daniel S. Fisher, "Dynamics of Droplet Fluctuations in Pure and Random Ising-Systems", *Phys. Rev.* B35, 684 (1987).
44. Daniel S. Fisher, "Activated Dynamic Scaling in Disordered Systems", *J. Appl. Phys.* 61, 3672 (1987).
45. Daniel S. Fisher and David A. Huse, "Static and Dynamic Behavior of Spin Glass Films", *Phys. Rev.* B36, 8937 (1987).
46. Daniel S. Fisher, "Equilibrium and Non-equilibrium Dynamics of Short-Range Spin-Glasses", *Proceedings of 18th International Conference on Low Temperature Physics, Jap. J. Appl. Phys. Suppl.* (1987).
47. Daniel S. Fisher and P. C. Hohenberg, "The Dilute Bose Gas in Two Dimensions", *Phys. Rev.* B37, 4936 (1988).
48. Daniel S. Fisher, A.J. Millis, B. Shraiman and R.N. Bhatt, "Zero Point Motion and the Isotope Effect in Oxide Superconductors", *Phys. Rev. Lett. (Comments)* 61, 482 (1988).
49. Daniel S. Fisher, "Dynamics of Random Magnets", in "Physics News in 1987", *Physics Today* 41, 1 S-23 (Jan. 1988).
50. Daniel S. Fisher and David A. Huse, "Equilibrium Behavior of the Spin-Glass Ordered Phase", *Phys. Rev* B38, 386 (1988).
51. Daniel S. Fisher and David A. Huse, "Non-equilibrium Dynamics of Spin Glasses", *Phys. Rev.* B38, 373 (1988).
52. Daniel S. Fisher and Matthew P. A. Fisher, "Onset of Superfluidity in Random Media", *Phys. Rev. Lett.* 61, 1847 (1988).
53. S.N. Coppersmith and Daniel S. Fisher, "Threshold Behavior of a Driven Harmonic Chain", *Phys. Rev.* A38, 6338 (1988).
54. J.T. Chayes, L. Chayes, Daniel S. Fisher, T. Spencer, "Correlation Length Bounds for Disordered Ising Ferromagnets", *Comm. Math. Phys.* 120, 501 (1989).
55. Curtis A. Doty and Daniel S. Fisher, "Correlation Functions of the Ising Spin Glass on the Bethe Lattice", *Phys. Rev.* B39, 12098 (1989).
56. Daniel S. Fisher, "Universality and Finite Size Scaling in Quantum Antiferromagnets", *Phys. Rev.* B39, 11783 (1989).
57. Daniel S. Fisher, Geoffrey M. Grinstein and Anil Khurana, "Theory of Random Magnets", *Physics Today* 41, 12, 56 (1988).
58. Matthew P.A. Fisher, Peter B. Weichman, G. Grinstein and Daniel S. Fisher, "Boson Localization and the Superfluid-Insulator Transition", *Phys. Rev.* B40, 546 (1989).
59. Ido Kanter and Daniel S. Fisher, "Lower Critical Dimension of Stochastic Non-equilibrium Ferromagnetic Ising Systems", *Phys. Rev.* A40, 5327 (1989).
60. Daniel S. Fisher, M.P.A. Fisher, and D.A. Huse, "Type II Superconductors in a Magnetic Field: Fluctuations Pinning and Transport," *Physica* B169, 85, (1991).
61. Daniel S. Fisher, Matthew P.A. Fisher and David A. Huse, "Thermal Fluctuations, Quenched Disorder, Phase Transitions and Transport in Type II Superconductors," *Phys. Rev.* B43, 130 (1991).

62. R.N. Bhatt and D.S. Fisher, "Absence of Spin Diffusion in Most Random Lattices," *Phys. Rev. Lett.* 68, 3072 (1992).
63. A.A. Middleton and D.S. Fisher, "Discrete Scatterers and Autocorrelations of Multiply Scattered Light," *Phys. Rev.* B43, 5934 (1991).
64. A.A. Middleton and D.S. Fisher, "Critical Behavior of Pinned Charge Density Waves Below the Threshold for Sliding," *Phys. Rev. Lett.* 66, 92 (1991).
65. Onuttom Narayan and Daniel S. Fisher, "Logarithmic Effects on the Critical Behavior of Superfluids in Random Media," *Phys. Rev.* B42, 7869 (1990).
66. D.A. Huse and D.S. Fisher, "On the Behavior of Spin glasses in a Uniform Magnetic Field," *J. de Phys.* 1, 621 (1991).
67. Daniel S. Fisher and David A. Huse, "Directed Paths in a Random Potential," *Phys. Rev.* B43, 10728 (1991).
68. C.A. Doty and D.S. Fisher, "Effects of Quenched Disorder on Spin- $\frac{1}{2}$ Quantum XXZ Chains," *Phys. Rev.* B45, 2167 (1992).
69. Daniel S. Fisher, "Pathologies of the Infinite-n Limit of Random Anisotropy: Spin Glass Transition or Local Crossover?," *Physica A* 177, 84 (1991).
70. A. Alan Middleton, Daniel S. Fisher, and P.B. Littlewood, "Reply to Comment by Mihaly, Mihaly, and Gruner," *Phys. Rev. Lett.* 67, 3873 (1991).
71. Daniel S. Fisher, "Phase Transitions and Transport in Anisotropic Superconductors With Large Thermal Fluctuations," "Phenomenology and Applications of High Temperature Superconductors," edited by K. Bedell, M. Invi, D. Meltzer, I.R. Schreiffer and S.Doniach. NY: Addison-Wesley. (1991).
72. Mi K. Hong, Onuttom Narayan, Raymond E. Goldstein, E. Shyamsunder, Robert H. Austin, Daniel S. Fisher, and Mike Hogan, "The Internal Dynamics of DNA Probed by Transient Electric Birefringence," *Phys. Rev. Lett.* 68, 1430 (1992).
73. David A. Huse, Matthew P.A. Fisher and Daniel S. Fisher, "Are Superconductors Really Superconducting?" *Nature* 358, 553 (1992).
74. Onuttom Narayan and Daniel S. Fisher, "Dynamics of Sliding CDWs in 4- ϵ Dimensions," *Phys. Rev. Lett.* 68, 3615 (1992).
75. Onuttom Narayan and Daniel S. Fisher, "Critical Behaviour of Sliding Charge Density Waves in 4- ϵ Dimensions," *Phys. Rev.* B46, 11520 (1992).
76. Daniel S. Fisher, "Random Transverse Field Ising Spin Chains," *Phys. Rev. Lett.* 69, 534 (1992).
77. A. Alan Middleton and Daniel S. Fisher, "Critical Behavior of Charge Density Waves Below Threshold: Numerical and Scaling Analysis," *Phys. Rev.* B47, 3530 (1993).
78. Onuttom Narayan and Daniel S. Fisher, "Threshold Critical Dynamics of Driven Interfaces in Random Media," *Phys. Rev.* B48, 7030 (1993).
79. Leon Balents and Daniel S. Fisher, "Large N Expansion for 4- ϵ Dimensional Oriented Manifolds in Random Media," *Phys. Rev.* B48, 5949 (1993).
80. Daniel S. Fisher, "Low Temperature Phases, Ordering and Dynamics in Random Media," in proceedings of NATO Advanced Study Institute on Phase Transitions and Relaxation in Systems with Competing Energy Scales, T. Riste and D. Sherrington, eds., Kluwer (Amsterdam 1993).
81. Terence Hwa and Daniel S. Fisher, "Anomalous Fluctuations of Directed Polymers in Random Media," *Phys. Rev.* B49, 3136 (1994).
82. Onuttom Narayan and Daniel S. Fisher, "Non-linear Fluid Flow in Random Media: Critical Phenomena Near Threshold," *Phys. Rev.* B49, 9469 (1994).

83. Terence Hwa and Daniel S. Fisher, "Vortex Glass Phase and Universal Susceptibility Variations in Planar Array of Flux Lines," *Phys. Rev. Lett* 72, 2466 (1994).
84. Erwin Frey, David R. Nelson and Daniel S. Fisher, "Interstitials, Vacancies and Supersolid Order in Vortex Crystals," *Phys. Rev.* B49, 9723 (1994).
85. Daniel S. Fisher, "Random Antiferromagnetic Quantum Spin Chains," *Phys. Rev.* B50, 3799 (1994).
86. Carlo Cararro and Daniel S. Fisher, "Barriers to Vortex-Line Cutting in High-Tc Superconductors," *Phys. Rev.* B51, 534 (1995).
87. Goetz Moeller, Qimiao Si, Gabriel Kotliar, Marcelo Rozenberg, and Daniel S. Fisher, "Critical Behavior Near the Mott Transition in the Hubbard Model," *Phys. Rev. Lett.* 74, 2082 (1995).
88. Aris L. Moustakas and Daniel S. Fisher, "Localization of Heavy Particles in Metals: Reexamined," *Phys. Rev.* B51, 6908 (1995).
89. Daniel S. Fisher, "Critical Behavior of Random Transverse-Field Ising Spin Chains," *Phys. Rev.* B51, 6411 (1995).
90. Daniel S. Fisher, G. Kotliar, and G. Moeller, "Mid Gap States in Doped Mott Insulators in Infinite Dimensions," *Phys. Rev.* B52, 17112 (1995).
91. Aris L. Moustakas and Daniel S. Fisher, "Prospects for Non-Fermi-Liquid Behavior of a Two Level Impurity in a Metal," *Phys. Rev.* B53, 4300 (1996).
92. Joe Watson and Daniel S. Fisher, "Collective Particle Flow through Random Media," *Phys. Rev.* B54, 938 (1996).
93. Daniel S. Fisher, "Dynamics and Domain Walls: Is the "Landscape" Paradigm Instructive?," *Physica D* 107, 204 (1997).
94. Aris L. Moustakas and Daniel S. Fisher, "Two-channel Kondo Physics from Tunnelling Impurities with Triangular Symmetry", *Phys. Rev.* B55, 6832 (1997).
95. Daniel S. Fisher, "Stability of Elastic Glass Phase in XY Magnets and Vortex Lattices in Type-II Superconductors", *Phys. Rev. Lett.* 78, 1964 (1997).
96. Joe Watson and Daniel S. Fisher, "Dynamic Critical Phenomena in Channel Flow of Driven Particles in Random Media", *Phys. Rev.* B55, 14909 (1997).
97. Sharad Ramanathan, Deniz Ertas, and Daniel S. Fisher, "Quasistatic Crack Propagation in Heterogeneous Media", *Phys. Rev. Lett.* 79, 873 (1997).
98. Sharad Ramanathan and Daniel S. Fisher, "Dynamics and Instabilities of Planar Tensile Cracks in Heterogeneous Media", *Phys. Rev. Lett.* 79, 877 (1997).
99. Daniel S. Fisher, Karin Dahmen, Sharad Ramanathan and Yehuda Ben-Zion, "Statistics of Earthquakes in Simple Models of Heterogeneous Faults", *Phys. Rev. Lett.* 78, 4885 (1997).
100. Daniel S. Fisher, Pierre LeDoussal, and Cecile Monthus, "Random Walks, Reaction Diffusion and Non-equilibrium Dynamics of Spin Chains in One-dimensional Random Environments, *Phys. Rev. Lett.* 80, 3539 (1998)
101. Daniel S. Fisher, "Collective Transport in Random Media: from Superconductors to Earthquakes", in "Proceedings of 9th International Summer School on Fundamental Problems in Statistical Mechanics", H. van Beijeren, ed., *Phys. Reports*, 301, 113 (1998)
102. Daniel S. Fisher and A.P. Young, "Distributions of Gaps and End-to-end Correlations in Random Transverse-field Ising Spin Chains," *Phys. Rev.* B58, 9131 (1998)
103. Sharad Ramanathan and Daniel S. Fisher, "Onset of Propagation of Planar Cracks in Heterogeneous Media," *Phys. Rev.* B58, 6026 (1998)

104. Chen Zeng, PL Leath and Daniel S. Fisher, “Absence of Two-Dimensional Bragg Glasses”, *Phys. Rev. Lett.* 82, 1935 (1999)
105. Daniel S. Fisher, “Phase Transitions and Singularities in Random Quantum Systems,” *Physica A* 263, 222 (1999)
106. Pierre LeDoussal, Cecile Monthus, and Daniel S. Fisher, “Random Walkers in 1D Random Environments: Exact Renormalization Group Analysis”, *Phys. Rev. E* 59, 4795 (1999).
107. Olexei Motrunich, Siun-Chuon Mau, David A. Huse, and Daniel S. Fisher, “Infinite-randomness quantum Ising critical fixed points”, *Phys. Rev. B* 61, 1160 (2000)
108. J. M. Schwarz and Daniel S. Fisher, “Depinning with dynamic stress overshoots: Mean field theory”, *Phys. Rev. Lett.* 87, 096107 (2001)
109. Daniel S. Fisher, Pierre Le Doussal, and Cecile Monthus, “Nonequilibrium dynamics of random field Ising spin chains: exact results via real space RG”, *Phys. Rev. E* 64, 66107 (2001)
110. A. Alan Middleton and Daniel S. Fisher, “Three-dimensional random field Ising magnet: interfaces, scaling, and the nature of states”, *Phys. Rev. B* 65, 134411 (2002).
111. E. Bouchaud, J-P Bouchaud, D.S. Fisher, S. Ramanathan, and J.R. Rice “Can crack front waves explain the roughness of cracks?”, *J. Mech. Phys. Solids* 50, 1703 (2002).
113. Gil Refael, Stefan Kehrein, and Daniel S. Fisher, “Spin Reduction Transition in Spin-3/2 Random Heisenberg Chains”, *Phys. Rev. B* 66 (Rapid Communications), 060402 (2002).
114. D.A. Gorokhov, Daniel S. Fisher, and G. Blatter, “Quantum Collective Creep: A Quasi-classical Langevin Equation Approach”, *Phys. Rev. B* 66, 214203 (2002).
115. J. M. Schwarz and Daniel S. Fisher, “Depinning with Dynamical Stress Overshoots: A Hybrid of Critical and Pseudohysteretic Behavior”, *Phys. Rev. E* 67, 021603 (2003)
116. D. S. Fisher, “Equilibrium States and Dynamics of Equilibration: General Issues and Open Questions”; in “Slow Relaxations and Nonequilibrium Dynamics in Condensed Matter”, J-L Barrat, M.V. Feigelman, J. Kurchan, and J Dalibard, eds., Springer (New York 2003)
117. Gil Refael, Eugene Demler, Yuval Oreg, Daniel S. Fisher, “Dissipation and quantum phase transitions of a pair of Josephson junctions”, cond-mat/0302498, *Phys. Rev. B* 68, 214515 (2003), and *Virtual J. Applies. Superconductivity* (Jan. 1, 2004)
- 118: Gil Refael and Daniel S. Fisher, “Energy Correlations in Random Transverse-Field Ising Spin Chains”, *Phys. Rev. B* 70, 064409 (2004)
119. Cristina Toninelli, Giulio Biroli, and Daniel S. Fisher, “Spatial structures and dynamics of kinetically constrained models of glasses”, *Phys. Rev. Lett.* 92, 185504 (2004)
120. Cristina Toninelli, Giulio Biroli, and Daniel S. Fisher, “Cooperative Behavior of Kinetically Constrained Lattice Gas Models of Glassy Dynamics”, cond-mat/0410647, *J. Stat. Phys.* 120, 167-238 (2005)
121. Cristina Toninelli, Giulio Biroli, and Daniel S. Fisher, “Jamming Percolation and Glass Transitions in Lattice Models” condmat/0509661, *Phys. Rev. Lett.* 96, 035702 (2006)
- 122: Olivia L White and Daniel S Fisher, “Scenario for Spin Glass Phase with Infinitely Many States, Cond-mat/0412335, *Phys. Rev. Lett.* 96, 137204 (2006)
124. G. Refael, E. Demler, Y. Oreg, and D.S. Fisher, “Superconductor-to-Metal Transitions in Dissipative Chains of Mesoscopic Grains and Nanowires”, cond-mat/0511212, *Phys. Rev. B* 75, 014522 (2007)
126. Cristina Toninelli, Giulio Biroli, and Daniel S. Fisher, “On the Universality of Jamming Percolation” [Toninelli, Biroli, and Fisher Reply to the comment of Jeng and Schwarz on “Jamming Percolation and Glass Transitions in Lattice Models”,] *Phys. Rev. Lett.* 98, 129602 (2007)

Biology

112. Jeffrey P. Townsend, Kaare M. Nielsen, Daniel S. Fisher, and Daniel L. Hartl, “Horizontal Acquisition of Divergent Chromosomal DNA in Bacteria: Effects of Mutator Phenotypes”, *Genetics* 164, 13 (2003); erratum, *ibid* 1241
123. Kendra Burbank, Zachary Perlman, A.C. Groen, Daniel S. Fisher and Timothy Mitchison, “A new method reveals microtubule minus ends throughout the meiotic spindle” *J. Cell Bio.* 175, 369-375 (2006)
125. Michael M. Desai, Daniel S. Fisher, and Andrew, W. Murray, “The Speed of Evolution and Maintenance of Variation in Asexual Populations”, *Current Biology* 17, 385-394 (2007)
127. Michael M. Desai and Daniel S. Fisher, “Beneficial Mutation-Selection Balance and the Effect of Linkage on Positive Selection.” *Genetics*, 176, 17591798 (2007)
128. Daniel S. Fisher, “Evolutionary Dynamics”, in “Complex Systems, Lecture Notes of the Les Houches Summer School 2006” J.-P Bouchaud, M. Mzard and J. Dalibard, eds. (Elsevier, Amsterdam 2007)
129. Kendra S. Burbank, Timothy J. Mitchison, and Daniel S. Fisher, “Slide-and-cluster models for spindle assembly”, *Curr. Bio.* 17, 1373-1383 (2007)
130. Michael J. Rust, Joseph S. Markson, William S. Lane, Daniel S. Fisher, and Erin K. OShea, “Ordered Phosphorylation Governs Oscillation of a Three-Protein Circadian Clock”, *Science*, 318, 809-812 (2007)
131. Daniel B. Weissman, Michael M. Desai, Daniel S. Fisher, and Marcus W. Feldman, “The Rate at Which Asexual Populations Cross Fitness Valleys”, *Th. Pop. Bio.*, 75, 286-300 (2009)
132. Joshua A. Weinstein, Ning Jiang, Richard A. White III, Daniel S. Fisher and Stephen R. Quake, “High-Throughput Sequencing of the Zebrafish Antibody Repertoire” *Science* 324, 807-810 (2009)
133. Richard A. Neher, Boris I. Shraiman, and Daniel S. Fisher, “Rate of Adaptation in Large Sexual Populations”, *Genetics* 184, 467 - 481 (2010)
134. Daniel B. Weissman, Marcus W. Feldman, and Daniel S. Fisher “The rate of fitness-valley crossing in sexual populations”, *Genetics*, 186, 1389 - 1410 (2010).
135. Daniel S. Fisher “Leading the Dog of Selection by its Mutational Nose”, *Proc. Natl. Acad. Sci. USA* 108, 2633-2634 (2011)
136. Ning Jiang, Joshua A. Weinstein, Lolita Penland, Richard A. White III, Daniel S. Fisher, and Stephen R. Quake, “Determinism and Stochasticity During Maturation of the Zebrafish Antibody Repertoire”, *PNAS* 108 (13) 5348-5353 (2011)
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