

## **Frank H. Stillinger**

### **Talks, listed in approximately chronological order**

1. Yale, Chemistry Dept., "Theory of Fused Salts".
2. M.I.T, Chemistry Dept., "Theory of Fused Salts".
3. R.C.A., "Theory of Fused Salts".
4. Bell Laboratories, "Quantum Statistics of Nonideal Systems".
5. University of Chicago, "Quantum Statistics of Nonideal Systems".
6. Chicago, A.P.S. meeting, "Remarks on Correlations in Ising Models".
7. Washington, DC. A.P.S. meeting, "Approximations in the Theory of Dense Fluids (?)".
8. Gordon Conference, summer 1959, "Theory of Fused Salts".
9. Gordon Conference, June 1963, "Critical Phenomena".
10. Columbia University, "Double Layer Theory".
11. University of Pennsylvania, "Double Layer Theory".
12. Baltimore, A.P.S. meeting, "Gaussian Mixture".
13. Yeshiva University, "Gaussian Mixture".
14. Princeton University, "Gaussian Mixture".
15. University of Minnesota, Mar. 2, 1966, "Gaussian Mixture".
16. Mellon Institute, "Residual Ice Entropy".
17. Yeshiva University, "Rigid Disks at High Compression".
18. Yale University, "Rigid Disks at High Compression".
19. Bell Labs, Chemistry, "Rigid Disks at High Compression".
20. Bell Labs, Chemistry, "Surface Tension of Dilute Electrolytes".
21. Bell Labs, Theoretical Chemistry, "Theory of Fused Salts".
22. Bell Labs, Theoretical Chemistry, "Critique of Ornstein-Zernike Theory".
23. Bell Labs, Theoretical Physics, "Correlations in Classical Order-Disorder Theory".
24. S.U.N.Y. Buffalo, "Cooperative Behavior in the Rigid Disk System".
25. University of Rochester, Chemistry Dept., "Compressibility of Simple Fused Salts".
26. New York City, A.P.S. meeting, "Ising Quadruplet Spin Averages".
27. Atlantic City, A.C.S. meeting, "Double Layer Theory".
28. Gordon Conference on Fused Salts, "Fused Salt Compressibility".
29. Carnegie Tech., Mar. 11, 1966, "Crystals of Rigid Spheres".
30. Bell Labs, Theoretical Physics, Mar. 23, 1966, "Crystals of Rigid Spheres".
31. Louisiana State University, Chemistry Dept., Apr. 28, 1966, "Crystals of Rigid Spheres".

32. Rice University, Chemistry Dept., Dec. 16, 1966, "Critical Phenomena in a Model Binary Fluid".
33. Indiana University, Chemistry Dept., Mar. 9, 1967, "Critical Phenomena in a Model Binary Fluid".
34. Yeshiva University, Apr. 6, 1967, "Physical Clusters and Critical Phenomena".
35. Cornell University, Dec. 14, 1967, "Physical Cluster Theory of Critical Phenomena".
36. Cornell University, Dec. 14, 1967, "Ion-Pair Theory of Concentrated Electrolytes".
37. University of Illinois, Apr. 1, 1968, "Physical Cluster Theory of Critical Phenomena".
38. S.U.N.Y. Albany, Dec. 17, 1968, "An Unconventional View of Electrolytes".
39. S.U.N.Y. Stony Brook, Mar. 7, 1969, "An Unconventional View of Electrolytes".
40. University of Pennsylvania, Chemistry Dept., April 29, 1969, "An Unconventional View of Electrolytes".
41. Washington University, Chemistry Dept., May 8, 1969, "The Structure of Liquid Water".
42. University of Chicago, Chemistry Dept., T.F. Young Symposium, June 16, 1969, "Structure in Liquid Water".
43. Gordon Conference, Holderness, NH, Aug. 13, 1969, "Structure in Liquid Water".
44. National Academy of Sciences, Hanover, NH (Dartmouth University), Oct. 15, 1969, "Structure in Liquid Water".
45. Carnegie-Mellon University, Physics Dept., May 1, 1970, "Structure in Liquid Water".
46. University of Rochester, Chemistry Dept., May 13, 1970, "Structure in Liquid Water".
47. Gordon Conference on Water, Tilton, NH, June 15, 1970, "Statistical Mechanical Theory of Water".
48. A.C.S., Chicago, Harned Memorial Symposium, Sept. 13, 1970, "Variational Principle for Electrolyte Theory".
49. A.C.S., Northeastern Section, Providence, RI, Water Symposium organized by E. Pysh, Oct. 20, 1970, "Comments on the Quantum Mechanical Approach to a Theory of Water Structure".
50. Yeshiva University, Statistical Mechanics Conference, Dec. 2, 1970, "Contribution to Scaled Particle Theory" (15 min.).
51. Bell Labs, 15 seminar, Dec. 16, 1970, "Structure of Liquid Water".

52. U.C.L.A., Chemistry Dept., Feb. 8, 1971, "Structure in Liquid Water" (evening, 90 min.)
53. Temple University, Physics Dept., Apr. 13, 1971, "Structure in Liquid Water".
54. University of Maryland, College Park, Chemistry Dept., May 25, 1971, "Structure in Liquid Water".
55. Northern Illinois University, Conference on Computers in Education and Research, July 21, 1971, "Computer-Assisted Study of Liquid Water".
56. Society for Cryobiology, Washington, DC, Aug. 30, 1971, "Structure in Liquid Water".
57. A.C.S., Washington, DC, Sept. 13, 1971, "Structure in Liquid Water".
58. National Bureau of Standards, Gaithersburg, MD, Nov. 15, 1971, "Structure in Liquid Water".
59. Columbia University, Chemistry Dept. Colloquium, Dec. 16, 1971, "Structure in Liquid Water".
60. Yale University, Chemistry Dept., Onsager Symposium, Apr. 20, 1972, "Molecular Structure of Liquid Water".
61. Carnegie-Mellon University, H.S. Frank Birthday Symposium, June 14, 1972, "Orientational Order in Ice".
62. Gordon Conference on Dielectrics, Proctor Academy, Andover, NH, July 25, 1972, "Local Orientational Order in Ice".
63. Gordon Conference on Water and Aqueous Solutions, Holderness School, Plymouth, NH, Aug. 23, 1972, "Recent Developments in Molecular Dynamics Studies of Models for Aqueous Systems".
64. N.Y.U., Chemistry Dept., Nov. 3, 1972, "Molecular Theory of Liquid Water".
65. University of Illinois Urbana, Chemistry Dept., Jan. 12, 1973, "Molecular Theory of Liquid Water".
66. Bell Labs Council, Jan. 24, 1973, review of entire water project (25 min.).
67. Australian National University, Canberra, Symposium on Equilibrium Electrochemistry, Feb. 20, 1973, "Basic Theory of Water".
68. Australian National University, Canberra, Symposium on Equilibrium Electrochemistry, Feb. 21, 1973, "Computer Simulation of Aqueous Fluids".
69. A.P.S., San Diego, CA, Liquid State Symposium, "Theory of Water" (45 min.).
70. University of Florida, Gainesville, Chemistry Dept., May 4, 1973, "The Molecular Nature of Liquid Water".

71. Brookhaven National Laboratory, Chemistry Dept., June 20, 1973, "Hydrogen Bond Topology in Liquid Water".
72. Purdue University, Chemistry Dept., Sept. 26, 1973, "Molecular Dynamics Simulation of Liquid Water".
73. Cornell University, Chemistry Dept., Oct. 17, 1973, "Critical Phenomena in Atomic and Molecular Quantum Theory".
74. Cornell University, Chemistry Dept., Oct. 18, 1973, "Molecular Dynamics Study of Liquid Water".
75. Rutgers University, Chemistry Dept., Nov. 20, 1973, "Molecular Dynamics Study of Liquid Water".
76. National Bureau of Standards, June 20, 1974, "Critical Phenomena in Atomic and Molecular Quantum Mechanics. I.".
77. National Bureau of Standards, June 21, 1974, "Critical Phenomena in Atomic and Molecular Quantum Mechanics. II.".
78. Gordon Conference on Water and Aqueous Solutions, Plymouth, NH, Aug. 9, 1974, "Molecular Dynamics - Progress Report".
79. University of Minnesota, Chemistry Dept., Oct. 14, 1974, "Molecular Structure and Properties of Liquid Water".
80. Houston Museum of Natural Sciences (sponsored by Rice University), Welsh Foundation Lecture, Dec. 2, 1974, "Understanding Liquid Water".
81. University of Texas Medical Branch, Galveston, TX, Welsh Foundation Lecture, Dec. 3, 1974, "Understanding Liquid Water".
82. Lamar University, Beaumont, TX, Welsh Foundation Lecture, Dec. 4, 1974, "Understanding Liquid Water".
83. Yeshiva University, Statistical Mechanics Conference, Dec. 12, 1974, "Central Force Models for Water - Molecular Dynamics Studies".
84. University of Colorado, Boulder, CO, Chemistry Dept., Apr. 2, 1975, "Understanding Liquid Water".
85. I.U.P.A.C., Jerusalem, Israel, July 7, 1975, "Construction and Use of Central-Force Models for the Theory of Polyatomic Fluids".
86. Royal Society, London, England, Nov. 13, 1975, "Theoretical Approaches to the Intermolecular Nature of Water".
87. A.C.S. (MARM), Liquids Symposium, Philadelphia, PA, Feb. 24, 1976, "Theory for Hydrogen-Bonded Liquids".
88. SUNY Binghamton, Chemistry-Physics Joint Seminar, Mar. 15, 1976, "Theory for Hydrogen-Bonded Liquids".
89. A.C.S., Debye Award Symposium, New York City, Apr. 7, 1976, "Quantum Chemistry and the Eccentric Behavior of Liquid Water".
90. Princeton University, Chemistry Dept., May 5, 1976, "Simple Theory for Hydrogen-Bonded Liquids".

91. National Bureau of Standards, Gaithersburg, MD, Oct. 7, 1976, "Study of the Gaussian Core Model for Melting".
92. Howard University, Chemistry Dept., Oct. 8, 1976, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
93. Wesleyan University, Chemistry Dept., Oct. 22, 1976, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
94. Pennsylvania State University, Chemistry Dept., Nov. 4, 1976, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
95. University of Rochester, Chemistry Dept., Dec. 1, 1976, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
96. University of Waterloo, Canada, Chemistry Dept., Feb. 22, 1977, "Discriminating Molecular Interactions and Aggregation in Fluorinated Hydrocarbons".
97. University of Delaware, Chemistry Dept., Mar. 9, 1977, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
98. National Bureau of Standards, Apr. 19, 1977, Summary lecture for meeting "Estimation of the Properties of Fluid Mixtures".
99. Yeshiva University, Semi-annual Statistical Mechanics Meeting, May 10, 1977, "Lattice Model for Bilayer Membrane Formation".
100. Proctor and Gamble Laboratories, Cincinnati, OH, Oct. 13, 1977, "Recent Advances in the Theory of Water".
101. Proctor and Gamble Laboratories, Cincinnati, OH, Oct. 13, 1977, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
102. U.C.S.D., La Jolla, CA, Chemistry Dept., Nov. 15, 1977, "Recent Advances in the Theory of Water and Aqueous Solutions".
103. U.S.C., Los Angeles, CA, Chemistry Dept., Nov. 16, 1977, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
104. Rutgers University, Semi-annual Statistical Mechanics Conference, Dec. 16, 1977, "Melting and Freezing Transitions in the Gaussian Core Model".
105. N.Y.U., Physics Dept., Jan. 5, 1978, "Present Status of the Theory of Water".
106. North Carolina State University, Raleigh, NC, Chemistry Dept., Mar. 20, 1978, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
107. University of North Carolina, Chapel Hill, NC, Mar. 21, 1978, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".

108. University of Connecticut, Storrs, CT, Chemistry Dept., Apr. 5, 1978, "Molecular Recognition and Self-Organization in Fluorinated Hydrocarbons".
109. University of Missouri, Rolla, MO, Physics and Chemistry Colloquium, May 11, 1978, "Recent Advances in the Theory of Water and Related Liquids".
110. University of Colorado, Boulder, CO, American Conference on Theoretical Chemistry, June 28, 1978, "Molecular Models for Polarization, Distortion, and Dissociation in Condensed Phases".
111. National Bureau of Standards, Gaithersburg, MD, July 10, 1978, "Melting, Freezing, and Variable Dimension".
112. Rutgers University, Chemistry Dept., Mar. 9, 1979, "Studies of Melting and Freezing".
113. University of Oregon, Eugene, OR, Chemistry Dept., Apr. 23, 1979, "Studies of Proton Chemistry with the Polarization Model".
114. A.C.S. Symposium "Water in Polymers", Washington, DC, Sept. 10, 1979, "Thermal Properties of Water in Restrictive Geometries".
115. Brown University, Chemistry Dept., Oct. 26, 1979, "Bridging Structural Chemistry and Statistical Mechanics with the Polarization Model".
116. A.P.S. short course, New York City Hilton Hotel, Mar. 22, 1980, "Role of Water in Biological Systems. Structure and Function".
117. A.C.S., Houston, TX, Kendall Award Symposium for Howard Reiss, Mar. 26, 1980, "Theory of Micelle Formation".
118. Yale University, Chemistry Dept., Apr. 15, 1980, "Theoretical Modeling of Complex Liquids".
119. Georgia Tech., Chemistry Dept., Apr. 24, 1980, "Theoretical Modeling of Complex Liquids".
120. Jackson State University, Chemistry Dept., Apr. 25, 1980, "Theoretical Modeling of Complex Liquids".
121. National Bureau of Standards, May 19, 1980, "Theory of Micelle Formation".
122. Gordon Conference on Water and Aqueous Solutions, Aug. 5, 1980, "Dissociation and Proton Transfer".
123. Boston University, Physics Dept., Oct. 8, 1980, "Statistical Thermodynamics of Micellar Solutions".
124. Catholic University, joint Chemistry-Physics colloquium, Nov. 5, 1980, "Statistical Thermodynamics of Micellar Solutions".
125. Tenth Annual Statistical Mechanics Meeting, Cocoyoc, Mexico, Jan. 9, 1981, "Structural Aspects of the Melting Transition".

126. University of Maryland, Chemistry Dept., Mar. 25, 1981, "Melting, Freezing, and Hidden Structure in Liquids".
127. University of Maryland, Chemistry Dept., Distinguished Lecturer, Mar. 26, 1981, "Theoretical Modeling for Complex Fluids".
128. Los Alamos Scientific Laboratory, Theoretical Division, Apr. 6, 1981, "Theoretical Modeling for Complex Fluids".
129. University of Illinois, Chemistry Dept., Apr. 22, 1981, "Theoretical Modeling for Complex Fluids".
130. M.I.T., Theoretical Chemistry Seminar, May 20, 1981, "Hidden Structure in Liquids".
131. University of Tennessee, Knoxville, Chemistry Dept., Oct. 6, 1981, "Polarization Model Studies of Gas Phase Neutralization Reactions".
132. Oak Ridge National Laboratory, Chemistry Division, Oct. 7, 1981, "Statistical Mechanical Theory of Micelle Solutions".
133. Rutgers University, 46th Statistical Mechanics Meeting, Dec. 18, 1981, "Statistical Mechanical Modeling for Water and Aqueous Solutions".
134. Bell Labs, 1153 Seminar, Jan. 21, 1982, "Hidden Structure in Liquids".
135. University of Texas, Austin, Chemistry Dept., Feb. 25, 1982, "Polarization Model Studies of Gas Phase Neutralization Reactions".
136. University of Houston, TX, Chemistry Dept., Feb. 26, 1982, "Hidden Structure in Liquids".
137. Joseph E. Mayer Symposium, West Palm Coast, FL, Mar. 10, 1982, "Structure of the Interface Between Coexisting Fluid Phases".
138. Proctor and Gamble Laboratories, Cincinnati, OH, Mar. 12, 1982, "Structure of the Interface Between Coexisting Fluid Phases".
139. University of California, Berkeley, Chemistry Dept., May 18, 1982, "Polarization Model Studies of Gas Phase Neutralization Reactions".
140. VI International Conference on Physics and Chemistry of Ice, Rolla, MO, Aug. 6, 1982, "Ice Under Pressure: Transition to Symmetrical Hydrogen Bonds".
141. Gordon Conference on Water and Aqueous Solutions, Holderness School, Plymouth, NH, Aug. 10, 1982, "Field Theory of Micelles".
142. Columbia University, Chemistry Dept., Oct. 7, 1982, "Field Theory of Micelles".
143. Harvard University, Chemistry Dept., Nov. 10, 1982, "Field Theory of Micelles".
144. 48th Statistical Mechanics Meeting, Rutgers University, Dec. 17, 1982, "Variational Field Theory for Micelles and Membranes".
145. Lehigh University, Chemistry Dept., Jan. 19, 1983, "Field Theory for Micelles and Membranes".

146. Hildebrand Award Symposium (for Jiri Jonas), A.C.S. meeting, Seattle, WA, Mar. 23, 1983, "Inherent Structure and Dynamics in Liquids".
147. University of Rochester, Chemistry Dept., Apr. 18, 1983, "Multiple Isomerism in Liquids and Amorphous Solids".
148. University of Wisconsin, Chemistry Dept., Sept. 13, 1983, "Inherent Structure in Liquids".
149. 50th Semiannual Statistical Mechanics Meeting, Rutgers University, Dec. 16, 1983, "Molecular Packings and the Dynamics of their Interconversions".
150. University of Chicago, Chemistry Dept., Jan. 23, 1984, "Molecular Packings and Their Interconversions in Liquids and Solids".
151. University of Oklahoma, Chemistry Dept., Karcher Lecture, Mar. 1, 1984, "Molecular Packings and Their Interconversions in Liquids and Solids".
152. University of California, Davis, Conference on Statistical Mechanics, Mar. 29, 1984, "Melting, Freezing, and Glass Transitions".
153. Yale University, Chemistry Dept., Trumbull Lecture I, Apr. 6, 1984, "Inherent Structure and Dynamics in Liquids and Solids".
154. A.C.S., St. Louis, MO, Langmuir Award Symposium (for Robert Zwanzig), Apr. 9, 1984, "Molecular Packings and Their Interconversions in Liquids and Solids".
155. Yale University, Chemistry Dept., Trumbull Lecture II, Apr. 13, 1984, "Phase Transitions and How to Avoid Them".
156. Yale University, Chemistry Dept., Trumbull Lecture III, Apr. 20, 1984, "Rate Processes in Condensed Phases".
157. Yale University, Chemistry Dept., Trumbull Lecture IV, Apr. 27, 1984, "Hydrogen Bond Structure in Aqueous Media".
158. Fifth American Conference on Theoretical Chemistry, Jackson Lake Lodge, Grand Teton National Park, WY, June 19, 1984, "Isomeric Packing Theory for Condensed-Matter Structure and Dynamics".
159. University of Pennsylvania, Chemistry Dept., Oct. 4, 1984, "Structure, Kinetics, and Phase Transitions in Condensed Matter".
160. Rahman Festschrift, Argonne National Laboratory, Nov. 13, 1984, "Particle Packings and the Properties of Condensed Phases".
161. National Bureau of Standards, Gaithersburg, MD, Jan. 17, 1985, "Inherent Structures and Their Dynamics in Condensed Phases".
162. U.C.L.A., Chemistry Dept., Feb. 4, 1985, "Physical Chemistry of Liquids and Solids Freed from the Tyranny of Three-Dimensional Thought".
163. A.P.S., Baltimore, MD, Div. of Chem. Phys. Symposium on Order



- and Disorder in Condensed Systems, Mar. 26, 1985, "A Configuration-Space View of Many-Body Structure and Dynamics".
164. NSF Workshop on Supercomputers in Chemistry, Arden House, Harriman, NY, Apr. 26, 1985, "Patterns of Order in Condensed Matter and Their Image Enhancement by Computer".
  165. A.C.S., Miami Beach, FL, C.A. Angell's glass symposium, Apr. 29, 1985, "Supercooling and Vitrification as Challenges to Statistical Mechanics".
  166. A.C.S., Miami Beach, FL, Hildebrand Award Symposium (for Berni Alder), Apr. 30, 1985, "Hard-Sphere Models and the Inherent Structure in Liquids".
  167. Princeton University, Chemistry Dept., May 9, 1985, "Understanding Molecular Order and Kinetics in Liquids, Crystals, and Glasses from a Multidimensional Viewpoint".
  168. Gordon Conference on Liquids, Holderness School, Plymouth, NH, Aug. 23, 1985, "Topographics of Potential Energy Hypersurfaces and Their Implications for Liquids".
  169. A.C.S., Chicago, Interface Symposium, Sept. 9, 1985, "Inherent Structure Theory Applied to Surfaces".
  170. University of Michigan, Chemistry Dept., Sept. 19, 1985, "Molecular Order and Kinetics in Liquids, Crystals, and Glasses: A Multidimensional Perspective".
  171. University of Maryland, Institute for Physical Science and Technology, Nov. 5, 1985, "A Square Model for Glasses".
  172. University of Maryland, Physics Dept., Nov. 5, 1985, "Molecular Order and Kinetics in Liquids, Crystals, and Glasses: A Multidimensional Perspective".
  173. New York Academy of Sciences, Glass Symposium, Dec. 1, 1985, "Statistical Mechanical Modeling for the Glass Transition".
  174. 54th Semiannual Statistical Mechanics Meeting, Rutgers University, Dec. 19, 1985, "A Model for Supercooling and Glass Formation".
  175. Stanford University, Chemistry Dept., Jan. 9, 1986, "Inherent Structure Concepts for Liquids and Their Application to Chemical Reactivity".
  176. University of Nebraska, Chemistry Dept., Washburn Memorial Lecture, Jan. 31, 1986, "Inherent Structures in Liquids: Implications for Chemistry and Materials Science".
  177. Michigan State University, Physics Dept., Feb. 10, 1986, "Tiling, Prime Numbers, and the Glass Transition".
  178. Bell Labs, informal theoretical physics seminar, Feb. 24, 1986, "A

- Simple Model for Glass Formation".
179. Boston College, Chemistry Dept., Mar. 13, 1986, "Structure and Dynamics in Complex Reactive Liquids: A Realistic Model for Sulfur".
  180. U.C. Davis, Statistical Mechanics Conference, Mar. 28, 1986, "A Tiling Model for Supercooling and Glass Formation".
  181. A.C.S., New York City, Hildebrand Award Lecture (to F.H.S.), Apr. 16, 1986, "Theory for Structured and Reactive Liquids: Application to Sulfur".
  182. University of Delaware, Physics Dept., May 7, 1986, "A Tiling Model for Supercooling and Glass Formation".
  183. STATPHYS 16, Boston University, Aug. 12, 1986, "Kinetics in Chemically Reactive Liquids".
  184. University of Minnesota, Chemistry Dept., Oct. 20, 1986, "Kinetic Theory for Chemically Reactive Liquids, with Application to Sulfur".
  185. Alabama A.&M. University, Physics Dept., Oct. 30, 1986, "Inherent Structure Theory of Liquids and Other Amorphous Materials".
  186. Rensselaer Polytechnic Institute, Chemistry Dept., Nov. 13, 1986, "Pure Theory and Impure Computation for a Reactive Liquid: Sulfur".
  187. University of Indiana, Chemistry Dept., Gucker Lecture, Jan. 29, 1987, "Order in the Face of Chaos: Inherent Structures in Dense and Reactive Media".
  188. University of Iowa, Chemistry Dept., Feb. 26, 1987, "Inherent Structure Theory for Static and Dynamic Properties of Liquids and Amorphous Solids".
  189. A.C.S., Denver, CO, Hildebrand Award Symposium (to Stuart Rice), Apr. 6, 1987, "Random Particle Packings and the Liquid State".
  190. A.C.S., Denver, CO, Supercomputers in Chemistry Symposium, Apr. 7, 1987, "Molecular Dynamics with Nonadditive Interactions".
  191. Institute for Theoretical Physics, U.C. Santa Barbara, CA, June 16, 1987, "Kinetics in Glasses and Liquids from a Multidimensional Geometric Point of View".
  192. University of Minnesota, Mathematics Dept., Institute for Mathematics and its Applications, June 29, 1987, "Collective Phenomena in Statistical Mechanics and the Geometry of Potential Energy Hypersurfaces. I. Basic Concepts".
  193. University of Minnesota, Mathematics Dept., Institute for Mathematics

- and Its Applications, June 30, 1987, "Collective Phenomena in Statistical Mechanics and the Geometry of Potential Energy Hypersurfaces. II. Phase Transitions".
194. University of Minnesota, Mathematics Dept., Institute for Mathematics and its Applications, July 1, 1987, "Collective Phenomena in Statistical Mechanics and the Geometry of Potential Energy Hypersurfaces.III. Rate Processes".
  195. A.C.S., New Orleans, LA, Symposium on Phase Transitions and and Disordered States of Matter, Sept. 2, 1987, "Ising-Like Adsorption Models for Inherent Structure in Condensed Phases".
  196. Carnegie-Mellon University, Chemistry Dept., Oct. 8, 1987, "Statistical Mechanics of Supercooled Liquids and Glasses".
  197. Pennsylvania State University, Chemistry Dept., Nov. 5, 1987, "Supercooling, Glass Transitions, and Amorphous Solids".
  198. U.C.L.A., Chemistry Dept., Nov. 9, 1987, "Supercooling, Glass Formation, and the Kauzmann Paradox".
  199. Bell Labs, Division 115 seminar, Jan. 28, 1988, "Inherent Structures Representation for Condensed Matter Phenomena".
  200. University of Houston, Chemistry Dept., Feb. 10, 1988, "Inherent Structures Representation for Condensed Matter Phenomena".
  201. University of Texas, Austin, Chemistry Dept., W.A. Noyes Lecture, Feb. 11, 1988, "Inherent Structures Representation for Condensed Matter Phenomena".
  202. 3rd U.C. Davis Conference on Statistical Mechanics, Mar. 30, 1988, "Unified Approach to Understanding Molecular Glasses".
  203. University of Illinois, Urbana, IL, Chemistry Dept., Sept. 14, 1988, "Inherent Structures in Stable and Supercooled Liquids".
  204. Washington University, St. Louis, MO, Chemistry Dept., Oct. 13, 1988, "Inherent Structures in Stable and Supercooled Liquids".
  205. International Symposium on Fluctuation and Relaxation in Condensed Phase, Kyoto, Japan, Nov. 7, 1988, "Structural Fluctuations and Nucleation in Supercooled Liquids".
  206. University of Maryland, Institute for Physical Science and Technology, Zwanzig Festschrift Symposium, Nov. 18, 1988, "Fragile Glasses and Crystal Nucleation".
  207. Harvard-M.I.T. Joint Physical Chemistry Seminar, Feb. 9, 1989, "Potential Energy Hypersurfaces and Their Role in Glass Formation".
  208. A.P.S. meeting, St. Louis, MO, Irving Langmuir Prize Lecture (to F.H.S.), Mar. 21, 1989, "Glass Relaxation and the Cartography of Potential Energy Hypersurfaces".

209. Los Alamos National Laboratory, Theoretical Physics Division, June 2, 1989, "Relaxation Behavior in Atomic and Molecular Glasses".
210. M.I.T., 60th Birthday Symposium for Irwin Oppenheim, June 23, 1989, "The Kauzmann Paradox".
211. General Electric Corporate R&D Center, Schenectady, NY, Oct. 3, 1989, "Inherent Structures in Condensed Phases".
212. Rutgers Statistical Mechanics Conference, Dec. 14, 1989, "A Toy Model for Crystallization".
213. U.C.L.A., Chemistry Dept., Regents Lecture, Jan. 8, 1990, "Metastable States of Matter. I. Introduction and Survey".
214. U.C.L.A., Chemistry Dept., Regents Lecture, Jan. 10, 1990, "II. Metastable States of Water".
215. U.C.L.A., Chemistry Dept., Regents Lecture, Jan. 16, 1990, "III. The Glass State (Part 1)".
216. U.C.L.A., Chemistry Dept., Regents Lecture, Jan. 17, 1990, "IV. The Glass State (Part 2)".
217. U.C.L.A., Chemical Engineering Dept., Regents Lecture, Jan. 24, 1990, "V. Clusters and Droplets".
218. U.C.L.A., Chemistry Dept., Regents Lecture, Jan. 26, 1990, "VI. Nucleation".
219. University of Chicago, Physical Chemistry Seminar, Mar. 7, 1990, "Some Recent Thoughts About Inherent Structures in Liquids".
220. University of Illinois, Chicago, Chemistry Dept., Mar. 8, 1990, "Transition Dynamics in 55-Atom Clusters".
221. N.Y.U., Courant Institute, Mar. 27, 1990, "Condensed Matter Phenomena from the Inherent Structures' Viewpoint".
222. Ohio State University, Chemistry Dept., first of two Meek Industrial Lectures, May 7, 1990, "Cluster Dynamics from the Inherent Structure Viewpoint".
223. Ohio State University, Chemistry Dept., second of two Meek Industrial Lectures, May 8, 1990, "Science in the Next Century".
224. Santa Fe Institute, May 21, 1990, "Nonlinear Optimization Strategies for the Protein Folding Problem".
225. A.T.&T. Bell Labs, lunchtime lecture for summer students, June 26, 1990, "Science in the Next Century".
226. Rutgers University, Hill Center, H.L. Frisch Symposium, Dec. 19, 1990, "Irregular Disk and Sphere Packings".
227. University of Maryland, Institute for Physical Science and Technology, Feb. 19, 1991, "A Theoretical View of the Protein

Folding Problem".

228. A.P.S., Cincinnati, OH, Mar. 18, 1991, "Planck's Constant Expansions for Atomic and Molecular Eigenstates".
229. Columbia University, Chemistry Dept., Apr. 4, 1991, "A Theoretical View of the Protein Folding Problem".
230. McGill University, Canada, Center for the Physics of Materials, Apr. 11, 1991, "Condensed Matter Phenomena from the 'Inherent Structures' Viewpoint".
231. Howard University, Chemistry Dept., Apr. 19, 1991, "Inherent Structures in Liquids".
232. Bell Labs, Condensed Matter Seminar, May 8, 1991, "The 'Inherent Structures' Description of Condensed Matter Phenomena".
233. Bilateral Workshop (NAS-ASUSSR) on Proteins and Glasses, Chernogolovka, Russia, June 6, 1991, "Potential Energy Hypersurfaces and Relaxations in Proteins and Glasses".
234. Boston University, Physics Colloquium, Oct. 2, 1991, "A Physicist's View of the Protein Folding Problem".
235. N.I.H., Bethesda, MD, Dec. 5, 1991, "Theoretical Aspects of the Protein Folding Problem".
236. Bell Labs, Division 115 Seminar, Feb. 6, 1992, "A Theoretical Assault on the Liquid Water Problem".
237. Florida State University, Joint Physical Chemistry and Biochemistry Seminar, Mar. 5, 1992, "Theoretical Aspects of the Protein Folding Problem".
238. Florida State University, Chemistry Dept. seminar, Mar. 6, 1992, "Understanding the Peculiar Nature of Water".
239. A.P.S., Indianapolis (talk K17 1, 10 min.), Mar. 18, 1992, "An Orientational Perturbation Theory for Water".
240. University of Wisconsin, Chemistry Dept., McElvain Lecture, Mar. 24, 1992, "Toward a Theory of Liquid Water".
241. A.C.S., San Francisco, Debye Award Lecture (to F.H.S.), Apr. 7, 1992, "Toward a Rational Theory of Liquid Water".
242. Barnard-Columbia Physics Colloquium, Sept. 18, 1992, "Inherent Structures in Liquids".
243. University of Chicago, Chemistry Dept., 60th Birthday Symposium for Stuart Rice, Sept. 24, 1992, "A Toy Model for Protein Folding".
244. University of Michigan, Dept. of Chemistry, Gomberg Lecture, Oct. 13, 1992, "Liquid Water: What is It?".
245. Carnegie-Mellon University, Physics Dept., Nov. 30, 1992, "Some Examples of Two-Dimensional Melting".

246. Carnegie-Mellon University, Physics Dept. Colloquium, Nov. 30, 1992, "A Toy Model for Protein Folding".
247. Rutgers University, Physics Colloquium, Dec. 9, 1992, "Inherent Structures in Liquids and Glasses".
248. University of North Carolina, Chemistry Dept., Mar. 4, 1993, "A Toy Model for Protein Folding".
249. A.P.S., Seattle, WA (talk R20 4, 10 min.), Mar. 26, 1993, "Phase Transitions in a Dimer Buckling Model for Si(001)".
250. A.T.&T. Bell Labs, Solid State Physics Seminar, Apr. 16, 1993, "Toy Model for Protein Folding".
251. 69th Semiannual Statistical Mechanics Meeting, Rutgers University, 25 min. invited talk, May 6, 1993, "Inherent Structures in Liquids and Solids".
252. 8th American Conference on Theoretical Chemistry, University of Rochester, June 29, 1993, "A Toy Model for Protein Folding".
253. A.C.S., Chicago, Aug. 24, 1993, "Lessons from a Toy Model for Protein Folding".
254. Benjamin Levich Institute, CUNY, Nov. 30, 1993, "Molecular Structure and Motion in Glass-Forming Liquids".
255. A.P.S., Pittsburg, PA, Mar. 21, 1994, "Equilibrium Concentration of Point Defects in Crystalline  $^4\text{He}$  at 0K".
256. A.P.S., Pittsburg, PA, Mar. 23, 1994, "Weak Crystallization in the Gaussian Core System".
257. SIAM (Society for Industrial and Applied Mathematics), San Diego, CA, July 27, 1994, "Sobering Lessons from a Simple Protein Folding Model".
258. NIST Workshop on Glasses, Stevensville, MD, Feb. 16, 1995, "Inherent Structures Representation for Supercooled Liquids and Their Glass Transitions".
259. A.P.S., San Jose, CA, Mar. 23, 1995, "Statistical Mechanics of Metastable Matter. Superheated and Stretched Liquids".
260. A.C.S., Anaheim, CA, Apr. 4, 1995, "Mathematical Challenges from Theoretical/Computational Chemistry".
261. Princeton Materials Institute, Workshop on Computational Modeling of Materials, May 9, 1995, "Modeling Amorphous Materials and Their Physical and Chemical Transformations".
262. 73rd Semiannual Statistical Mechanics Meeting, Rutgers University, May 11, 1995, "Statistical Mechanics for Metastable Matter".
263. Institute for Mathematics and its Applications, University of Minnesota, Sept. 22, 1995, "Sphere Packing Phenomena: From the

Obvious to the Puzzling".

264. Institute for Mathematics and its Applications, University of Minnesota, Sept. 22, 1995, "Superheated, Supercooled, and Stretched Matter".
265. University of Illinois, Urbana, Chemistry Dept., Sept. 25, 1995, "Living in a Metastable World: Superheated, Supercooled, and Stretched Matter".
266. University of California, Berkeley, Ninth Annual Pitzer Lecture, Chemistry Dept., Mar. 12, 1996, "Superheated, Supercooled, and Stretched Matter".
267. Courant Institute, N.Y.U., Mar. 29, 1996, "Rugged Potential Energy Landscapes and Their Role in Condensed Matter Phenomena".
268. American Ceramic Society, Indianapolis, Amorphization Mechanisms Symposium, Apr. 15, 1996, "Diffusion, Viscosity, and Rugged Landscapes".
269. Wesleyan University, Chemistry Dept., 1996 Leermakers Symposium honoring John A. Pople, May 7, 1996, "Inherent Structures in Liquids and Solids".
270. Los Alamos Scientific Laboratory, Landscape Paradigm Workshop, May 13, 1996, "Interaction Potentials and Inherent Structures in Liquids, Glasses, and Crystals".
271. National Research Council, Board on Mathematical Sciences Workshop: Actions for the Mathematical Sciences in the Changed Environment, Alexandria, VA, May 17, 1996, "Physical Scientists are from Mars, Mathematicians are from Venus; How on Earth can We Communicate?".
272. A.C.S., Orlando, FL, Supercooled Liquids Symposium, Aug. 26, 1996, "Shear Viscosity and Diffusion in Supercooled Liquids".
273. Boston College, Chemistry Dept., Mar. 20, 1997, "Living in a Metastable World: A Theoretical Perspective".
274. N.I.S.T., Ray Mountain 60th Birthday Symposium, Apr. 10, 1997, "Inherent Structures and Condensed Matter Phenomena".
275. University of Pennsylvania, Center for Molecular Modeling, May 19, 1997, "Metastable States of Condensed Matter".
276. Gordon Conference on Chemistry and Physics of Liquids, Holderness School, Plymouth, NH, Aug. 5, 1997, "Tutorial on Rugged Potential Energy Landscapes and Inherent Structures".
277. N.I.S.T., Gaithersburg, MD, E.A. DiMarzio 65th Birthday Symposium, Nov. 6, 1997, "Some Remarks about Glass Transitions".
278. Princeton Materials Institute, Princeton University, Dec. 3, 1997,

- "Supercooling and Glass Formation".
279. Rutgers Statistical Mechanics Meeting, Widom and Kadanoff birthdays (70 and 60, respectively), Dec. 15, 1997, "Hijacking Solid State Concepts for Liquids".
  280. A.P.S., Los Angeles, CA, Water Symposium, Mar. 17, 1998, "Resolving Vibrational and Inherent Structural Contributions to Water Properties".
  281. A.P.S., Los Angeles, CA, Rugged Energy Landscapes Symposium, Mar. 17, 1998, "Insights and Predictions for Liquids from the Inherent Structure Viewpoint".
  282. University of Chicago, Chemistry Dept. Colloquium, May 11, 1998, "Insights and Predictions for Liquids from the Inherent Structure Viewpoint".
  283. West Coast Theoretical Chemistry Conference (WCTCC98), P.N.N.L., Richland, WA, June 22, 1998, "The 'Rugged Landscape' View of Condensed Matter Interactions and Statistical Mechanics".
  284. Gordon Conference on Water and Aqueous Solutions, Holderness School, Plymouth, NH, Aug. 6, 1998, "Imagination, Hallucination, Obsession, and Water Science".
  285. A.C.S. National Meeting, Boston, MA, 20th Anniversary Symposium for the Theoretical Chemistry Subdivision, Aug. 27, 1998, "The Inherent Structures Approach as an Interpretive Tool for Condensed Matter Theory".
  286. 81st Semiannual Statistical Mechanics Meeting, Rutgers University, H.L. Frisch 70th Birthday Symposium, Dec. 15, 1998, "Hard Particles, Hard Problems".
  287. National Research Council, Academy-Industry Program Forum, entitled: How Much Can We Rely on Mathematical Modeling?, at NAS building, May 10, 1999, "Mathematical Modeling in the Physical Sciences: Triumphs and Pitfalls".
  288. Gordon Conference on Chemistry and Physics of Liquids, Holderness School, Plymouth, NH, Aug. 3, 1999, "Tutorial on Fundamental Concepts, Strategies, and Terminology in Liquids Science".
  289. A.C.S. National Meeting, New Orleans, LA, Water and Water Clusters Symposium, Aug. 22, 1999, "Water Anomalies Analyzed from the 'Rugged Potential Landscape' Viewpoint".
  290. University of California, Berkeley, Pitzer Memorial Symposium on Theoretical Chemistry, Jan. 12, 2000, "Inherent Structures and Their Excitations".
  291. AAAS Annual Meeting, Washington, DC, Symposium entitled:



- The Role of Water for Life in Precarious Circumstances, Feb. 19, 2000, "Introductory Remarks".
292. N.I.S.T., Center for Theoretical and Computational Materials Science, Gaithersburg, MD, Feb. 24, 2000, "Inherent Structures and Their Excitations".
  293. A.P.S., Minneapolis, MN, Mar. 24, 2000, "Møller-Plesset Convergence Issues in Computational Quantum Chemistry".
  294. A.C.S., San Francisco, CA, Mar. 28, 2000, "Multidimensional Potential Surface for Water and Its Implications".
  295. Columbia University, Chemistry Dept., B.J. Berne 60th Festschrift, June 2, 2000, "Molecular Dynamics and the Electron Correlation Problem".
  296. NORM 2000 (regional A.C.S. meeting), Idaho Falls, ID, June 16, 2000, "Coupling Constant Singularities in Møller-Plesset Theory for Atoms and Molecules".
  297. Pennsylvania State University, Chemical Engineering Dept., Nov. 28, 2000, "Glasses, the Third Law of Thermodynamics, and the Kauzmann Paradox".
  298. Princeton University, Chemical Engineering Dept., Dec. 1, 2000, "Weird Science: The Gaussian Core Model".
  299. Princeton University, Chemistry Dept., Dec. 7, 2000, "Glasses, the Third Law of Thermodynamics, and the Kauzmann Paradox".
  300. A.C.S., San Diego, CA, a Karplus award session, Apr. 1, 2001, "Strip-Mining the Energy Landscape for Physical Insights".
  301. Princeton University, Chemical Engineering Dept., Oct. 25, 2001, "Computational Sampling of Landscapes".
  302. 87th Semiannual Statistical Mechanics Conference, Rutgers University, May 19, 2002, "Unusual Properties of the Classical Gaussian Core Model".
  303. Norwegian University of Science and Technology (NTNU), Trondheim, Norway, 2002 Onsager Lecture, Sept. 19, 2002, "Polymers, Gaussian Core Model Dualities, and Inverse Melting".
  304. CUNY, Physics Dept., Oct. 30, 2002, "Polymers, the Gaussian Core Model, and Inverse Melting".
  305. 88th Semiannual Statistical Mechanics Meeting, Rutgers University, Dec. 16, 2002, "Inverse Melting".
  306. Princeton University, Chemistry Dept., Water Festival, Jan. 6, 2003, "Multidimensional Potential Energy Landscape for Water, and Its Implications".
  307. University of Kansas, Chemistry Dept., Apr. 4, 2003, "Glasses,

- Inverse Melting, and Protein Unfolding".
308. Yale University, Chemistry Dept., Onsager 100th Birthday Symposium, Dec. 5, 2003, "Inverse Melting and the Onsager Influence".
  309. SUNY, Stony Brook, Chemistry Dept., George Stell's Retirement Symposium, Apr. 24, 2004, "Hard Sphere Packing Properties and Problems".
  310. 91st Semiannual Statistical Mechanics Conference, Rutgers University, May 16, 2004, "Pair Correlation Function Realizability Problems".
  311. University of California, Berkeley, David Chandler 60th Birthday Statistical Mechanics Meeting, Jan. 8, 2005, "Potentials, Structures, and Self Assembly".
  312. Honolulu, HI, Pacifichem 2005, Dec. 19, 2005, "Inherent Structure View of Interface Properties".
  313. University of California, Berkeley, 2006 Mini Statistical Mechanics Meeting, Jan. 15, 2006, "Hard Sphere Pair Correlation Via Scaled Particle Theory".
  314. Yale University, Mechanical Engineering Dept., Apr. 5, 2006, "Inventing Particle Interactions for Targeted Self-Assembly".
  315. Boston University, Chemistry Dept., Dec. 13, 2006, "Inventing Particle Interactions for Targeted Self-Assembly".
  316. Princeton University, PCTS Workshop: Packing Problems, Classical Ground States, and Glasses, Apr. 12, 2007, "Configurational Polytopes Near the Jamming Limit".
  317. 101st Semiannual Statistical Mechanics Conference, Rutgers University, May 10, 2009, "Modeling Prebiotic Appearance of Biological Chirality".
  318. Faraday Discussion 146, Richmond, VA, Apr. 14, 2010, "Concluding Remarks".
  319. A.C.S., 240th National Meeting, Boston, MA, 70th Birthday Symposium for Bruce Berne, Aug. 23, 2010, "Microscopic Kinetic Model Exhibiting Chiral Symmetry Breaking".
  320. Princeton University, PCTS Workshop: Toward Unifying Concepts in the Physics of Aperiodic Systems, Oct. 15, 2011, "Glass Transition 'Issues' ".
  321. A.C.S., New Orleans, LA, Awards Symposium (Theoretical Chemistry Award to F.H.S.), Apr. 9, 2013, "Symmetry Breaking Models for Pre-Biotic Environments".
  322. Mt. Hood, OR, FOMMS (Foundations of Molecular Modeling and

- Simulation) 2015 Meeting, July 22, 2015, Keynote Address, "Chiral Symmetry Breaking via Computer Simulation".
323. 115th Semiannual Statistical Mechanics Conference, Rutgers University, May 8, 2016, "Molecular Model for Chiral Symmetry Breaking".
  324. A.C.S., San Francisco, CA, Hildebrand Award Symposium (for S. Torquato), Apr. 3, 2017, "Hard Spheres Under Gravity".
  325. A.C.S., Washington, DC, Benjamin Widom's 90th Birthday Symposium, Aug. 20, 2017, "Chiral Symmetry Breaking in Isotropic Liquids".
  326. Washington University, St. Louis, MO, 53rd Joseph W. Kennedy Lecture (first of two), May 3, 2018, "Metastable States of Water: A 'Landscape' View".
  327. Washington University, St. Louis, MO, 53rd Joseph W. Kennedy Lecture (second of two), May 4, 2018, "Spontaneous Chiral Symmetry Breaking in Liquids".