CV Tom Lubensky (3/30/2011)

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Professional Preparation:

California Institute of Technology	Physics	B.S. 1964
Harvard University	Physics	M.A. 1965
Harvard University	Physics	Ph.D. 1969

Appointments:

2009-	Christopher H. Browne Distinguished Professor of Physics, University of Pennsylvania
2001-2009	Chair, Department of Physics and Astronomy, University of Pennsylvania
2001	Poste Rouge au CNRS, Ecole Normale Supérieure, Lyon, France
1998-2009	Mary Amanda Wood Chair of Physics, University of Pennsylvania
1998-2001	Associate Director, Laboratory for Research in the Structure of Matter, University of Pennsylvania
1990-95	Consultant EXXON Research and Engineering, Annandale, New Jersey
1989-90	Visiting Research Associate at the Ecole Supérieure de Physique et de Chimie Industrielles (ESPCI) de la Ville de *Paris* (Poste Rouge au CNRS)
1981-82	Visiting Professor at the Ecole Normale Supérieure, Paris, France
1980	Professor, University of Pennsylvania
1976	Research Associate, Harvard University
1975-80	Associate Professor, University of Pennsylvania
1971-75	Assistant Professor, University of Pennsylvania
1970-71	Postdoctoral Fellow, Brown University
1969-70	NSF Postdoctoral Fellow, University of Paris, Orsay, France

Honors and Awards:

2010	Michelin Professor at the Ecole École Supérieure de Physique et de Chimie Industrielles de la Ville de *Paris* (ESPCI)
2008	Elected to the American Academy of Arts and Sciences
2004	Honored Member of the International Liquid Crystal Society
2004	Oliver E. Buckley Prize of the American Physical Society
2002	Elected to the National Academy of Sciences
2000	Fellow, American Association for the Advancement of Science
1985	Fellow, American Physical Society
1981	Guggenheim Fellow
1975-77	Alfred P. Sloan Fellow

Service:

2011-	Simons Foundation pane for Investigators in Physics
2010-	Editorial Board of PNAS

2006 -	Executive Committee of the International Liquid Crystal Society
2009	External Review Committee, Department of Physics, Korea Advanced Institute of Science and Technology (KAIST)
2008-	Chair, Section 33 of the National Academy of Sciences
2007	External Review Committee, Department of Physics, Duke University
2006	External Review Committee, Korea Institute for Advanced Study (KIAS)
2006	External Review Committee, Department of Physics, Boston University
2001	External Review Committee, Department of Physics, University of Texas, Austin
2001	Chair, Gordon Conference on Liquid Crystals
1998-2001	Member-at-Large (elected) of the Executive Committee of the Division of Condensed Matter Physics (DCMP) of the American Physical Society
1998-2001	Member, Advisory Board for the Institute for Theoretical Physics, Santa Barbara
1997-2004	Editorial Board, Physical Review E
1996	Co-coordinator of Aspen Institute for Theoretical Physics program on Topological Defects in Soft Condensed Matter Physics
1996-99	Member of the Advisory Committee for Science of Soft Surfaces and Interfaces Program of the Canadian Institute for Advanced Research
1996-	Member Editorial Advisory Board of Molecular Crystals and Liquid Crystals
1996-2002	Member Editorial Council of Annals of Physics
1992	Co-coordinator of Aspen Institute for Theoretical Physics program on Self-Assembling Systems
1988	Co-coordinator of Aspen Institute for Theoretical Physics program on Complex Fluids
1987-88	Co-coordinator of program on Quasicrystals and Related Structures at the Institute for Theoretical Physics in Santa Barbara

Publications of Tom C. Lubensky (3/30/2011)

Books

Chaikin, P.M., and Lubensky, T.C., *Principles of Condensed Matter Physics*, (Cambridge University Press, Cambridge, 1995).

Articles in Refereed Journals

1. Lubensky, T.C., Magnetic response functions I: conserving systems, *Annals of Physics* **64**, 424-451 (1971).
2. Lubensky, T.C., Magnetic response functions II: non-conserving systems, *Annals of Physics* **64**, 452-473 (1971).
3. Lubensky, T.C., A calculation of the elastic K_{11} for a nematic liquid crystal, *Physics Letters A* **33**, 202-203 (1970).
4. Lubensky, T.C., Molecular description of nematic liquid crystals, *Physical Review A* **2**, 2497-2514 (1970).
5. Forster, D., Lubensky, T.C., Martin, P.C., Swift, J., and Pershan, P.S. Hydrodynamics of liquid crystals, *Physical Review Letters* **26**, 1016-1019 (1971).
6. Lubensky, T.C., Hydrodynamics of cholesteric liquid crystals, *Physical Review A* **6**, 452-470 (1972).
7. Lubensky, T.C., Low-temperature phase of infinite cholesterics, *Physical Review Letters* **29**, 206-209 (1972).

8. Lubensky, T.C., A spin model for cholesteric liquid crystals, *Journal of Physics & Chemistry of Solids* **34**, 365-370 (1973).
9. Lubensky, T.C., A derivation of the hydrodynamical equations for superfluid helium, *Journal of Low Temperature Physics* **11**, 247-254 (1973).
10. Lubensky, T.C., Hydrodynamics of cholesterics in an external magnetic field, *Molecular Crystals & Liquid Crystals* **23**, 99-109 (1973).
11. Priest, R.G., and Lubensky, T.C., Biaxial model of cholesteric liquid crystals, *Physical Review A* **9**, 893-898 (1974).
12. Lubensky, T.C., and Rubin, M.H., ε-Expansion in semi-infinite Ising systems, *Physical Review Letters* **31**, 1469-1472 (1973).
13. Halperin, B.I., Lubensky, T.C., and Ma, S.-K., First-Order Phase Transition in superconductors and smectic-*A* liquid crystals, *Physical Review Letters* **32**, 292-295 (1974).
14. Halperin, B.I., and Lubensky, T.C., On the analogy between smectic-*A* liquid crystals and superconductors. *Solid State Communications* **14**, 997-1001 (1974).
15. Lubensky, T.C., and Priest, R.G., Critical exponents for a symmetric-traceless-tensor field theory model, *Physics Letters A* **48**, 103-104 (1974).
16. Lubensky, T.C., Latent heat of the cholesteric to smectic-*A* transition, *J. Phys. Colloq*. **1**, 151 (1975).
17. Harris, A.B., and Lubensky, T.C., Renormalization-group approach to the critical behaviour of random spin models, *Physical Review Letters* **33**, 1540-1543 (1974).
18. Lubensky, T.C., Critical properties of random spin models from the ε-expansion, *Physical Review B* **11**, 3573-3580 (1975).
19. Lubensky, T.C., and Rubin, M.H., Critical phenomena in semi-infinite systems I: ε-expansion for positive extrapolation length, *Physical Review B* **11**, 4533-4546 (1975).
20. Harris, A.B., Lubensky, T.C., Holcomb, W.K., and Dasgupta, C., Renormalization group approach to percolation problems, *Physical Review Letters* **35**, 327-330 (1975).
21. Lubensky, T.C., and Rubin, M.H., Critical phenomena in semi-infinite systems II: mean-field theory, *Physical Review B* **12**, 3885-3901 (1975).
22. Harris, A.B., Lubensky, T.C., and Chen, J.-H., Critical properties of spin glasses, *Physical Review Letters* **36**, 415-418 (1976).
23. DeMoura, M.A., Lubensky, T.C., Imry, Y., and Aharony, A., Coupling to anisotropic elastic media: magnetic and liquid-crystal phase transitions, *Physical Review B* **13**, 2176-2185 (1976).
24. Priest, R.G., and Lubensky, T.C., Critical properties of two tensor models with application to the percolation problem, *Physical Review B* **13**, 4159-4171 (1976); erratum, *Physical Review B* **14,** 5125 (1976).
25. Chen, J.-H., and Lubensky, T.C., Landau-Ginzburg mean-field theory for the nematic to smectic-*C* and nematic to smectic-*A* phase transitions, *Physical Review A* **14**, 1202-1207 (1976).
26. Meyer, R.B., and Lubensky, T.C., Mean-field theory of the nematic-smectic-*A* phase change in liquid crystals, *Physical Review A* **14**, 2307-2320 (1976).
27. Lubensky, T.C., Scaling theory of phase transitions in diluted systems near the percolation threshold, *Physical Review B* **15**, 311-314 (1977).
28. Chen, J.-H., and Lubensky, T.C., Mean field and ε-expansion study of spin glasses, *Physical Review B* **16**, 2106-2114 (1977).
29. Harris, A.B., and Lubensky, T.C., Spin-glass and related orderings in quenched random-spin systems, *Physical Review B* **16**, 2141-2147 (1977).
30. Lubensky, T.C., and Chen, J.-C., Anisotropic critical properties of the de Gennes model for the nematic to smectic-*A* phase transition, *Physical Review B* **17**, 366-376 (1978).
31. Dasgupta, C., Harris, A.B., and Lubensky, T.C., Renormalization-group treatment of the random resistor network, 6-ε dimensions, *Physical Review B* **17**, 1375-1382 (1978).
32. Chen, J.-C., Lubensky, T.C., and Nelson, D.R., Crossover near fluctuation-induced first-order phase transitions in superconductors, *Physical Review B* **17**, 4274-4286 (1978).

33. Lubensky, T.C., Critical exponents for the zero-state Potts model in 2 + ε dimensions, *Physics Letters A* **67A**, 169-170 (1978).
34. Lubensky, T.C., and Isaacson, J., Field theory for the statistics of branched polymers gelation and vulvanization, *Physical Review Letters* **41**, 829-832 (1978)
35. Lubensky, T.C., Dasgupta, C., and Chaves, C.M., Statistics of trees and branched polymers from a generalized Hilhorst model, *Journal of Physics A* **11**, 2219-2236 (1978).
36. Alexander, S., and Lubensky, T.C., Textural singularities and frustration in random anisotropy and random field models, *Physical Review Letters* **42**, 125-129 (1979).
37. Hossain, K.A., Swift, J., Chen, J.-H., and Lubensky, T.C., Dynamics near the nematic-smectic-*A* and nematic-smectic-*C* phase transitions in liquid crystals, *Physical Review B* **19**, 432-440 (1979).
38. Lubensky, T.C., and Isaacson, J. Statistics of lattice animals and dilute branched polymers, *Physical Review A* **20**, 2130-2146 (1979).
39. Coniglio, A., and Lubensky, T.C., ε-expansion for correlated percolation: applications to gels, *Journal of Physics A* **13**, 1783-1789 (1980).
40. Harris, A.B., and Lubensky, T.C., Mean field theory and ε-expansion for Anderson localization, *Solid State Communications* **34**, 343-346 (1980).
41. Houghton, A., and Lubensky, T.C., The metastable Ising magnet in a negative field, *Physics Letters A* **77A**, 479-480 (1980).
42. Isaacson, J. and Lubensky, T.C., Flory exponents for generalized polymer problems, Journal de Physique (Paris) Lettres). 44, L469-L471 (1980).
43. Lubensky, T.C., and Isaacson, J., Field theory and polymer size distribution for branched polymers, *Journal de Physique I* **42**, 175-188 (1981).
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45. Harris, A.B., and Lubensky, T.C., Generalized percolation, *Physical Review B* **24**, 2656-2670 (1981).
46. Harris, A.B., and Lubensky, T.C., Mean-field theory and ε-expansion for Anderson localization, *Physical Review B* **23**, 2640-2673 (1981).
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52. Lubensky, T.C., and McKane, A.J., Correlations at the nematic-to-smectic-*A* critical point when $\nu_{\|} = 2\nu_{\perp}$, *Journal de Physique (Paris) Lettres* **43**, L217-L221 (1982).
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58. Harris, A.B., and Lubensky, T.C., Field theoretic approaches to biconnectedness in percolating systems, *Journal of Physics A* **16**, L365-L373 (1983).
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63. Lubensky, T.C., Fluctuations in random walks with random traps, *Physical Review A* **30**, 2657-2665 (1984).
64. Wang, J., and Lubensky, T.C., Correlations and x-ray scattering in polar smectic-A_1 phases, *Journal de Physique I* **45**, 1653-1661 (1984).
65. Harris, A.B., Kim, S., and Lubensky, T.C., ε-expansion for the conductivity of a random resistor network, *Physical Review Letters* **53**, 743-746 (1984).
66. Harris, A.B. and Lubensky, T.C., Diluted spin models near the percolation threshold, *Journal of Physics A* **17**, L609-L614 (1984).
67. Day, A.R., and Lubensky, T.C., Gauge invariant de Gennes model, *Physical Review A* **30**, 481-487 (1984).
68. Barois, P., Prost, J., and Lubensky, T.C., New critical points in frustrated smectics, *Journal de Physique I* **46**, 391-399 (1985).
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70. John, S., Lubensky, T.C., Spin glass state of a randomly diluted granular superconductor, *Physical Review Letters* **55**, 1014-1017 (1985).
71. Lubensky, T.C., Ramaswamy, S., and Toner, J., Hydrodynamics of icosahedral quasicrystals, *Physical Review B* **32**, 7444-7452 (1985).
72. Lubensky, T.C., and Wang, J., The percolation conductivity exponent to second order in $\varepsilon = 6 - d$, *Physical Review B* **33**, 4998-5009 (1986).
73. Achiam, Y., Lubensky, T.C., and Marshall, E.W., Ising model on a quasiperiodic chain, *Physical Review B* **33**, 6460-6464 (1986).
74. Grinstein, G., Lubensky, T.C., and Toner, J., Defect-mediated melting and new phases in three-dimensional systems with a single soft direction, *Physical Review B* **33**, 3306-3321 (1986).
75. Lubensky, T.C., Ramaswamy, S., and Toner, J., Dislocation motion in quasicrystals and implications for macroscopic properties, *Physical Review B* **33**, 7715-7719 (1986).
76. Park, Y., Harris, A.B., and Lubensky, T.C., Noise exponents of the random resistor network, *Physical Review B* **35**, 5048-5055 (1986).
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78. John, S., and Lubensky, T.C., Phase transitions in a disordered granular superconductor near percolation, *Physical Review B* **34**, 4815-4825, (1986).
79. Lubensky, T.C., Socolar, J.E.S., Steinhardt, P.J., Bancel, P.A., and Heiney, P.A., Distortions and peak broadening in quasicrystal diffraction patterns, *Physical Review Letters* **57**, 1440-1443 (1986).
80. Socolar, J.E.S., Lubensky, T.C., and Steinhardt, P.J., Phonons, phasons and dislocations in quasicrystals, *Physical Review B* **34**, 3345-3360 (1986).
81. Harris, A.B., and Lubensky, T.C., Potts-model formulation of the random resistor network, *Physical Review B* **35**, 6987-6996 (1987).
82. Harris, A.B., and Lubensky, T.C., Randomly diluted *xy* and resistor networks near the percolation threshold, *Physical Review B* **35**, 6964-6986 (1987).

83. Lubensky, T.C., Mean-field theory for the biaxial nematic phase and the *N N′AC* critical point, *Molecular Crystals & Liquid Crystals* **146**, 55-69 (1987).
84. Aronovitz, J.A., and Lubensky, T.C., ε-expansion for self-avoiding tethered surfaces of fractional dimension, Europhyics Letters **4**, 395-401 (1987).
85. Park, Y., and Lubensky, T.C., New critical point in smectic liquid crystals, *Physical Review A* **37**, 2197-2213 (1988).
86. John, S., Lubensky, T.C., and Wang, J., Diamagnetism of percolative granular superconductors and diluted Josephson arrays, *Physical Review B* **38**, 2533-2542 (1988).
87. Renn, S.R., and Lubensky, T.C., Abrikosov dislocation lattice in a model of the cholesteric-to-smectic-*A* transition, *Physical Review A* **38**, 2132-2147 (1988).
88. Aronovitz, J.A., and Lubensky, T.C., Fluctuations of solid surfaces, *Physical Review Letters* **60**, 2634-2637 (1988).
89. Lubensky, T.C., Ramaswamy, S., and Toner, J., Static and dynamic properties of incommensurate smectic-A_{IC} liquid crystals, *Physical Review A* **38**, 4284-4298 (1988).
90. Golubović, L., and Lubensky, T.C., Smectic elastic constants of lamellar fluid membrane phases: crumpling effects, *Physical Review A* 39, 12110-21133 (1989).
91. Aronovitz, J., Golubović, L., and Lubensky, T.C., Fluctuations and the lower critical dimension of crystalline membranes, *Journal de Physique I* **50**, 609-631 (1989).
92. Park, Y., Lubensky, T.C., and Prost, J., A new mean-field Sm-*A*--Sm-*A′* critical point in a symmetry breaking field, *Liquid Crystals* **4**, 435-440 (1989).
93. Aronovitz, J., and Lubensky, T.C., Crossover in randomly diluted classical two-dimensional Heisenberg magnets, *Journal of Physics A* **23**, 241-248 (1990).
94. Golubović, L., and Lubensky, T.C., Steric entropy and phase equilibria in microemulsions, *Europhysics Letters* **10**, 513-518 (1989).
95. Golubović, L., and Lubensky, T.C., Thermal fluctuations and phase equilibrium in microemulsions, *Physical Review E* **41**, 4343-4366 (1990).
96. Harris, A.B., Lubensky, T.C., and Mele, E.J., Flux phases in tight-binding models, *Physical Review B* **40**, 2631-2634 (1989).
97. Golubovic, L., and Lubensky, T.C., Nonlinear elasticity of amorphous solids, *Physical Review Letters* **63**, 1082-1085, (1989).
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99. Lubensky, T.C., and Renn, S.R., Twist-grain-boundary phases near the nematic-smectic-*A*-smectic-*C* point in liquid crystals, *Physical Review A* **41**, 4392-4401 (1990).
100. Morse, D.C., and Lubensky, T.C., Incommensurate flux phases on a square lattice, *Physical Review B* **42**, 7994-8007 (1990).
101. Morse, D.C., and Lubensky, T.C., Instabilities of the Fermi-liquid and staggered flux phases in the large-*N t-J* model, *Physical Review B* **43**, 10436-10444 (1991).
102. Renn, S.R., and Lubensky, T.C., Existence of a Sm-*C* grain boundary phase at the chiral *NAC* point, *Molecular Crystals & Liquid Crystals* **209**, 349-355 (1991).
103. Golubović, L., and Lubensky, T.C., Entropic elasticity of lamellar tethered membrane phases, *Physical Review A* **43**, 6793-6802 (1991).
104. Lubensky, T.C., Tokihiro, T., and Renn, S.R., Polymers in a chiral nematic liquid crystal: model for twist-grain-boundary phases, *Physical Review A* **43**, 5449-5462 (1991).
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106. MacKintosh, F.C., and Lubensky, T.C., Orientational order, topology, and vesicle shapes, *Physical Review Letters* **67**, 1169-1172 (1991).
107. Morse, D.C., Lubensky, T.C., and Grest, G.S., Quenched disorder in tethered membranes, *Physical Review E* **45**, 2151-2154 (1991).

108. Lubensky, T.C., and Prost, J. Orientational order and vesicle shape, *Journal de Physique II* **23**, 371-382 (1992).
109. Morse, D.C., and Lubensky, T.C., Curvature disorder in tethered membranes: a new flat phase at $T = 0$, *Physical Review A* **46**, 1751-1768 (1992).
110. Park, J., Lubensky, T.C., and MacKintosh, F.C., *n*-atic order and continuous shapes changes of deformable surfaces of genus zero, *Europhysics Letters* **20**, 279-284 (1992).
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112. Morse, D.C., and Lubensky, T.C., *2D* crystalline order and defects in a stack of membranes, *Journal de Physique II* **3**, 531-546 (1993).
113. Ramaswamy, S., Prost, J., Cai, W., and Lubensky, T.C., Dynamics of lyotropic lamellar phases, *Europhysics Letters* **23**, 271-276 (1993).
114. Lubensky, T.C., and MacKintosh, F.C., Theory of the "ripple" phase of lipid bilayers, *Physical Review Letters* **71**, 1565-1568 (1993).
115. Pettey, D., and Lubensky, T.C., Star defects on flat and spherical surfaces, *Journal de Physique II* **3**, 1571-1579 (1993).
116. Kamien, R.D., and Lubensky, T.C., Twisted line liquids, *Journal de Physique I* **3**, 2131-2138 (1993).
117. Cai, W., and Lubensky, T.C., Covariant hydrodynamics of fluid membranes, *Physical Review Letters* **73**, 1186-1189 (1994).
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Professional preparation for practice is a complexity of knowledge, inquiry, aspirations and culture that spans a multitude of fields. Regardless of the professional field under consideration, the goal is the same â€“ to prepare students to become practitioners in the profession. In this chapter, we focus on four main areas as a pragmatic overview to preparation for professional practice: (1) a brief history of professional preparation for practice in 1,480 professional preparation products are offered for sale by suppliers on Alibaba.com. A wide variety of professional preparation options are available to you, There are 1,466 suppliers who sells professional preparation on Alibaba.com, mainly located in Asia. The top countries of suppliers are India, China, and Hong Kong S.A.R., from which the percentage of professional preparation supply is 1%, 89%, and 5% respectively. Related Search Official Cambridge English preparation materials. You can find a wide range of official Cambridge English support materials from Cambridge Assessment English and Cambridge University Press. Support materials include coursebooks and practice tests and include materials in both print and digital formats.Â See more official exam preparation materials. View the full range of support materials for the C2 Proficiency exam. See more.