

SIDNEY REDNER

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Education & Postdoctoral Training:

7/77–8/78 Postdoctoral Fellow, University of Toronto, Toronto, Canada.

9/72–6/77 Graduate study in physics at MIT, Ph.D. 6/77.

9/68–6/72 Undergraduate study in physics, University of California, Berkeley.
A.B. degree with distinction in general scholarship.

Professional Positions:

7/14– Resident Faculty Member, Santa Fe Institute.

9/89– Professor of Physics, Boston University.

9/84–8/89 Associate Professor of Physics, Boston University.

9/78–8/84 Assistant Professor of Physics, Boston University.

Administrative Positions:

Chair, Department of Physics, 7/11–1/14.

Acting Chair, Department of Physics, 9/93–8/94, 7/03–7/04.

Associate Chair, Department of Physics 9/92–8/95, 9/96–8/98, 12/00–8/03.

Director of Graduate Studies, Department of Physics 9/91–8/98, 12/00–8/03.

Honorary & Visiting Positions:

1/15–2/15 Visiting Professor, Institut Henri Poincaré, Paris, France.

5/08–6/08 Visiting Professor, Université Pierre et Marie Curie, Paris, France.

2/08–3/08 Visiting Professor, Université Paul Sabatier, Toulouse, France.

7/07–6/14 External Faculty, Santa Fe Institute.

5/06–6/06 Senior Visiting Fellow, Newton Institute of Mathematical Sciences, Cambridge University.

9/04–9/05 Ulam Scholar, Center for Non-Linear Studies, Los Alamos National Laboratory.

1/86–5/86 Visiting Scientist & Consultant, Schlumberger-Doll Research.

8/84–2/85 Visiting Scientist, Schlumberger-Doll Research.

Research Interests:

Condensed matter & statistical physics; stochastic & first-passage processes; coarsening & phase-ordering kinetics; chemical kinetics; transport in disordered media; percolation theory & disordered systems; dynamics of social systems; structure of complex networks.

Publication Summary:

- 260 publications in refereed journals and book chapters.
- 1 monograph, “A Guide to First-Passage Processes” (Cambridge University Press, 2001).
- 1 graduate-level text, “A Kinetic View of Statistical Physics”, with P. L. Krapivsky, and E. Ben-Naim (Cambridge University Press, 2010).

Professional Affiliations:

Fellow, American Physical Society; Fellow, Institute of Physics.

Divisional Associate Editor, Physical Review Letters, 2013–

Editorial Boards: Journal of Statistical Physics, 2000–2002, 2008–, J. Informetrics, 2006–
European Physical Journal B, 2009–11, J. Stat. Mech., 2004–11.

Journal of Physics A, 2005–09.

American Journal of Physics, 2005–07, Physical Review E, 1992–97.

Advisory Panel, Institute of Physics Publishing, 2001–09.

Chair, APS Topical Group in Statistical and Nonlinear Physics, 2008–09.

Ph.D. Students Supervised

1. Edward T. Gawlinski, Ph.D. 1983. Thesis Title: “Critical Properties of Continuum Percolation”, (thesis work performed under joint supervision with Prof. H. E. Stanley). Present position: Professor of Physics and Computer Science, Temple University, Philadelphia, PA
2. Kiho Kang, Ph.D. 1985, (deceased). Thesis title: “Fluctuation Dominated Kinetics in Diffusion-Controlled Reactions”. Kiho was about to assume a postdoctoral position at Exxon Research Labs before he became ill and died.
3. Lucilla de Arcangelis, Ph.D. 1986. Thesis title: “Multifractality in Percolation: The Voltage Distribution”. First postdoctoral position at S. Ph. T, C.E.N. Saclay, Gif-sur-Yvette, France. Present position: Professor, Dipartimento de Ingegneria dell’Informazione, Seconda Università di Napoli Italy.
4. Byungnam Kahng, Ph.D. 1990. Thesis title: “Anomalous Transport and Breakdown Phenomena in Composite Systems”. First postdoctoral position at Department of Chemistry, University of California, Berkeley. Present position: Professor of Physics, Seoul National University, Seoul, Korea.
5. David Considine, Ph.D. 1991. Thesis title: “Kinetics in Models of Heterogeneous Catalysis”. First postdoctoral and present permanent position: Research Scientist, NASA/Goddard Space Flight Center, Greenbelt, MD.
6. Astero Provata, Ph.D. 1992. Thesis title: “Anomalous Diffusion and Growth Due to Long-Range Correlations”. First postdoctoral position at Service de Chimie-Physique, Universite Libre de Bruxelles, Bruxelles, Belgium. Current Position: Senior Researcher, Institute of Physical Chemistry, National Center of Scientific Research “Demokritos”, Athens, Greece.
7. Jun Zhuo, Ph.D. 1993. Thesis title: “Critical Behavior in Models of Surface Reactions”. First postdoctoral position: Department of Biochemistry, University of California, Berkeley. Current position: Financial manager, AIG, New York City.
8. Eli Ben-Naim, Ph.D. 1994. Thesis title: “Kinetics Properties of Stochastic Processes”. First postdoctoral position: University of Chicago. Current position: Scientific Staff Member at Los Alamos National Laboratory.
9. Slava Ispolatov, Ph.D. 1997. Thesis title: “Coarsening Dynamics in Fluctuating Systems”. First postdoctoral position: McGill University with Martin Grant. Present position: Associate Professor of Physics, University of Santiago de Chile, Santiago, Chile.
10. Somalee Datta, Ph.D. 2000. Thesis title: “Kinetics of Filtration Processes”. Current position: Director of Bioinformatics at Gen-Probe Incorporated, San Diego, CA.
11. Wonmuk Hwang, Ph.D. 2001. Thesis title: “Statistical Models of Catalysis, Population Biology, and Filtration Kinetics”, First position: Postdoctoral Fellow at the Center for Biomedical Engineering, MIT. Current position: Assistant Professor of Biomedical Engineering, Texas A&M University.
12. Victor Spirin, Ph.D. 2001. Thesis title: “Anomalous Phase Ordering Kinetics in Ising Spin Systems”, Current position: Senior Scientist, Department of Informatics and Information Technology, Merck & Co.
13. Vishal Sood, Ph.D. 2006. Thesis title: “Interacting Particle Systems on Graphs”. Current position: Postdoctoral Fellow at the University of Lausanne, Switzerland.
14. Federico Vazquez, Ph.D. 2007. Thesis title: “The Dynamics and Ultimate Fate of Social Systems”. Current position: CONICET Tenured Research Scientist, Instituto de Física de Líquidos y Sistemas Biológicos, La Plata, Argentina.

15. Pu Chen, Ph.D. 2009. Thesis title: “Opinion Dynamics and Citation Statistics”. Current status unknown.
16. James McNerney, Ph.D. 2012; co-advised with Dr. Doyne Farmer of the Santa Fe Institute. Thesis Title: “Application of Statistical Physics to Technology Price Evolution”. Current position: Postdoctoral Fellow, Engineering Systems Division, MIT.
17. Dan Volovik, current Ph.D. 2012. Thesis Title: “Reinforcement in Opinion Dynamics”. Current position: Mathematical Analyst, Delfigo Security.
18. Jason Olejarz, Ph.D. 2013. Thesis Title: “Domain Coarsening and Interface Kinetics in the Ising Model”. Current position: Postdoctoral Fellow, Program for Evolutionary Dynamics, Harvard University.
19. Alan Gabel, Ph.D. 2014. Thesis Title: “Emergent Phenomena and Fluctuations in Cooperative Systems”. Current status: Senior Analyst, Senior Analyst, Property Product Management, Liberty Mutual Insurance Co., Boston, MA.
20. Uttam Bhat, current Ph.D. student.

Postdoctoral Fellows Supervised

1. Dani ben-Avraham, Ph.D. Bar-Ilan University 1985. Postdoctoral fellow at Boston University 1985-85. Current position: Professor of Physics, Clarkson University.
2. Francois Leyvraz, Ph.D. ETH, Zurich 1981. Postdoctoral fellow at Boston University 1984-87. Current position: Professor of Physics, UNAM, Mexico.
3. Zheming Cheng, Ph.D. University of Michigan 1987. Postdoctoral fellow at Boston University 1987-88. Following position: Postdoctoral fellow at Rutgers University; current position: unknown.
4. In-Mook Kim, Professor of Physics, Korea University. Visiting Research Scholar at Boston University 1990-91.
5. Hideki Takayasu, Ph.D. Kobe University. Postdoctoral fellow at Boston University 1991-92. Current position: Senior Researcher, Sony Computer Science Laboratories Inc., 3-14-13 Higashigotanda, Shinagawa-ku, Tokyo 141-0022, Japan.
6. Hyunggyu Park, Ph.D. University of Washington, 1987. Postdoctoral fellow at Boston University 1990-91. Current position: Professor of Physics, Korea Institute for Advanced Study, Seoul 130-012, Korea.
7. Paul L. Krapivsky, Ph.D. Moscow Institute of Physics & Technology 1990. Postdoctoral fellow at Boston University 1993-95. Current position: Research Associate Professor of Physics, Boston University.
8. Alon Drory, Ph.D. Hebrew University 1993. Postdoctoral fellow at Boston University 1993-95. Current position: unknown.
9. Laurent Frachebourg, Ph.D. University of Geneva 1994. Postdoctoral fellow at Boston University 1994-96. Current position: Teaching high school physics in Geneva.
10. Jose Mendes, Ph.D. University of Porto 1995. Postdoctoral fellow at Boston University 1995-96. Current position. Professor of Physics, University of Aveiro, Portugal.
11. Zeev Jaeger, Scientific Staff Member, Soreq Research Center, Yavne, Israel. Visiting Research Scholar at Boston University 2000-2001.
12. Mauro Mobilia, Ph.D. University of Lausanne 2002. Postdoctoral fellow at Boston University 2002-03. Current position: University Lecturer, School of Applied Mathematics, University of Leeds, Leeds, England.
13. Pablo Hurtado, Ph.D. University of Lausanne 2002. Postdoctoral fellow at Boston University 2002-03. Current position: Postdoctoral fellow, University of Granada, Spain.
14. Tibor Antal, Ph.D. University of Lausanne 2002. Postdoctoral fellow at Boston University 2003-2005. Current position: Lecturer, School of Mathematics, University of Edinburgh, Edinburgh, Scotland.

Visiting Faculty Hosted and Visiting Graduate Students Supervised

1. Professor Jose Mendes, University of Porto, Portugal; sabbatical visitor 1997-1998.
2. Professor Naoki Masuda, University of Tokyo, Japan; long-term visitor 2010 & 2011.
3. Nathael Gibert, visiting graduate student from École Normale Supérieure in Paris, France; fall semester 2009.
4. Professor Baruch Meerson, Hebrew University of Jerusalem; sabbatical visitor from February-August 2012.

Publications

1. "A Gas Mixture for Multiwire Chambers with High Proportional Gain", R. Fuzesy, L. Kaufman, V. Perez-Mendez, S. Redner and H. Steiner, *Nuclear Instruments and Methods* **100**, 267 (1972).
2. "The R-S Model for Magnetic Systems with Competing Interactions: Series Expansions and Some Rigorous Results", S. Redner and H.E. Stanley, *J. Phys. C* **10**, 4765 (1977).
3. "Helical Order and its Onset at the Lifshitz Point", S. Redner and H.E. Stanley, *Phys. Rev. B* **16**, 4901 (1977).
4. "Exact Solution of the One-Dimensional Percolation Problem with Further Neighbour Bonds", W. Klein, H.E. Stanley, S. Redner and P.J. Reynolds, *J. Phys. A* **11**, L17 (1978).
5. "Anisotropic Bond Percolation", S. Redner and H.E. Stanley, *J. Phys. A* **12**, 1267 (1979).
6. "Mean End-To-End Distance of Branched Polymers", S. Redner, *J. Phys. A* **12**, L239 (1979).
7. "Site-Bond Percolation: A Low-Density Series Study of the Uncorrelated Limit", P. Agrawal, S. Redner, P.J. Reynolds and H.E. Stanley, *J. Phys. A* **12**, 2073 (1979).
8. "Distribution Functions in the Interior of Polymer Chains", S. Redner, *J. Phys. A* **13**, 3525 (1980).
9. "On the Crossover Exponent for Anisotropic Bond Percolation", S. Redner and A. Coniglio, *Phys. Lett. A* **79**, 111 (1980).
10. *Book Chapter*: "Critical Phenomena: Past, Present and Future", H. E. Stanley, A. Coniglio, W. Klein, H. Nakanishi, S. Redner, P. J. Reynolds and G. Shlifer, *Proceedings of the International Symposium of Synergetics*, ed. H. Haken (Springer-Verlag, 1980).
11. "One Dimensional Ising Chain with Competing Interactions: Exact results and connection with other statistical models", S. Redner *J. Stat. Phys.* **25**, 15 (1981).
12. "Anisotropic Bond Percolation by Position-Space Renormalization Group", H. Nakanishi, P. J. Reynolds and S. Redner, *J. Phys. A* **14**, 855 (1981).
13. "Single-Scaling-Field Approach for an Isolated Polymer Chain", S. Redner and P. J. Reynolds, *J. Phys. A* **14**, L55 (1981).
14. "Position Space Renormalization Group for Isolated Polymer Chains", S. Redner and P. J. Reynolds, *J. Phys. A* **14**, 2679 (1981).
15. "Percolation and Conduction in a Random Resistor-Diode Network", S. Redner, *J. Phys. A* **14**, L349 (1981).
16. "Percolation Properties of a Three-Dimensional Random Resistor-Diode Network", S. Redner and A. C. Brown, *J. Phys. A* **14**, L285 (1981).
17. "A Scaling Picture of a Single Polymer in the Dense Phase", H. Nakanishi and S. Redner", *Phys. Lett. A* **88**, 67 (1982).
18. "Directed and Diode Percolation", S. Redner, *Phys. Rev. B* **25**, 3242 (1982).
19. "Size and Shape of Directed Lattice Animals", S. Redner and Z.-R. Yang, *J. Phys. A* **15**, L177 (1982).
20. "Conductivity of Random Resistor-Diode Networks", S. Redner, *Phys. Rev. B* **25**, 5646 (1982).
21. "Flory Theory for Directed Lattice Animals and Directed Percolation", S. Redner and A. Coniglio, *J. Phys. A* **15**, L273 (1982).
22. "A FORTRAN Program for Cluster Enumeration", S. Redner, *J. Stat. Phys.* **29**, 309 (1982).
23. "Conductivity in a Random Directed Diode Network near the Percolation Threshold", S. Redner and P. R. Mueller, *Phys. Rev. B* **26**, 5293 (1982).
24. "Analog Experiments and Computer Simulations for Directed Conductivity", S. Redner and J. S. Brooks, *J. Phys. A* **15**, L605 (1982).
25. "Exact Exponent Relations for Random Resistor-Diode Networks", S. Redner, *J. Phys. A* **15**, L685 (1982).
26. "Site and Bond Directed Branched Polymers for Arbitrary Dimensionality: Evidence Supporting a Relation with the Lee-Yang Edge Singularity", H. E. Stanley, S. Redner and Z.-R. Yang, *J. Phys. A* **15**, L569 (1982).
27. *Book Chapter*: "Position-Space Renormalization Group for Models of Linear Polymers, Branched Polymers and Gels", H. E. Stanley, P. J. Reynolds, S. Redner and F. Family, in *Real-Space Renormalization*, eds. T. W. Burkhardt and J. M. J. van Leeuwen (Springer-Verlag, Heidelberg, 1982).
28. "Monte Carlo Renormalization Group for Continuum Percolation with Excluded Volume Interactions", E. T. Gawlinski and S. Redner, *J. Phys. A* **16**, 1063 (1983).
29. "Break-Collapse Method for Resistor Networks and Renormalization Group Applications", C. Tsallis, A. Coniglio and S. Redner, *J. Phys. C* **16**, 4339 (1983).

30. “Critical Properties of Directed Self-Avoiding Walks”, S. Redner and I. Majid, *J. Phys. A* **16**, L307 (1983).
31. “A New Approach for Multicriticality in Directed and Diode Percolation”, C. Tsallis and S. Redner, *Phys. Rev. B* **28**, 6603 (1983).
32. “Novel Superuniversal Behavior of a Random-Walk Model”, H. E. Stanley, K. Kang, S. Redner and R. L. Blumberg, *Phys. Rev. Lett.* **51**, 1223 (1983); (E) **54**, 1209 (1985).
33. “Asymptotic Solution of Interacting Walks in One Dimension”, S. Redner and K. Kang, *Phys. Rev. Lett.* **51**, 1729 (1983); (E) **52**, 401 (1984).
34. *Book Chapter*: “Percolation and Conduction in Random Resistor-Diode Networks”, S. Redner, in *Percolation Structures and Processes*, Annals of the Israel Physical Society, Vol. 5, eds. G. Deutscher, R. Zallen, and J. Adler (A. Hilger, Bristol, 1983).
35. *Book Chapter*: “Recent Progress and Puzzles in Percolation”, S. Redner, based on an invited talk from the workshop on the Physics and Mathematics of Disordered Media, University of Minnesota, in *Lecture Notes on Mathematics 1035* (Springer-Verlag, 1983).
36. *Book Chapter*: “Directionality Effects in Percolation”, S. Redner, *ibid.*
37. “Novel Behavior of Biased Correlated Walks in One Dimension”, K. Kang and S. Redner, *J. Chem. Phys.* **80**, 2752 (1984).
38. “Asymptotic Properties of Spiral Self-Avoiding Walks”, S. Redner and L. de Arcangelis, *J. Phys. A* **17**, L203 (1984).
39. “Scaling Approach for the Kinetics of Recombination Processes”, K. Kang and S. Redner, *Phys. Rev. Lett.* **52**, 955 (1984).
40. “Kinetics of the Scavenger Reaction”, S. Redner and K. Kang, *J. Phys. A* **17**, L451 (1984).
41. “Winding Angle of Self-Avoiding Walks”, M. E. Fisher, V. Privman, and S. Redner, *J. Phys. A* **17**, L569 (1984).
42. “Universal Behavior of N -Body Decay Processes”, K. Kang, P. Meakin, J. H. Oh, and S. Redner, *J. Phys. A* **17**, L665 (1984).
43. “Unimolecular Reaction Kinetics”, S. Redner and K. Kang, *Phys. Rev. A* **30**, 3362 (1984).
44. “Conformal Invariance and Self-Avoiding Walks in Restricted Geometries”, J. L. Cardy and S. Redner, *J. Phys. A* **17**, L933 (1984).
45. “Fluctuation Effects in Smoluchowski Reaction Kinetics”, K. Kang and S. Redner, *Phys. Rev. A* **30**, 2833 (1984).
46. “Anomalous Voltage Distribution of Random Resistor Networks and a New Model for the Backbone at the Percolation Threshold”, L. de Arcangelis, S. Redner and A. Coniglio, *Phys. Rev. B* **31**, 4725 (1985).
47. “Fluctuation-Dominated Kinetics in Diffusion-Controlled Reactions”, K. Kang and S. Redner, *Phys. Rev. A* **32**, 435 (1985).
48. “A Random Fuse Model for Breaking Processes”, L. de Arcangelis, S. Redner, and H. J. Herrmann, *J. de Physique I* **46**, L585 (1985).
49. “Tests of Hyperuniversality for Self-Avoiding Walks”, V. Privman and S. Redner, *J. Phys. A* **18**, L781 (1985).
50. “Enumeration Study of Self-Avoiding Random Surfaces”, S. Redner, *J. Phys. A* **18**, L723 (1985).
51. “A Connection Between Linear and Non-Linear Resistor Networks”, L. de Arcangelis, A. Coniglio, and S. Redner, *J. Phys. A* **18**, L805 (1985).
52. *Book Chapter*: “Dynamical Processes in Random Media”, S. Redner, in *The Physics of Finely Divided Matter*, (Springer-Verlag, 1985). Proceedings from the Les Houches Winter Conference.
53. “Long-Time Crossover Effects in Coagulation Kinetics”, K. Kang, S. Redner, P. Meakin, and F. Leyvraz, *Phys. Rev. A* **33**, 1171 (1986).
54. “Hydrodynamic Dispersion in Network Models of Porous Media”, L. de Arcangelis, J. Koplik, S. Redner, and D. Wilkinson, *Phys. Rev. Lett.* **57**, 996 (1986).
55. “Kinetics of N -Species Annihilation: Mean-Field and Diffusion-Controlled Limits”, D. ben-Avraham and S. Redner, *Phys. Rev. A* **34**, 501 (1986).
56. “Comment on: A Lattice Model of Uniform Star Polymers”, S. Redner, *J. Phys. A* **20**, 2233 (1986).
57. “Non-Universality and Breakdown of Scaling in a Two-Component Coagulation Model”, F. Leyvraz and S. Redner, *Phys. Rev. Lett.* **57**, 163 (1986); (E) **57**, 3123 (1986).
58. “Multiscaling Approach in Random Resistor and Random Superconducting Networks”, L. de Arcangelis, S. Redner, and A. Coniglio, *Phys. Rev. B* **34**, 4656 (1986).

59. “Hydrodynamic Dispersion on Self-Similar Structures: The Convective Limit”, S. Redner, D. Wilkinson, and J. Koplik, *J. Phys. A* **20**, 1543 (1987).
60. “Kinetics of Cluster Eating”, S. Redner, D. ben-Avraham, and B. Kahng, *J. Phys. A* **20**, 1231 (1987).
61. “Multifractal Structure of the Incipient Infinite Cluster”, L. de Arcangelis, A. Coniglio, and S. Redner, *Phys. Rev. B* **36**, 5631 (1987).
62. “Series Enumeration Study of the Rod-to-Coil Transition of Linear Polymer Chains”, V. Privman and S. Redner, *Z. Phys. B* **67**, 129 (1987).
63. “Non-Universal Behavior and Breakdown of Scaling in Two-Species Aggregation”, F. Leyvraz and S. Redner, *Phys. Rev. A* **36**, 4033 (1987).
64. “Persistency of Two-Dimensional Self-Avoiding Walks”, S. Redner and V. Privman, *J. Phys. A* **20**, L857 (1987).
65. “Logarithmic Voltage Anomalies in Random Resistor Networks”, B. Kahng, G. G. Batrouni, and S. Redner, *J. Phys. A* **20**, L827 (1987).
66. “Transport and Dispersion in Random Networks with Percolation Disorder”, J. Koplik, S. Redner, and D. Wilkinson, *Phys. Rev. A* **37**, 2619 (1988).
67. “Conductance and Resistance Jumps in Finite-Size Random Resistor Networks”, G. G. Batrouni, B. Kahng, and S. Redner, *J. Phys. A* **21**, L23 (1988).
68. “Electrical Breakdown in a Fuse Network with Random, Continuously Distributed Breaking Strengths”, B. Kahng, G. G. Batrouni, S. Redner, L. de Arcangelis, and H. J. Herrmann, *Phys. Rev. B* **37**, 7625 (1988).
69. “Scaling Theory of Fragmentation”, Z. Cheng and S. Redner, *Phys. Rev. Lett.* **60**, 2450 (1988).
70. *Book Chapter*: “Random Multiplicative Processes and Multifractals”, S. Redner, in proceedings from the Les Houches Conference on *Universality in Condensed-Matter Physics* (Springer-Verlag, 1988).
71. “Scaling of the First-Passage Time and Survival Probability on Exact and Quasi Self-Similar Structures”, B. Kahng and S. Redner, *J. Phys. A* **22**, 887 (1989).
72. “Repulsion of Random and Self-Avoiding Walks from Excluded Points and Lines”, D. Considine and S. Redner, *J. Phys. A* **22**, 1621 (1989).
73. “Random Walk in a Random Multiplicative Environment”, D. ben-Avraham, S. Redner, and Z. Cheng, *J. Stat. Phys.* **56**, 437 (1989).
74. “Coagulation with a Steady Point Monomer Source”, Z. Cheng, S. Redner, and F. Leyvraz, *Phys. Rev. Lett.* **62**, 2321 (1989).
75. “Rupture in the ‘Bubble’ Model”, D. Sornette and S. Redner, *J. Phys. A* **22**, L619 (1989).
76. “Avalanche Dynamics in a Deposition Model with ‘Sliding’”, Z. Cheng, S. Redner, P. Meakin, and F. Family, *Phys. Rev. A* **40**, 5922 (1989).
77. “Random Multiplicative Processes: An Elementary Tutorial”, S. Redner, *Am. J. Phys.* **58**, 267–73 (1990).
78. “Comment on ‘Noise-Induced Bistability in a Monte Carlo Surface-Reaction Model’”, D. Considine, S. Redner and H. Takayasu, *Phys. Rev. Lett.* **63**, 2857 (1989).
79. *Invited Contribution*: “Superdiffusive Transport Due to Random Velocity Fields”, S. Redner, (essays in honor of B. Mandelbrot), *Physica D* **38**, 287 (1989).
80. *Book Chapter*: “Transport and Dispersion in Random Media”, S. Redner, proceedings from the SIAM Conference on *Random Media and Composites* eds. R. V. Kohn and G. W. Milton, (SIAM, Philadelphia, 1989).
81. “Kinetics of Fragmentation”, Z. Cheng and S. Redner, *J. Phys. A* **23**, 1233 (1990).
82. “Finite-Size Poisoning in Heterogeneous Catalysis”, D. ben-Avraham, S. Redner, D. Considine, and P. Meakin, *J. Phys. A* **23**, L613 (1990).
83. “Superdiffusion in Random Velocity Fields”, J.-P. Bouchaud, A. Georges, J. Koplik, A. Provata, and S. Redner, *Phys. Rev. Lett.* **64**, 2503 (1990).
84. “Saturation Transition in a Monomer-Monomer Model of Heterogeneous Catalysis”, D. ben-Avraham, D. Considine, P. Meakin, S. Redner and H. Takayasu, *J. Phys. A* **23**, 4297 (1990).
85. “A Non-Equilibrium Tricritical Point in the Monomer-Dimer Catalysis Model”, D. Considine, H. Takayasu and S. Redner, *J. Phys. A* **23**, L1181 (1990).
86. “Nearest-Neighbor Distances of Diffusing Particles From a Single Trap”, S. Redner and D. ben-Avraham, *J. Phys. A* **23**, L1169 (1990).
87. *Book Chapter*: “Statistical Theory of Fragmentation”, S. Redner, *Proceedings of the NATO ASI on ‘Disorder and Fracture’*, ed. J.-C. Charmet (Plenum, 1990).

88. *Book Chapter*: “Fragmentation”, S. Redner, in “*Statistical Models for the Fracture of Disordered Media*”, eds. H. J. Herrmann and S. Roux (Plenum, 1990).
89. *Invited Symposium Contribution*: “Superdiffusion in Random Velocity Fields”, S. Redner, in Proceedings of the Bar-Ilan Conference in Condensed-Matter Physics, *Physica A* **168**, 551 (1990).
90. *Conference Proceeding*: “Kinetics of Lattice Models of Catalysis”, S. Redner, in Proceedings of the Annual Meeting of the Materials Research Society (1990).
91. “Spatial Organization in the Two-Species Annihilation Reaction $A + B \rightarrow 0$ ”, F. Leyvraz and S. Redner, *Phys. Rev. Lett.* **66**, 2168 (1991).
92. “Interfacial Growth with Competing Surface Currents”, H. Park, A. Provata, and S. Redner, *J. Phys. A* **24**, L1391 (1991).
93. “Spatial Organization in Two-Species Annihilation”, S. Redner and F. Leyvraz, *J. Stat. Phys.* **65**, 1043 (1991).
94. “Superballistic Motion in a ‘Random Walk’ Shear Flow”, D. ben-Avraham, F. Leyvraz, and S. Redner, *Phys. Rev. A* **45**, 2315 (1992).
95. “An Extension of the Two-Dimensional Self-Avoiding Walk Series on the Square Lattice”, B. Masand, U. Wilensky, J. P. Massar, and S. Redner, *J. Phys. A* **25**, L365 (1992).
96. “Bimodal Diffusion in Power-Law Shear Flows”, E. Ben-Naim, S. Redner, and D. ben-Avraham, *Phys. Rev. A* **45**, 7207 (1992).
97. “Inhomogeneous Two-Species Annihilation in the Steady State”, E. Ben-Naim and S. Redner, *J. Phys. A* **25**, L575 (1992).
98. “Spatial Structure in Diffusion-Limited Two-Species Annihilation”, F. Leyvraz and S. Redner, *Phys. Rev. A* **46**, 3132 (1992).
99. “Dynamics and Spatial Organization in Two-Species Competition”, J. Zhuo, G. Murthy, and S. Redner, *J. Phys. A* **25**, 5889 (1992).
100. “Excluded Volume Effects in Heterogeneous Catalysis: Reactions between ‘Dollars’ and ‘Dimes’”, H. Park, J. Köhler, I.-M. Kim, D. ben-Avraham, and S. Redner, *J. Phys. A* **26**, 2071 (1993).
101. “Exact Enumeration of Self-Avoiding Walks on Lattices with Random Site Energies”, I. Smaller, J. Machta and S. Redner, *Phys. Rev. E* **47**, 262 (1993)
102. “Partial Absorption and ‘Virtual’ Traps”, E. Ben-Naim, S. Redner, and G. H. Weiss, *J. Stat. Phys.* **71**, 75 (1993).
103. “Critical Behavior of an Interacting Catalysis Model”, J. Zhuo, S. Redner, and H. Park, *J. Phys. A* **26**, 4197 (1993).
104. Comment on “Critical Exponents for the Irreversible Surface Reaction $A+B \rightarrow AB$ with B Desorption on Homogeneous and Fractal Media”, J. Zhuo and S. Redner, *Phys. Rev. Lett.* **70**, 2822 (1993).
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254. “Emergence of Clustering in an Acquaintance Model without Homophily”, U. Bhat, P. L. Krapivsky, and S. Redner, *J. Stat. Mech.* P11035 (2014); arXiv:1408.6596.
255. “Gradual Diffusive Capture: Slow Death by Many Mosquito Bites”, O. Bénichou and S. Redner, *J. Stat. Mech.* P11019 (2014); arXiv:1409.2907.
256. “Mortality, Redundancy, and Diversity in Stochastic Search” B. Meerson and S. Redner, *Phys. Rev. Lett.* **114**, 198101 (2015); arXiv:1502.06211.

257. “Safe Leads and Lead Changes in Competitive Team Sports”, A. Clauset, M. Kogan, and S. Redner, *Phys. Rev. E* **91**, 062815 (2015); arXiv:1503.03509.
258. “Optimal Strategy to Capture a Skittish Lamb Wandering Near a Precipice”, M. Chupeau, O. Bénichou, and S. Redner, *J. Stat. Mech.* P06026 (2015); arXiv:1504.05107.
259. “Intermediate-Level Crossings of a First-Passage Path”, U. Bhat and S. Redner, *J. Stat. Mech.* P06035 (2015); arXiv:1505.01184.
260. “Influence of Luddism on Innovation Diffusion” A. Mellor, M. Mobilia, S. Redner, A. M. Rucklidge, and J. Ward, *Phys. Rev. E* **92**, 012806 (2015); arXiv:1505.020202.
261. “Universality Classes of Foraging with Resource Renewal”, M. Chupeau, O. Bénichou, and S. Redner, arXiv:1511.01347.

Seminars, Colloquia, and Invited Talks

1. Bell Labs, March 1977. Title: High temperature series investigations of the Lifshitz point.
2. Contributed talk, Semi-annual Statistical Mechanics Meeting, Yeshiva University, May 1977. Title: Helical order and its onset at the Lifshitz point.
3. Solid-State Seminar, University of Toronto, January 1978. Title: Percolation as a model of disordered systems.
4. Contributed talk, Annual APS Meeting, March 1978. Title: High temperature series for models of helical ordering.
5. Invited talk, Annual Meeting of the Canadian Association of Physicists, June 1978. Title: Recent progress in percolation theory.
6. Department Colloquium, Boston University, April 1979. Title: Helical order and the Lifshitz point.
7. Contributed talk, STATPHYS 14, Edmonton, Alberta, Canada, Aug. 1980. Title: Two-dimensional polymers by large-cell renormalization group.
8. Solid State Seminar Series, Department of Physics, Boston University, Oct. 1980. Title: Percolation and Conduction in Random-Resistor Diode Networks.
9. Seminar, Polymer Science and Engineering Department, University of Massachusetts, Amherst MA, Oct. 5, 1981. Title: Percolation and Conduction in Directed Systems.
10. Seminar at Schlumberger-Doll Research Center, Ridgefield CT, Oct. 13, 1981. Title: Percolation in Random-Resistor Diode Networks.
11. Talk at Inaugural Physics Alumni Conference at Boston University, Dec 5, 1981. Title: Percolation and Conduction in Random Systems.
12. Banquet speaker for Hamilton-Wenham High School, March 6, 1982. Title: Scaling: A New Symmetry Principle in Physics.
13. Solid State Seminar Series at the University of Toronto, April 12, 1982. Title: Conductivity of Random Resistor-Diode Networks.
14. Seminar at Schlumberger-Doll Research Center, Ridgefield Conn. Sept. 21, 1982. Title: Transport in directed random networks.
15. Mathematics Department Seminar, Boston University, Oct. 6, 1982. Title: Geometrical structure of random resistor-diode networks or, Stuck forever in in random Manhattan?
16. Theoretical Chemistry Seminar, M.I.T., Oct. 20, 1982. Title Novel transport and anisotropic critical phenomena in directed percolation.
17. Physics Department Colloquium, University of Alberta, Edmonton, Alberta, Canada, Nov. 18, 1982. Title: Lost forever in random Manhattan?
18. Theoretical Physics Seminar, University of Alberta, Nov. 19, 1982. Title: Novel critical behavior and transport in directed percolation.
19. Condensed Matter Theory Seminar, Northeastern University, Boston MA, Dec 2, 1982. Title: New results in directed percolation.
20. Combined Polymer Science and Engineering, Chemistry, and Physics seminar, University of Massachusetts, Amherst, MA, Dec. 29, 1982. Title: Directed Percolation:— The effect of bias on polymer conformation, critical phenomena, and transport problems.
21. Theoretical Solid State Seminar, University of British Columbia, Vancouver B. C., Canada. Feb. 10, 1983. Title: Percolation theory of composite media.

22. Condensed Matter Theory Seminar, Simon Fraser University, Burnaby B. C., Canada, Feb. 11, 1983. Title: Novel critical behavior and transport in directed networks.
23. Invited speaker for Mathematics and Physics of Disordered Media: Percolation, Random Walk, Modeling and Simulation, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis MN, Feb. 14–19, 1983. Title: Recent progress and current puzzles in percolation.
24. [Same forum as above]. Title: Directionality effects in percolation.
25. Condensed-Matter Theory Seminar Series, Harvard University, Feb. 24, 1983 Title: Lost forever in random Manhattan?
26. Seminar, Center for Polymer Studies, March 4, 1983. Title: Exact and "wrong" results for restricted random walks.
27. Seminar, Simon Fraser University, Burnaby B. C. Canada, Aug. 11, 1983. Title: Correlated diffusion: New results for a classical problem.
28. Condensed Matter Theory Seminar, University of British Columbia, Vancouver B. C. Canada, Aug. 12, 1983. Title: Correlated diffusion: New results for a classical problem.
29. Physics Department Colloquium, University of Rhode Island, Kingston RI, Nov. 4, 1983. Title: Kinetics of Diffusion Controlled Reactions.
30. Physical Sciences Colloquium, IBM Research Center, Yorktown Heights NY, Nov. 8, 1983. Title: Kinetics of Diffusion Controlled Reactions.
31. Physics Department Colloquium, St. Francis Xavier University, Antigonish, Nova Scotia, Canada, Feb. 3, 1984. Title: Kinetics of Diffusion-Controlled Reactions.
32. Physics Department Colloquium, Boston University, Boston, MA, Feb. 29, 1984. Title: Kinetics of Diffusion-Controlled Reactions.
33. Colloquium in Applied Analysis and Dynamical Systems, Department of Mathematics, Boston University, Boston, MA, March 26, 1984. Title: Interacting Brownian Particle Systems.
34. Solid State Seminar, McGill University, Montreal P. Q., Canada, April 11, 1984. Title: Kinetics of Diffusion-Controlled Reactions.
35. Statistical Mechanics Seminar, University of Guelph, Guelph, Ontario, May 7, 1984. Title: Kinetics of Diffusion-Controlled Reactions.
36. Seminar, Schlumberger-Doll Research, Ridgefield CT, Sept 12, 1984. Title: Fluctuation-Dominated Behavior in Diffusion-Controlled Reactions.
37. Program Review, Schlumberger-Doll Research, Ridgefield CT, Jan. 9, 1985. Title: Hydrodynamic Dispersion.
38. Departmental Colloquium, Tufts University, Medford MA, Feb. 26, 1985. Title: Kinetics of Diffusion-Controlled Reactions.
39. Invited talk, Les Houches Winter School on the Physics of Finely Divided Matter, Les Houches, France, March 25 – April 5, 1985. Title: Dynamical Processes in Random Media.
40. Solid State Seminar, University of Massachusetts, Amherst MA, April 19, 1985. Title: Fluctuation Effects in Chemical Kinetics.
41. Departmental Colloquium, Temple University, Philadelphia PA, April 22, 1985. Title: Kinetics of Diffusion-Controlled Reactions.
42. Theoretical Chemistry Seminar, M.I.T., Cambridge MA, May 1, 1985. Title: Fluctuation Effects in Chemical Kinetics.
43. Solid-State Seminar, Army Materials and Mechanics Research Center, Watertown MA, May 7, 1985. Title: Breaking and Breakdown of Inhomogeneous Media.
44. Theoretical Chemistry Seminar, Harvard University, Cambridge, MA, Jan 24, 1986. Title: Kinetics of Chemical Reactions.
45. Condensed-Matter Theory Seminar, University of Sherbrooke, Sherbrooke, P.Q., Canada, Feb. 6, 1986. Title: Kinetics of Chemical Reactions.
46. Condensed-Matter Theory Seminar, Brandeis University, Waltham, MA, Feb. 19, 1986. Title: Kinetics of Chemical Reactions.
47. Physics Department Colloquium, Clarkson University, Potsdam N.Y., March 11, 1986. Title: Universality, Scaling, and Exponents in Reacting Systems.
48. Condensed-Matter Theory Seminar, Exxon Research Laboratories, Annandale N.J., March 18, 1986. Title: Hydrodynamic dispersion in randomly-porous media.
49. Physics Department Colloquium, Carnegie-Mellon University, Pittsburgh PA, April 14, 1986. Title: Universality, Scaling, and Exponents in Chemically Reacting Systems.

50. Invited Talk, Semi-Annual Statistical Mechanics Meeting, Rutgers University, New Brunswick, N.J., Dec 19, 1986. Title: Kinetics of Chemically Reacting Systems.
51. Invited Talk, March Meeting of the American Physical Society, New York, N.Y., March 16–20, 1987. Title: Transport and Dispersion in Randomly-Porous Media.
52. Seminar, Institute for Theoretical Physics, University of California, Santa Barbara, CA, May 12, 1987. Title: Universality, Scaling, and Exponents in Chemically Reacting Systems.
53. Seminar, Institute for Theoretical Physics, University of California, Santa Barbara, CA, May 21, 1987. Title: First Passage in Hierarchical Structures.
54. Theoretical Chemistry Seminar, M. I. T., Cambridge, MA, Dec 9, 1987. Title: Transport and Dispersion in Random Media.
55. Invited Speaker, Les Houches Winter School on Universalities in Condensed-Matter Physics Les Houches, France, March 15 – 24 1988. Title: Random Multiplicative Processes and Multifractals
56. Invited Speaker, Workshop on Measurement of Properties in Bulk Materials (sponsored by the U.S. Army Research Office at the Natick Research, Development and Engineering Center, Natick, MA, April 5–6, 1988). Title: Hydrodynamic Dispersion
57. Condensed-Matter Theory Seminar, Yale University, New Haven, CT, April 13, 1988. Title: Diffusion and Dispersion in Porous Networks.
58. Invited Speaker, Summer Institute on Theoretical Physics (sponsored by the Canadian Association of Physicists at Queen’s University, Kingston, Ontario, July 4–15, 1988). Title: Multifractals.
59. Invited speaker, Gordon Conference on Fractals, Tilton Academy, Tilton, N. H., Aug. 8–12, 1988. Title: Random Multiplicative Processes and Multifractals.
60. Invited speaker, SIAM Workshop on Random Media and Composites, Dec. 7–10, 1988. Title: Transport and Dispersion in Inhomogeneous Media.
61. Condensed Matter Theory Seminar, Michigan State University, East Lansing MI, Feb. 27, 1989. Title: Universality, Scaling and Exponents in Aggregating and Fragmenting Systems.
62. Invited Talk, March Meeting of the American Physical Society, St. Louis, MO, March 20–24, 1989. Title: Scaling Theories of Fragmentation.
63. Condensed Matter Theory Seminar, McMaster University, Hamilton, Canada, April 19, 1989. Title: Superdiffusive Transport in the Presence of Random Velocity Fields.
64. Condensed Matter Theory Seminar, University of Toronto, Toronto, Canada, April 24, 1989. Title: Universality, Scaling and Exponents in Aggregation and Fragmentation.
65. Invited Talk, NATO Advanced Scientific Institute, “Heterogeneous Materials: Interaction between disorder and behavior” May 29 – June 7, 1989. Title: Statistical Theory of Fragmentation.
66. Departmental Colloquium, State University of New York, Albany, N.Y., October 13, 1989. Title: Scaling, Segregation and Selective “Poisoning” in Particle-Antiparticle Reactions.
67. Condensed-Matter Seminar, Clarkson University, Potsdam, N.Y., November 3, 1989. Title: Superdiffusive Transport Driven by Random Velocity Fields.
68. Departmental Colloquium, West Virginia University, Morgantown, WV, November 30, 1989. Title: Scaling, Segregation and Selective “Poisoning” in Particle-Antiparticle Reactions.
69. Condensed-Matter Seminar, Weizmann Institute of Science, Rehovot, Israel, January 3, 1990. Title: Kinetics of Heterogeneous Catalysis: Random Walks to “Poisoning”.
70. Condensed-Matter Seminar, Tel-Aviv University, Tel-Aviv Israel, January 4, 1990. Title: Kinetics of Heterogeneous Catalysis: Random Walks to “Poisoning”.
71. Condensed-Matter Seminar, The Technion, Haifa, Israel, January 7, 1990. Title: Kinetics of Heterogeneous Catalysis: Random Walks to “Poisoning”.
72. Contributed Talk, Bar-Ilan Conference on New Directions in Condensed-Matter Physics, January 8–11, 1990. Title: Superdiffusive transport.
73. Condensed-Matter Seminar, Laboratorio de Cuernavaca, UNAM, May 17, 1990. Title: Kinetics of Heterogeneous Catalysis: Random Walks to “Poisoning”.
74. Invited Talk, Cornell University Mathematical Sciences Institute Workshop on “Percolation Models of Material Failure” May 31 – June 3, 1990. Title: Burning and Breaking in Random and Deterministic Structures.
75. Departmental Colloquium, Purdue University, October 25, 1990 Title: Universality, Scaling, and Exponents in Reacting Systems: The Theory of Murderous Random Walks.
76. Invited Speaker, Materials Research Society Fall Meeting, Boston MA, Nov. 26 – Dec. 1, 1990. Title: Kinetics of Lattice Models of Catalysis.

77. Departmental Seminar, Princeton University, December 3, 1990 Title: Fluctuations and Recurrence in Diffusion-Controlled Reactions.
78. Theoretical Seminar, Courant Institute, New York University, February 15, 1991. Title: Fluctuations and Recurrence in Diffusion-Controlled Reactions.
79. Condensed-Matter Theory Seminar, McGill University, February 27, 1991. Title: Spatial Organization in Diffusion-Limited Reactions.
80. Invited Speaker, NIH meeting, Bethesda MD, March 25–27, 1991. Title: Spatial Organization in Diffusion-Limited Reactions.
81. Theoretical Chemistry Seminar, M.I.T., April 17, 1991. Title: Spatial Organization in Diffusion-Limited Reactions.
82. Condensed-Matter Theory Seminar, University of Massachusetts, Amherst MA, April 25, 1991. Title: Spatial Organization in Diffusion-Limited Reactions.
83. Condensed-Matter Theory Seminar, Northeastern University, May 8, 1991. Title: Spatial Organization in Diffusion-Limited Reactions.
84. Contributed Talk, Materials Research Society Fall Meeting, Boston MA, Dec. 2–6, 1991. Title: Superdiffusion in Random and Deterministic Shear Flows.
85. Departmental Colloquium, Worcester Polytechnical Institute, January 27, 1992. Title: Spatial Organization in Diffusion-Limited Reactions.
86. Condensed-Matter Theory Seminar, Aberdeen Proving Grounds May 20, 1992. Title: Kinetics of Heterogeneous Reaction Processes.
87. Theoretical Seminar, Columbia University Chemical Engineering Department, November 10, 1992. Title: Kinetics of Heterogeneous Reaction Processes.
88. Condensed-Matter Seminar, Clarkson University, Potsdam, N.Y., March 30, 1993. Title: ‘Weird’ Reaction Kinetics.
89. Condensed-Matter Seminar, Cornell University, Ithaca, N.Y., October 14, 1993. Title: ‘Weird’ Reaction Kinetics.
90. Invited Talk, International Colloquium on Modern Quantum Field Theory II, Tata Institute of Fundamental Research, Bombay, India, January 7, 1994. Title: Kinetics of Heterogeneous Reactions.
91. Invited Talk for Workshop on Mesoscopic Modeling of Non-equilibrium Systems, May 23–27, 1994, Mathematical Sciences Research Institute, University of California, Berkeley CA, May 1994. Title: Kinetics of Heterogeneous Reactions.
92. Fluid Mechanics Seminar, M. I. T., October 18, 1994. Title: Schizophrenic Stochastic Transport in Heterogeneous Flows.
93. Theoretical Seminar, Levich Institute, C.U.N.Y., New York, N. Y., October 25, 1994. Title: Kinetics of Heterogeneous Reactions.
94. Departmental Colloquium, Boston College, December 8, 1994. Title: Kinetics of Diffusion-Controlled Reactions.
95. Departmental Colloquium, Boston University Department of Mathematics, February 22, 1995. Title: Life and Death at the Edge: Dodging Deadly Diffusers and Bypassing Ballistic Bullets.
96. Condensed-Matter Theory Seminar, IBM Research Center, Yorktown Heights NY, May 10, 1995. Title: Life and Death at the Edge of a Windy Cliff.
97. Condensed-Matter Theory Seminar, Natick Army Research Laboratories, August 14, 1995. Title: Kinetics of Heterogeneous Reactions.
98. Invited Talk, Materials Research Society Fall Meeting, Boston MA, Nov. 27 – Dec. 1, 1995. Title: Scaling Theories of Diffusion-Limited Bimolecular Reactions.
99. Theoretical Seminar, Center for Non-Linear Science, Los Alamos National Laboratory, June 13, 1996. Title: Coarsening Kinetics in Competitive Reactions.
100. Theoretical Chemistry Seminar, Boston University Chemistry Department May 7, 1997. Title: Kinetics of Heterogeneous Reactions.
101. Condensed-Matter Theory Seminar, Institute of Theoretical Physics, University of Warsaw, May 28, 1997. Title: Kinetics of Heterogeneous Reactions.
102. Center for Biodynamics Seminar, Boston University, October 16, 1997. Title: Aggregation Kinetics: Overview and Applications to War and Wealth.
103. Millipore Corporation, Bedford, MA, October 20, 1997. Title: A Gradient Percolation Picture for Filtration Kinetics.

104. Invited Talk, Fifth Chemical Congress of North America, Cancun Mexico, November 12–15, 1997. Title: Anomalous Reaction Kinetics under Heterogeneous Internal and External Conditions.
105. Condensed-Matter Theory Seminar, Northeastern University, January 21, 1998. Title: Gradient Clogging in Depth Filtration.
106. Invited Talk, Workshop on Non-Equilibrium Processes, Los Alamos National Laboratory, April 20–22, 1998. Title: Gradient Clogging in Depth Filtration.
107. Mathematical Modeling Seminar, Natick Army Research Laboratories, April 24, 1998. Title: Gradient Clogging in Depth Filtration.
108. Invited Talk, Seventh International Conference on the Discrete Simulation of Fluids, University of Oxford, July 14–18, 1998. Title: Gradient and Percolative Clogging in Depth Filtration.
109. Departmental Colloquium, Clark University, Worcester, MA, September 10, 1998. Title: Aggregation Kinetics in Gelation, Traffic, Wealth, and other Everyday Phenomena.
110. Condensed-Matter Theory Seminar, University of Massachusetts, Amherst, MA, October 1, 1998. Title: Gradient Clogging in Depth Filtration.
111. Condensed-Matter Theory Seminar, UNAM, Cuernavaca, Mexico, November 12, 1998. Title: The Geometry and Kinetics of Clogging Processes.
112. Condensed-Matter Theory Seminar, Johns Hopkins University, Baltimore, MD, November 18, 1998. Title: Gradient Clogging in Depth Filtration.
113. Invited Talk, Semi-Annual Statistical Mechanics Meeting, Rutgers University, New Brunswick, N.J., December 16, 1998. Title: Capture of the Lambs: Diffusing Predators Seeking a Diffusing Prey.
114. Invited Talk, Workshop of Flexible Barriers, Natick Army Research Laboratories, April 15, 1999, Title: Filtration: Clogging and Dynamics.
115. Condensed-Matter Theory Seminar, Dartmouth University, Hanover, NH, May 27, 1999. Title: Gradient Clogging in Depth Filtration.
116. Invited Speaker, Workshop on Non-Equilibrium Dynamic Systems, University of Porto, Porto Portugal, June 6–11, 1999. Title: Kinetics of Clogging Processes.
117. Invited Speaker, Workshop on the Dynamics of Non-Equilibrium Systems, International Center for Theoretical Physics, Trieste, Italy, August 16–27, 1999. Title: Kinetics of Clogging Processes.
118. Departmental Colloquium, Virginia Polytechnical Institute, Blacksburg VA, December 2, 1999. Title: Aggregation Kinetics in Gelation, Traffic, Wealth, and other Everyday Phenomena.
119. Departmental Colloquium, University of Virginia, Charlottesville VA, December 3, 1999. Title: Aggregation Kinetics in Gelation, Traffic, Wealth, and other Everyday Phenomena.
120. Invited Speaker, Fifth Claude Itzykson Meeting: Dynamics of Nonequilibrium Systems. CEN, Saclay, France, June 20–23, 2000. Title: Fate of Finite Ferromagnets.
121. Departmental Colloquium, Brandeis University, Waltham, MA, September 19, 2000. Title: Aggregation Kinetics in Gelation, Traffic, Wealth, and other Everyday Phenomena.
122. Center for Biodynamics Seminar, Boston University, March 22, 2001. Title: On the Growth of Popularity-Driven Webs.
123. Invited Talk, New England Complex Fluids Workshop, March 23, 2001. Title: How Does a Filter Clog?
124. Condensed-Matter Seminar University of Massachusetts, Boston, May 2, 2001: Title: The Statistical Mechanics of Popularity.
125. Oral Presentation, TRI-Princeton Conference on Wetting and Nanocapillarity, June 25–27, 2001. Title: Clogging Time of a Filter.
126. Invited Talk, Statphys 21, Cancun Mexico, July 15–21, 2001. Title: Aggregation Kinetics of Popularity.
127. Departmental Colloquium, Cornell University, Ithaca NY, October 15, 2001. Title: The Statistical Mechanics of Popularity.
128. Invited Talk, Army Research Office Workshop on Permselective Membranes, Aberdeen, Md., November 14–15, 2001. Title: Dynamics of Barrier Penetration.
129. Invited Talk, Materials Research Society Fall Meeting, Boston MA, November 2001. Title: How Long Does It Take For A Filter To Clog?
130. Departmental Seminar, Chalmers University, Gothenburg, Sweden, December 18, 2001. Title: The Statistical Mechanics of Popularity.
131. Physical Chemistry Seminar, Seoul National University, Seoul, Korea, February 15, 2002. Title: Coarsening Kinetics and Opinion Dynamics.

132. Invited Talk, International Conference on “Scaling and Phase Transitions in Complex Networks and Nonequilibrium Systems”. Sponsored by the Asia Pacific Center for Theoretical Physics, Pohang, Korea, February 18–21, 2002. Title: Growing Networks.
133. Departmental Colloquium, Johns Hopkins University, Baltimore, Md., April 18, 2002. Title: The Statistical Mechanics of Popularity.
134. “Squishy Physics” Seminar Series, Harvard University, Cambridge, MA. May 1, 2002. Title: Kinetics of Clogging.
135. Invited Talk: Michigan Center for Theoretical Physics International Conference on “Fronts, Fluctuations, and Growth”, University of Michigan, Ann Arbor, MI, May 19–26, 2002. Title: Growing Networks.
136. Invited Talk, XVIII SITGES Conference “Statistical Mechanics of Complex Networks”, Sitges, Spain, June 10–14, 2002. Title: Rate Equation Approach for Growing Networks.
137. Departmental Colloquium, Washington University, St. Louis, Mo. November 13, 2002. Title: The Statistical Mechanics of Popularity.
138. Invited Talk, Center of BioDynamics Symposium, Boston University, December 6, 2002. Title: Demystifying Complex Networks by the Rate Equations.
139. Invited Talk, at “Randomness and Complexity”, a conference in honor of Shlomo Havlin’s 60th birthday, Eilat Israel, January 7, 2003. Title: Unity and Discord in Compromise Dynamics.
140. Invited Talk, 23rd International Annual Conference of the CNLS at Los Alamos National Laboratory, May 11–17, 2003. Title: Extremal Properties of Growing Networks.
141. Condensed-Matter Theory Seminar, Arizona State University, Tempe, AZ, October 22, 2003. Title: Coarsening, Slow Dynamics, and Freezing in the Simplest Spin Systems.
142. Departmental Colloquium, Arizona State University, Tempe, AZ, October 23, 2003. Title: The Statistical Mechanics of Popularity.
143. Invited Talk, at “Building Energy 2004”, Sponsored by the Northeast Sustainable Energy Association, March 12, 2004. Title: Learning to Connect: A New Science of Networks.
144. Invited Talk, March Meeting of the American Physical Society, Montreal, Canada March 22–26, 2004. Title: Kinetic Approach to Growing Networks.
145. Colloquium, CNLS, Los Alamos National Laboratory, October 18, 2004. Title: Statistical Physics of Popularity-Driven Networks.
146. Seminar, School of Information Sciences, Indiana University, November 1, 2004. Title: Statistical Physics of Popularity-Driven Networks.
147. Seminar, Santa Fe Institute, Santa Fe, NM, December 3, 2004. Title: Statistical Physics of Popularity-Driven Networks.
148. Departmental Colloquium, University of Arizona, Tucson, AZ, January 14, 2005. Title: The Statistical Mechanics of Popularity-Driven Networks.
149. Seminar, Santa Fe Institute, Santa Fe, NM, February 1, 2005. Title: Consensus and Contention in Models of Opinion Dynamics.
150. Invited Talk Series at the 8th Granada Seminar on Computational and Statistical Physics, February 7–10, 2005. Titles: 1. The voter model. 2. Consensus and Contention in Models of Opinion Dynamics. 3. The zero-temperature kinetic Ising model.
151. Theory Seminar, Bar-Ilan University, Ramat Gan, Israel, February 17, 2005. Title: Statistical Physics of Popularity.
152. Invited talk at the Santa Fe Institute Conference “Stochasticity and Nonlinearity on Three Continents”, Santa Fe, NM, March 30 – April 1, 2005. Title: Dynamics of Social Diversity.
153. Departmental Colloquium, University of New Mexico, Albuquerque, NM, April 8, 2005. Title: The Statistical Mechanics of Popularity-Driven Networks.
154. Departmental Colloquium, Cognitive Science Department, University of California, San Diego, April 18, 2005. Title: The Statistical Mechanics of Popularity-Driven Networks.
155. Invited talk at the CNLS conference “Collectives Formation and Specialization in Biological and Social Systems”, Santa Fe, NM, April 20–22, 2005. Title: Dynamics of Social Diversity.
156. Physics Colloquium, Fermilab, September 28, 2005. Title: The Statistical Physics of Citations.
157. Physics Colloquium, University of Chicago, September 29, 2005. Title: The Statistical Physics of Citations.
158. Physics Colloquium, Northwestern University, September 30, 2005. Title: The Statistical Physics of Citations.

159. Physics Colloquium, Clarkson University, October 28, 2005. Title: The Statistical Physics of Citations.
160. Seminar, New England Complex Systems Institute, November 18, 2005. Title: The Statistical Physics of Citations.
161. Invited talk at the International Seminar and Workshop “Dynamics on Complex Networks and Applications”, Max Planck Institute, Dresden, Germany, February 13–17, 2006. Title: Social Balance on Networks: The Dynamics of Friendship and Hatred.
162. Invited talk at 2006 APS March Meeting, Baltimore, MD, March 16, 2006. Title: Social Balance on Networks: the Dynamics of Friendship and Hatred.
163. Physics Colloquium, Boston University, March 21, 2006. Title: The Statistical Physics of Citations.
164. Seminar, British Antarctic Survey, Cambridge, England, June 1, 2006. Title: On the Role of Global Warming on Record Temperature Statistics.
165. Seminar, Newton Institute, Cambridge University, Cambridge, England, June 6, 2006. Title: Social Balance on Networks: the Dynamics of Friendship and Hatred.
166. Seminar, Newton Institute, Cambridge University, Cambridge, England, June 9, 2006. Title: The Statistics of Scientific Citations.
167. Colloquium, Physics Department, Ludwig Maximilian University, Munich, Germany, June 13, 2006. Title: The Statistical Physics of Citations.
168. Seminar, Schlumberger-Cambridge Research, Cambridge, England, June 22, 2006. Title: The Kinetics of Filtration and Clogging.
169. Invited talk, Workshop on First-Passage and Extreme Value Problems in Random Processes, Newton Institute, Cambridge, England, June 30, 2006. Title: On the Role of Global Warming on Record Temperature Statistics.
170. Invited talk, Crime Hot Spots: Behavioral, Computational and Mathematical Models, Institute of Pure and Applied Mathematics, UCLA, January 29 – February 2, 2007. Title: Social Balance on Networks: the Dynamics of Friendship and Hatred.
171. Condensed-Matter Theory Seminar, University of Massachusetts, Amherst, MA, March 15, 2007. Title: Dynamics of Microtubule Growth and Catastrophe.
172. Biophysics Seminar, Boston University, Boston, MA, April 27, 2007. Title: Dynamics of Microtubule Growth and Catastrophe.
173. Invited talk, Random and Dynamic Graphs and Networks, Institute of Pure and Applied Mathematics, UCLA, May 7–11, 2007. Title: On the Structure of Growing Networks.
174. Invited talk, International Conference on “Statistical Physics of Social Dynamics: Opinions, Semiotic Dynamics, Language” Erice, Sicily, July 16–20 2007. Title: The Dynamics of Consensus and Clash
175. Invited Speaker, SFI conference “Dynamics of Flows on Networks”, Seattle, WA, July 30, 2007. Title: Structure and Dynamics of Complex Networks
176. Physics Colloquium, Emory University, Atlanta, GA, September 7, 2007. Title: The Statistical Physics of Citations.
177. Public Lecture, Interdisciplinary Center for Complex Systems at Bonn University, January 8, 2008. Title: The Dynamics of Consensus and Clash.
178. Condensed-Matter Theory Seminar, Institut für Festkörperforschung Forschungszentrum, Jülich, Germany, January 9, 2008. Title: Dynamics of Microtubule Growth and Catastrophe.
179. Invited Speaker, Conference on Disorder, Fluctuations and Universality in honor of Thomas Nattermann’s 60th birthday, University of Cologne, Cologne, Germany, January 11, 2008. Title: The Statistical Physics of Citations.
180. Condensed-Matter Theory Seminar, CIRCS (Center for Interdisciplinary Research on Complex Systems), Northeastern University, Boston, MA, January 22, 2008. Title: Does Intelligence Help or Hinder in Achieving Consensus?
181. Condensed-Matter Theory Seminar, IRSAMC (Institute de Recherche sur les Systèmes Atomiques et Moléculaires Complexes), Université Paul Sabatier, Toulouse, France, February 19, 2008. Title: Dynamics of Microtubule Growth and Catastrophe.
182. Colloquium, IRSAMC, Université Paul Sabatier, Toulouse, France, February 25, 2008. Title: The Statistical Physics of Citations.
183. Seminar, CNLS, Los Alamos National Laboratory, March 25, 2008. Title: Understanding Baseball Team Standings and Streaks.
184. Seminar, Santa Fe Institute, Santa Fe, New Mexico, March 31, 2008. Title: Understanding Baseball Team Standings and Streaks.

185. Colloquium, Department of Physics, University of Colorado, Boulder, Colorado, April 2, 2008. Title: The Statistical Physics of Citations.
186. Condensed-Matter Theory Seminar, Department of Physics, University of Colorado, Boulder, Colorado, April 3, 2008. Title: Dynamics of Microtubule Growth and Catastrophe.
187. Invited Speaker, International Workshop on “Sociophysics: Status and Perspectives”, ISI Foundation, Turin, Italy, May 26–29, 2008. Title: Dynamics of the Voter Model.
188. Invited Speaker, ENRAGE (European Network on RANdom GEometry) Topical School “On growth and shapes”, Institute Henri Poincaré, Paris France. A 4-hour minicourse entitled “Dynamics of Evolving Graphs”, June 2–6, 2008.
189. Invited Speaker, Thirteenth Claude Itzykson Meeting: “Puzzles of Growth”. CEA, Saclay, Gif-sur-Yvette, France, June 9–11, 2008. Title: Cutting Corners.
190. Theory seminar, Science & Finance/Capital Fund Management, Paris, France, July 7, 2008 Title: The Best, the Hottest, and the Luckiest: A Statistical Tale of Extremes”
191. Computational Complexity Forum, University of Warwick, Coventry, England, July 11, 2008. Title: The Statistical Physics of Citations.
192. Science at the Edge Seminar Series, Michigan State University, East Lansing MI, September 19, 2008. Title: The Best, the Hottest, and the Luckiest: A Statistical Tale of Extremes.
193. Colloquium, Department of Physics, University of British Columbia, Vancouver, Canada, October 23, 2008. Title: The Statistical Physics of Citations.
194. Colloquium, Department of Physics, Simon Fraser University, Burnaby, Canada, October 24, 2008. Title: The Statistical Physics of Citations.
195. Invited Speaker, International conference on “Extreme Events: Theory, Observation, Modeling and Prediction”, UIB, Palma de Mallorca, Spain, Nov. 10–14, 2008. Title: The Best, the Hottest, and the Luckiest: A Statistical Tale of Extremes.
196. Colloquium, Department of Physics, McMaster University, Hamilton, Canada, November 19, 2008. Title: The Statistical Physics of Citations.
197. Colloquium, Department of Physics, University of Waterloo, Waterloo, Canada, November 20, 2008. Title: The Statistical Physics of Citations.
198. Invited Talk, Semi-Annual Statistical Mechanics Meeting, Rutgers University, New Brunswick, N.J., December 13, 2008. Title: Consensus Formation in Simple and Complex Networks.
199. Invited speaker at MECO34: 34th Conference of the Middle European Cooperation in Statistical Physics, Leipzig, Germany, March 30–April 2, 2009. Title: Dynamical Approach for Solving Complex Networks.
200. Invited speaker, Flows and Networks in Complex Media, Institute of Pure and Applied Mathematics, UCLA, April 27 – May 1, 2009. Title: Kinetics of Filtration and Clogging.
201. Principal Lecturer, 2009 Boulder School for Condensed Matter and Materials Physics, University of Colorado, Boulder, CO. Five pedagogical lectures on aggregation, adsorption, first-passage processes, and complex networks.
202. Lecturer in the Perimeter Scholars Institute, Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Canada, Nov. 16–27, 2009. Ten pedagogical lectures on diffusion phenomena, aggregation, adsorption, spin dynamics, population dynamics, and complex networks.
203. Invited speaker, The XXXIX Winter Meeting on Statistical Physics, Taxco, Mexico, January 5–8, 2010. Title: The Dynamics of Opinion Formation.
204. Invited speaker, March Meeting of the American Physical Society, Portland, OR, March 15–19, 2010. Title: Dynamics of Voting Models.
205. Invited speaker, CSCAMM (Center for Scientific Computation and Mathematical Modeling) workshop on Nonlinear Dynamics of Networks, University of Maryland, April 5–9, 2010. Title: Kinetics of Heterogeneous Voter Models.
206. Seminar, Center for Computational Science, Boston University, April 9, 2010. Title: The Dynamics of Consensus, Compromise, and Conflict.
207. Invited speaker, Society of Physics Students, Spring Zone 1 meeting, Northeastern University, April 9–10, 2010. Title: Statistical Physics of Citations.
208. Colloquium, Department of Physics, University of Maine, Orono, Maine, April 23, 2010. Title: The Statistical Physics of Citations.
209. Invited speaker, NetSci 2010, MIT and Northeastern University, May 5–7, 2010. Title: Evolving Preferential Attachment Networks.

210. Invited speaker, Statistical Mechanics and Quantum Transport: from optics to biology (A memorial conference for Michael Stephen), The Technion, Haifa, Israel, May 23–27, 2010. Title: The Dynamics of Consensus, Compromise, and Conflict.
211. Colloquium, Department of Physics, Bar-Ilan University, Ramat Gan, Israel, May 31, 2010. Title: The Dynamics of Consensus, Compromise, and Conflict.
212. Seminar, Department of Physics of Complex Systems, Weizmann Institute of Science, Rehovot, Israel, June 1, 2010. Title: Evolving Preferential Attachment Networks.
213. Invited speaker, Program on Complex Networks, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC, August 29 – September 1, 2010. Title: Dynamics of Voter Models on Heterogeneous Networks.
214. Invited speaker, Conference on Complex Driven Systems: From Statistical Physics to the Life Sciences, Virginia Tech., Blacksburg VA, October 1–3, 2010. Title: Facilitated Asymmetric Exclusion.
215. Invited speaker for “Trends in Research Measurement Metrics” sponsored by Elsevier Publishing Company, Washington, DC, October 27, 2010. Title: A Physicist’s Perspective on Citation Analysis.
216. Invited speaker, workshop on Evolution of Cooperation, Indiana University, Bloomington Indiana, December 3–5, 2010. Title: Can Consensus Ever Be Achieved by Social Interactions Alone?
217. Colloquium, CNLS, Los Alamos National Laboratory, January 10, 2011. Title: Fate of the Three-Dimensional Ising Model.
218. Seminar, Santa Fe Institute, Santa Fe, New Mexico, January 14, 2011. Title: The Role of Reinforcement on Social Dynamics.
219. Seminar, Department of Physics, Boston University, February 4, 2011. Title: The Role of Reinforcement on Social Dynamics.
220. Invited Speaker, 47th Karpacz Winter School “Simple Models for Complex Systems”, Ladek Zdroj, Poland, February 7–12, 2011. Three lectures entitled: Fate of the Kinetic Ising Model.
221. Invited speaker, Workshop on Dynamics on Complex Networks, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC, March 21–23, 2011. Title: Role of Reinforcement on Social Dynamics.
222. Speaker, CEIT Instructional Innovation Conference, Boston University, March 25, 2011. Title: Dynamics of Billiards.
223. Seminar, Department of Physics, University of Maryland, April 5, 2011. Title: The Role of Reinforcement on Social Dynamics.
224. Invited Speaker, Sixteenth Claude Itzykson Meeting: “Extremes and Records”. CEA, Saclay, Gif-sur-Yvette, France, June 14–17, 2011. Title: Dynamics of Predatory Random Walkers.
225. Theory Seminar, Université Pierre et Marie Curie, Paris, France, June 21, 2011. Title: The Role of Reinforcement on the Dynamics of Innovations and Fads.
226. Statistical Physics Seminar, CEA, Saclay, Gif-sur-Yvette, France, June 23, 2011. Title: The Role of Reinforcement on the Dynamics of Innovations and Fads.
227. Invited speaker for the workshop “Towards Unifying Concepts in the Physics of Aperiodic Systems”, Princeton University, Princeton, NJ, October 14–15, 2011. Title: Fate of the Kinetic Ising Model.
228. Colloquium, Department of Physics, Syracuse University, Syracuse, NY, October 27, 2011. Title: The Statistical Physics of Citations.
229. Condensed-Matter Theory Seminar, Department of Physics, Syracuse University, Syracuse, NY, October 28, 2011. Title: Fate of the Kinetic Ising Model.
230. Invited Talk, Semi-Annual Statistical Mechanics Meeting, Rutgers University, New Brunswick, N.J., December 17–18, 2011. Title: Fate of the Kinetic Ising Model.
231. Invited speaker, March Meeting of the American Physical Society, Boston, MA, February 27 – March 2, 2012. Title: Cooperative-Driven Singularities in Asymmetric Exclusion Processes.
232. NICO (Northwestern Institute on COmplex systems) Seminar Series, Northwestern University, Evanston, IL, March 7, 2012. Title: The Role of Reinforcement on the Dynamics of Innovations and Fads.
233. Squishy Physics Seminar, Department of Physics, Harvard University, Cambridge, MA, March 28, 2012. Title: Fate of the Kinetic Ising Model.
234. Seminar, Department of Physics, ETH Zurich, Switzerland, May 7, 2012. Title: Fate of the Kinetic Ising Model.
235. Risk Center Seminar Series Presentation, ETH Zurich, May 8, 2012. Title: Statistical Physics of Citations.
236. Theoretical Physics Seminar, University of Geneva, May 10, 2012. Title: Statistical Physics of Citations.

237. Invited Speaker, International Workshop “Mathematical Physics of Complex Networks: From Graph Theory to Biological Physics”, Max Planck Institute for Complex Systems, May 14–18, 2012. Title: Dynamics of Voting Models in Complex and Simple Networks.
238. Invited Lecturer, Summer School on Soft Solids and Complex Fluids 2012, University of Massachusetts, June 3–7, 2012. Title: Nonequilibrium Statistical Physics of Aggregation, Adsorption, Coarsening and Networks (four pedagogical lectures).
239. Colloquium, Department of Physics, Georgia Institute of Technology, Atlanta, GA, February 25, 2013. Title: Fate of the Kinetic Ising Model.
240. Plenary Invited Speaker, German Physical Society Meeting, Regensburg, Germany, March 11–15, 2013. Title: The Dynamics of Wealth, Persuasion, and Popularity.
241. Colloquium, Department of Physics, University of Massachusetts Boston, Boston, MA, May 3, 2013. Title: Fate of the Kinetic Ising Model.
242. Invited Talk, Cargèse International Workshop on “Search and Exploration”, June 3–7, 2013. Title: Survival of the Lamb.
243. Invited Talk, Statphys 25, Seoul, Korea, July 22–26, 2013. Title: Dynamics of Influence Propagation and its Role in Consensus/Non-Consensus.
244. Invited talk at the International Seminar and Workshop “Small Systems far from Equilibrium: Order, Correlations, and Fluctuations, Max Planck Institute, Dresden, Germany, October 14–18, 2013. Title: Fate of the Kinetic Ising and Potts Models.
245. Colloquium, Department of Physics, Hebrew University, Jerusalem, Israel, March 10, 2014. Title: Fate of the Kinetic Ising and Potts Models.
246. Invited talk at the International Seminar and Workshop “Brownian Motion in Confined Geometries”, Max Planck Institute, Dresden, Germany, March 17–21, 2014. Title: The Dynamics of Diffusive Capture Processes.
247. SFI Sponsored Community Lecture, October 15, 2014. Title: I Get All The News I Need From The Sports Section.
248. Applied Math Seminar, University of Edinburgh, Edinburgh, Scotland, November 11, 2014. Title: Evolving Complex Networks.
249. Applied Math Colloquium, University of Leeds, Leeds, England, November 14, 2014. Title: Fate of the Kinetic Ising and Potts Models.
250. Invited talk at the EPSRC-sponsored workshop “Collective Behaviour in Growing Systems”, University of Bath, Bath, England, November 18, 2014. Title: Fate of the Kinetic Ising and Potts Models.
251. Seminar, Center for Non-Linear Science, Los Alamos National Laboratory, December 11, 2014. Title: Statistics of Basketball Scoring and Lead Changes.
252. Minicourse at the Santa Fe Institute: Introduction to First-Passage Processes. Six ninety-minute lectures between December 5 & 12, 2014.
253. Invited pedagogical lectures at the CIRM Winter School on “Disordered Systems, Random Spatial Processes and Some Applications”, Luminy, France, January 5–9, 2015. Title: Dynamics of Persuasion (three lectures).
254. Seminar, LPMTIC, Paris France, January 14, 2015. Title: Fate of the Kinetic Ising and Potts Models.
255. Invited talk at the Workshop on Statistical Physics Methods in Social and Economic Systems, Institut Henri Poincaré, Paris, France, January 29, 2015. Title: Basketball Scoring and Lead Change Statistics.
256. Seminar, Institut Curie, Paris France, February 4, 2015. Title: Dynamics of Facilitated and Cooperative Exclusion Processes.
257. Colloquium, Department of Physics, University of New Mexico, Albuquerque, NM, March 16, 2015. Title: Title: Statistics of Basketball Scoring and Lead Changes.
258. Colloquium, Center for Non-Linear Science, Los Alamos National Laboratory, March 30, 2015. Title: Fate of the Kinetic Ising and Potts Models.
259. Invited Speaker, SFI Science Board Symposium, May 1, 2015. Title: Basketball Scoring and Lead Change Statistics.
260. Invited Speaker, SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 17-21. Title: Basketball Scoring and Lead Change Statistics.
261. Invited Speaker, SFI Complex Systems Summer School, St. John’s College, Santa Fe, NM, June 11 & 12, 2015. Title: Dynamics of Complex Networks. Two 75-minute lectures.
262. Colloquium, Department of Physics, University of Massachusetts, Amherst, MA, September 9, 2015. Title: Statistics of Basketball Scoring and Lead Changes.

263. Invited Speaker, SFI workshop on Knetic Networks, Santa Fe Institute, September 17–19. Title: Overview of Aggregation Kinetics.
264. Condensed-Matter Theory Seminar, UNAM, Cuernavaca, Mexico, November 12, 2015. Title: Basketball Scoring and Lead Change Statistics.
265. Minicourse on First-Passage Processes, Universidad Autonoma de la Ciudad de Mexico (UACM), October 21–23, 2015. Lectures consisted of three 2-hour sessions.
266. Plenary Speaker, National Meeting on Statistical Physics (ENFE 2015), Vitoria, Brazil, November 2–4, 2015. Title: Statistics of Basketball Scoring and Lead Changes.
267. Condensed-Matter Theory Seminar, University of New Mexico, Albuquerque, NM, November 16, 2015. Title: Role of Starvation, Regeneration, and Reproduction on Foraging Dynamics.

Grant Awards

1. "Modern Methods of Statistical Mechanics Applied to Polymers", supported by the Air Force Office of Scientific Research (co-principal investigator with W. Klein and H. E. Stanley). Amount awarded: \$387,162 for 1978 - 1981.
2. "Methods of Statistical Mechanics Applied to Percolation Phenomena", supported by the Army Research Office (co-principal investigator with W. Klein and H. E. Stanley). Amount awarded: \$480,000 for 1980 - 1985.
3. "Computer Experiments for Long Polymer Chains", supported by the University Advisory Committee on Research. Amount awarded: \$1,200 for 1980 - 1981.
4. "Statistical Mechanics of Polymers", supported by the National Science Foundation (co-principal investigator with R. Bansil and H. E. Stanley). Amount awarded: \$252,000 for 1982 - 1984.
5. "New theoretical and experimental approaches to polymer materials", supported by the NSF/CNRS U.S.-Italy co-operative program (co-principal investigator with R. Bansil, A. Coniglio, W. Klein, and H. E. Stanley). Amount awarded: \$40,000 for 1981 - 1983.
6. "Conductivity of Random Resistor-Diode Networks", supported by the University Committee on Research (co-principal investigator with J. S. Brooks). Amount awarded: \$2,000 for 1982 - 1983.
7. "Theoretical and Experimental Research on Polymer Materials", supported by the National Science Foundation (co-principal investigator with R. Bansil and H. E. Stanley for years 1 & 2, and co-principal investigator with H. E. Stanley for year 3). Amount awarded: \$438,000 for 1984 - 1987.
8. "New theoretical and experimental approaches to polymer materials" supported by the NSF/CNRS U.S.-Italy co-operative program (co-principal investigator with R. Bansil, A. Coniglio, W. Klein, and H. E. Stanley). Amount awarded: \$40,000, 1984 - 1987.
9. "Kinetics of Diffusion-Controlled Reactions" supported by the Army Research Office. Amount awarded: \$225,000 for 1986 - 1988.
10. "Microscopic studies of clusters in phase separation" supported by the Office of Naval Research (co-principal investigator with W. Klein and H. Gould). Amount awarded: \$300,000 for 1988 - 1990.
11. "Kinetics and Dynamics of Chemically Reacting Systems", supported by the Army Research Office. Amount awarded: \$261,000 for 1989 - 1991.
12. "Statistical Mechanics of Chemical Kinetics and Random Systems", supported by the International Division of the National Science Foundation under the auspices of the NSF/CONACYT international program. Amount awarded: \$9,422 for 1989 - 1990.
13. "Statistical Mechanics of Random Systems", supported by the National Science Foundation, 1989 (co-principal investigator with H. E. Stanley). Amount awarded: \$50,000 for 1990.
14. "Structural Properties and Transport in Disordered Media", supported by the National Science Foundation. Amount awarded for 1991 - 1992: \$55,000.
15. "Kinetics of Lattice Models of Catalysis", supported by the Petroleum Research Fund. Amount awarded for 1992 - 1994: \$40,000
16. "Kinetics of Heterogeneous Reaction Processes", supported by the Army Research Office, January 1, 1993 - December 31, 1995. Amount awarded \$270,000
17. "Stochastic Transport in Heterogeneous Flows and Media", supported by the National Science Foundation, January 1, 1993 - December 31, 1995. Amount awarded \$165,000.
18. "Dynamics of Reactive Interfaces", supported by the Army Research Office, April 1, 1996 - March 31, 1999. Amount awarded \$269,525.
19. "Kinetics of Non-Linear Reactive Systems" supported by the National Science Foundation (International travel grant) May 1, 1996 - April 30, 1999. Amount awarded \$13,402.
20. "Non-Linear Transport and Spatial Organization Processes", supported by the National Science Foundation, August 1, 1996 - July 31, 1999. Amount awarded \$168,000 (plus supplement of \$14,000 for August 1, 1999 - October 31, 1999).
21. "Dynamics of Physicochemical Infiltration and Filtration Processes", supported by the Army Research Office, May 1, 1999 - April 31, 2002. Amount awarded \$276,300.
22. "Feedback and Dynamics of Evolving Media", supported by the National Science Foundation, November 1, 1999 - October 31, 2002. Amount awarded \$228,000.
23. "Visualizations and Simulations of Infiltration and Filtration Processes", supported by the Army Research Office DURIP program, March 2000 - March 2001. Amount awarded \$63,716 (plus \$15,000 in BU cost sharing).
24. REU supplement to "Feedback and Dynamics of Evolving Media", National Science Foundation, February 2001. Amount awarded \$5,000.

25. “Dynamics of Growing Networks and Evolving Media”, National Science Foundation, December 15, 2002 – October 31, 2005. Amount awarded \$300,000.
26. Ulam Scholar at Los Alamos National Laboratory, August 2005 – August 2005. Amount awarded \$233,230.
27. “Complex Networks and Complex Processes”, National Science Foundation, April 2005. Amount awarded \$444,000 for December 1, 2005 – May 31, 2009.
28. “Applications of Statistical Physics to Complex Processes”, National Science Foundation, Division of Materials Research. Award amount \$420K for August 1, 2009 – July 31, 2012.
29. “Applications of Non-Equilibrium Statistical Physics to Collective Phenomena in Materials and Complex Systems”, National Science Foundation, October 2011. Award amount \$435K for September 1, 2012 – August 31, 2015.
30. “NETWORK DYNAMICS: Modeling and Generation of Very Large Social Networks”, DARPA, Award amount \$398,808 for August 1, 2012 – August 15, 2015.
31. “Large Fluctuations in Non-Stationary Interacting Lattice Gases”, US-Israel Binational Science Foundation, July 2013, Award amount \$146K for September 1, 2013 – August 31, 2017.