

CURRICULUM VITAE

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Birth: Shanghai, China, November 1, 1931.
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EDUCATION:

1952 B.S. (in Electrical Engineering), University of Illinois, Urbana, Illinois.
1953 M.S. (in Electrical Engineering), University of Illinois, Urbana, Illinois.
1957 Ph.D. (in Electrical Engineering), University of Illinois, Urbana, Illinois.
1962 Ph.D. (in Physics), Brown University, Providence, Rhode Island.

ACADEMIC AND RESEARCH POSITIONS:

1962-64: Research Associate, Theoretical Group, Lawrence Radiation Laboratory, University of California, Berkeley, California.
1964-66: Visiting Member, Institute for Advanced Study, Princeton, New Jersey.
1966-71: Assistant Professor, Institute for Theoretical Physics, State University of New York at Stony Brook, Stony Brook, New York.
1971-74: Associate Professor, Department of Physics, University of Oregon, Eugene, Oregon.
1974-97: Professor, Department of Physics, University of Oregon, Eugene, Oregon.
1997- Professor Emeritus, Department of Physics, University of Oregon, Eugene, Oregon.

HONORS:

1962: Graduation with Higher Honor, University of Illinois.

1995: Fellow, American Physical Society.

2008: Outstanding Referee, American Physical Society.

2013: Excellence in Reviewing, Nuclear Physics A.

ADMINISTRATIVE POSITIONS:

1973-77 & 1979-84: Director, Institute of Theoretical Science, University of Oregon, Eugene, Oregon.

EDITORSHIP

1985-2008 Associate Editor, International Journal of Modern Physics A.

1986-2008 Associate Editor, Modern Physics Letter A.

PROFESSIONAL SERVICE:

1969: Member, Organizing Committee, Third International Conference on High Energy Collisions, Stony Brook, N.Y., September 5-6, 1969.

1980: Member, Organizing Committee, 20th International Conference on High Energy Physics, Madison, Wisc., July 17-23, 1980.

1983: Member, Organizing Committee, 14th International Symposium on Multiparticle Dynamics, Granlibakken, Lake Tahoe, CA, June 22-27, 1983.

1985: Chairman, Organizing Committee, 1985 Annual Meeting of the Division of Particles and Fields of the American Physical Society, Eugene, Oregon, August 12-15, 1985.

1987: International Coordinator and Program Organizer, Shandong Workshop on Multiparticle Production, Jinan, Shandong, China, June 28-July 6, 1987.

1988: Member, Organizing Committee, Perugia Workshop on Multiparticle Production Perugia, Italy, June 21-28, 1988.

1989: Coordinator, Symposium/Workshop on Relativistic Heavy Ion Collisions, Academia Sinica and CCAST-World Laboratory, Beijing, China, June 1-13, 1989.

1990: Member, Organizing Committee, Santa Fe Workshop on Intermittency in High Energy Collisions, Santa Fe, New Mexico, March 18-21, 1990.

1991: Member, Organizing Committee, Workshop on Fluctuations and Fractal Structure, Ringberg Castle, Germany, June 24-29, 1991.

1991: Member, International Advisory Committee and Organizing Committee, 21st International Symposium on Multiparticle Dynamics, Wuhan, China, September 1991.

1993: Member, Organizing Committee, Workshop on Soft Physics and Fluctuations, Krakow, Poland, May 4-7, 1993.

- 1995:** Member, Organizing Committee, Workshop on Correlations and Fluctuations, Nijmegen, Netherland, July, 1996.
- 1996:** Member, International Advisory Committee, 3rd International Symposium on Quark Gluon Plasma and Astrophysics, Jaipur, India, March 1997.
- 1997:** Member, Organizing Committee, Workshop on Correlations and Fluctuations, Matrahaza, Hungary, June, 1998.
- 1998-2000:** Member, American Physical Society's Committee on International Freedom of Scientists.
- 2000-2003:** Member, International Advisory Committee, International Symposium on Multiparticle Dynamics:
- 30th ISMD, October 2000, Lake Balaton, Hungary
 - 31st ISMD, September 2001, Datong, China
 - 32nd ISMD, September 2002, Alushta, Crimea, Ukraine
 - 33rd ISMD, September 2003, Krakow, Poland
- 2003:** Organizer, Workshop on Quark Recombination, December 2003, Institute of Nuclear Theory, University of Washington, WA, USA

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EDITED VOLUMES

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- *Multiparticle Production*, Proceedings of the Shandong Workshop, (with Xie Qu-bing) (World Scientific, Singapore, 1988).
- *Multiparticle Production*, Proceedings of the Perugia Workshop, (with G. Pancheri and Y. Srivastava) (World Scientific, Singapore, 1989).
- *Relativistic Heavy-Ion Collisions*, vol. 7 of CCAST Symposium/Workshop Proceedings (with C. S. Gao and M. H. Ye) (Gordon and Breach, New York, 1990).
- *Quark-Gluon Plasma*, vol. 6 in Advanced Series on Directions in High-Energy Physics (World Scientific, Singapore, 1990).
- *Intermittency in High Energy Collisions*, Proceedings of the Santa Fe Workshop (with F. Cooper and I. Sarcevic) (World Scientific, Singapore, 1991).
- *Fluctuations and Fractal Structure*, Proceedings of the Ringberg Workshop on Multiparticle Production (with W. Ochs and N. Schmitz) (World Scientific, Singapore, 1992).

- *Soft Physics and Fluctuations*, Proceedings of the Cracow Workshop on Multiparticle Production (with A. Białas, K. Fialkowski and K. Zalewski) (World Scientific, Singapore, 1994).
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- *Correlations and Fluctuations*, Proceedings of the Nijmegen Workshop on Multiparticle Production (with W. Kittel, W. J. Metzger, and D. J. Schotanus) (World Scientific, Singapore, 1997).
- *Quark-Gluon Plasma 3*, with X.N. Wang (World Scientific, Singapore, 2004).
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ARTICLES

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2. Interpretation of Pion-Hyperon Resonances, *Nuovo Cimento* **23**, 914-918 (1962). (with D. Feldman).
3. Study of Pion-Hyperon Resonances by Dispersion Relations in the Unphysical Sheet, *Ann. Phys. (N.Y.)* **24**, 453-493 (1963). (with D. Feldman).
4. Singularities in the Unphysical Sheets and the Isobar Model, *Phys. Rev.* **130**, 2580-2592 (1963).
5. On the Analytic Structures of Production Amplitudes, *Phys. Rev.* **134**, B1086-1098 (1964).
6. An Iteration Method in the S-Matrix Theory, *Phys. Rev.* **136**, B1525-1532 (1964).
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8. Minimal Bootstrap in Meson-Baryon Systems, *Phys. Rev.* **138**, B933-937 (1965). (with S.H. Patil).
9. Bootstrap and SU(3) Assignment of 2^+ Mesons, *Phys. Rev.* **139**, B969-872 (1965). (with S.H. Patil).
10. Bootstrap Algebra for Mesons, *Phys. Rev.* **140**, B1586-1591 (1965). (with S.H. Patil)
11. Group Embedding for the Harmonic Oscillator, *Phys. Rev.* **145**, 1188-1195 (1966). (with J. Nuyts).
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83. Connection between QCD and Regge Intercept, Phys. Rev. Lett. **50**, 305 (1983).
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85. Proton Fragmentation in Deep Inelastic Scattering: A Treatment in the Valon-Recombination Model, Zeit. Phys. C **20**, 27 (1983). (with M. S. Zahir).
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87. Partons in Nuclear Collisions Before Recombination, Proc. of the 14th International Symposium on Multiparticle Dynamics, Lake Tahoe, CA, 1983, ed. by P. Yager and J. Gunion (World Scientific, Singapore, 1984), p. 746.

88. Structure and Interactions of Harons, Proc. of the First Asia-Pacific Physics Conference, Singapore 1983, Edited by A. Arima et al. (World Scientific, Singapore, 1984), Vol. 2, p 896.
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33. Time Evolution of Partons in the Nuclear Fragmentation Region, Sixth High Energy Heavy Ion Study and Second Workshop on Anomalons, Berkeley, California, June 1983.
34. A Parton Description of Nucleus-Nucleus Collisions, Quark Matter '83, Brookhaven National Laboratory, Upton, NY, September 1983.
35. Formation and Signatures of Quark-Gluon Plasma, Annual Meeting of the Division of Particles and Fields, American Physical Society, Eugene, Oregon, August 1985.
36. Dilepton Production at RHIC, RHIC Workshop, Experiments for a Relativistic Heavy Ion Collider, April 1985, Proc. edited by Haustein and Woody, BNL51921, Brookhaven National Laboratory, Upton, NY.

37. Initial Temperature in Ultrarelativistic Nuclear Collisions, 21st Rencontre de Moriond, Les Arcs, France, March 1986.
38. Approaches to the Thermalization Problem, 2nd International Workshop on Local Equilibrium in Strong Interaction Physics, Santa Fe, New Mexico, April 1986.
39. Minijets, Soft Processes and all that, Multiparticle Dynamics Workshop, Aspen Center for Physics, Aspen, Colorado, August 1986.
40. Transverse Momentum from Collective Expansion and Minijets, 22nd Rencontre de Moriond, Les Arcs, Savoie, France, 1987.
41. Comparative Survey of Theoretical Approaches, Shandong Workshop on Multiparticle Production, Jinan, China, June 1987.
42. Multiplicity Fluctuations in Nuclear Collisions, Quark Matter '87, Sixth International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions, Schloss Nordkirchen, W. Germany, August 1987.
43. Geometrical Scaling, Furry Branching, and Minijets, Second International Conference on Elastic and Diffractive Scattering, New York, October 1987.
44. Multiplicity Fluctuation as a Possible Signature for Collective Effects, International Conference on Physics and Astrophysics of Quark-Gluon Plasma, Bombay, India, February 1988.
45. Expectations and Realities in Relativistic Heavy-Ion Collisions, International Conference on Medium- and High-Energy Nuclear Physics, Taipei, May 1988.
46. Average Transverse Momentum in the Geometrical Branching Model with Jets, 19th International Symposium on Multiparticle Dynamics, Arles, France, June 1988.
47. Recent Developments in the Geometrical Branching Model, Workshop on Multiparticle Dynamics, Perugia, Italy, July 1988.
48. Towards a Unification of the Geometrical, Stochastic and Dynamical Properties of Hadronic Matter in Collision, International Conference on Hadronic Matter in Collision, Tucson, Arizona, October 1988.
49. Intermittency and Fractals in Multiparticle Dynamics, Third Conference on Elastic and Diffractive Scattering, Evanston, Illinois, May 1989.
50. Aspects of Relativistic Heavy-Ion Collisions, CCAST (World Laboratory) Symposium/Workshop on Relativistic Heavy-Ion Collisions, Beijing, China, June 1989.
51. An Overview on Intermittency in High-Energy Collisions, Summary talk at Workshop on Intermittency in High-Energy Collisions, Santa Fe, NM, March 1990.
52. Self-Similarity in Multiplicity Fluctuations, Quark Matter 90, Menton, France, May 1990.
53. Multifractal Structure in Multiparticle Production, CAMP, Marburg, Germany, May 1990.
54. Intermittency, Multifractality and Hadronic Collisions, Ringberg Workshop, Ringberg Castle, Germany, June 1991.

55. Fractal Interpretation of Intermittency, Review talk at the 21st International Symposium on Multiparticle Dynamics, Wuhan, China, September 1991.
56. J/ψ Suppression, Intermittency and Phase Transition, 22nd International Symposium on Multiparticle Dynamics, Santiago de Compostela, Spain, July 1992.
57. Multiplicity Fluctuations, Intermittency and Phase Transition, a set of three lectures given at the Fall School on Fractal Phenomena in Complex Systems: from Particle Physics to Astronomy, Lisbon, Portugal, November 1992.
58. Fluctuations in Hadron Observables in Phase Transition, Workshop on the Rapidity Acceptance of the Dedicated Heavy Ion Detector, CERN, Geneva, February 1993.
59. Scaling Properties in Hadronic Observables of Phase Transitions, Krakow Workshop on Multiparticle Production, Krakow, Poland, May 1993.
60. Intermittency and Correlations in ECCO, Krakow Workshop, *loc. cit.*.
61. What can we learn from fluctuations in heavy-ion collisions? Europhysics Conference on High Energy Physics, Marseille, July, 1993.
62. Hadronic Observables of Quark-Hadron Phase Transition, ITP Conference on Strong Interactions at Finite Temperature, Santa Barbara, August 1993.,
63. Soft Interaction, Intermittency and Phase Transition, Workshop on Pre-equilibrium Parton Dynamics, LBL, Berkeley, August 1993.
64. Theoretical Reviews of Intermittency, 23rd International Symposium on Multiparticle Dynamics, Aspen, Sept. 1993.
65. Intermittency and Other Scaling Behaviors in Nuclear Collisions, NATO Advanced Research Workshop, Divonne, June 1994.
66. Continuation of F_q to Noninteger q , 24th International Symposium on Multiparticle Dynamics, Vietri, Italy, Sept. 1994.
67. Cluster Growth in Heavy-Ion Collisions, *loc cit.*.
68. Self-Organized Criticality in Quark-Hadron Phase Transition, Quark-Matter 95, Monterey, CA, January 1995.
69. An Overview of Intermittency and Beyond, Workshop on QCD: Confinement, Collisions, and Chaos, Paris, France, June, 1996.
70. Chaotic Behaviors of QCD Branching Processes, *loc cit.*.
71. Criticality, Erraticity and Chaoticity in Strong Interaction, Workshop on Multiparticle Production: Correlations and Fluctuations, Nijmegen, The Netherlands, July 1996.
72. Summary of the Nijmegen Workshop on Multiparticle Production, *loc cit.*.
73. Critical and Chaotic Behaviors of Quarks, 26th International Symposium on Multiparticle Dynamics, Faro, Portugal, September, 1996.

74. Chaotic Behaviors of Quarks and Gluon Jets, Workshop on Ultrarelativistic Nuclei: From Structure Functions to the Quark-Gluon Plasma, Institute of Nuclear Theory, University of Washington, Seattle, September 1996.
75. Chaotic Behaviors of Quarks, Workshop on the State of Physics at the end of the 20th Century, Pete Fest, Santa Fe, October, 1996.
76. Scaling Behavior of Multiplicity Differences in Quark Hadron Phase Transition, 27th International Symposium on Multiparticle Dynamics, Frascati, Italy, September, 1997.
77. J/ψ Suppression Due to Gluon Depletion, 27th International Symposium on Multiparticle Dynamics, Frascati, Italy, September 1997.
78. Chaos as a Signature of Quark-Hadron Phase Transition, lecture at the Les Houches Workshop on Nuclear Matter in Different Phases and Transitions, Les Houches, France, March 1998.
79. Chaos, Phase Transition and Cardiac Pathology, Workshop on Multiparticle Production *Correlations and Fluctuations 98*, Matrahaza, Hungary, June 1998.
80. ECOMB: A Color Mutation Model of Soft Interaction, Workshop on Multiparticle Production *Correlations and Fluctuations 98*, Matrahaza, Hungary, June 1998.
81. The Possible role of Gluon Depletion in J/ψ Suppression, Workshop on *Quarkonium Production in Relativistic Nuclear Collisions*, Institute of Nuclear Theory, University of Washington, Seattle, WA, May 1998.
82. Hadronic Signature of Critical Behavior and Final State Randomization. *Quark Matter '99*, Torino, Italy, May 1999.
83. Critical Behavior of Quark-Hadron Phase Transition, *International Symposium on Multiparticle Dynamics*, Brown University, Providence, R.I., September 1999.
84. Color Mutation Model, Intermittency, and Erraticity, *International International Symposium on Multiparticle Dynamics*, Brown University, Providence, R.I., September 1999.
85. Observable Measures of Critical Behavior in High-energy Nuclear Collisions, CRIS 2000 *Phase Transitions in Strong Interactions: Status and Perspectives*, Acicastello, Italy, May 2000.
86. Fluctuations of Gaps and Voids, *New Frontier in Soft Physics and Correlations on the Threshold of the Third Millennium*, Torino, Italy, June 2000.
87. Gluon Depletion and J/ψ Suppression in pA collisions, *From e^+e^- to Heavy Ion Collisions*, 30th Int. Symp. on Multiparticle Dynamics, Tihany, Hungary, 2000.
88. Gap Analysis for Critical Fluctuations, *Workshop on Correlations and Fluctuations in QCD* Crete, Greece, 2002.
89. Fluctuations in Human Electroencephalogram, *Workshop on Correlations and Fluctuations in QCD* Crete, Greece, 2002.
90. A Universal Approach to the Study of Nonlinear Systems, invited talk at the Second International Conference on Frontier of Science "A Nonlinear World: The Real World" in Pavia, Italy, 2003.

91. Stroke detection based on the scaling properties of human EEG, Frontier Science 2003, Pavia, Italy, September 2003.
92. Oregon model on recombination, Organizer of and speaker at Mini-Workshop on Quark Recombination/Coalescence, INT, Seattle, WA, December 2003.
93. Fragmentation or Recombination at High p_T ?, talk given at Quark Matter 2004, Oakland, CA, January 2004.
94. Intermediate p_T at RHIC: from Soft to Hard Physics, invited talk given at RHIC and AGS Users' Meeting at BNL, May 2004.
95. Puzzles at High p_T at RHIC and their Resolutions, invited talk at the Int. Symposium on Multiparticle Dynamics, Sonoma, CA, July 2004,
96. Forward Production by Parton Recombination, invited talk at Forward Physics Meeting, University of Kansas, Lawrence, KS, October 2004.
97. Parton Recombination at all p_T , plenary talk at Hard Probes 2004, Lisbon, Portugal, November 2004.
98. Parton and hadron correlations in jets, RIKEN Workshop on jet correlations, Brookhaven National Laboratory, March 2005.
99. Correlation at intermediate p_T , invited talk at MIT Workshop on Correlations and Fluctuations in Relativistic Nuclear Collisions, 2005.
100. Hadronization of partons by recombination, lecture given at the Summer School on RHIC Physics, Wuhan, China, June 2005.
101. Correlation of hadrons in jets produced at RHIC, Workshop on QCD and RHIC Physics, Wuhan, China, June 2005.
102. Resolutions of several puzzles at intermediate p_T and recent developments in correlation, Quark Matter 2005, Budapest, Hungary, August 2005.
103. Production of strange particles at intermediate p_T at RHIC, Strangeness in Collisions Workshop, Brookhaven National Laboratory, February, 2006.
104. Jets, correlations and their fluctuations, invited talk given at the meeting of the STAR Collaboration, Brookhaven National Laboratory, March 2006.
105. High p_T hadron correlation and no correlation, talk given at the 2nd Int'l Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions, Asilomar, CA, June 2006.
106. Future measurements of test recombination, Workshop on Future Prospects in QCD at High Energy, Brookhaven National Laboratory, July 2006.
107. The Omega puzzle, talk given at Quark Matter 2006, Shanghai, China, November 2006.
108. Hadron correlation in jets, talk given at 11th Int'l Workshop on Correlation and Fluctuation in Multiparticle Production, Hangzhou, China, November, 2006.
109. Correlation and Fluctuation in multiparticle production: Some closing remarks, Closing talk given at the Hangzhou Workshop, Hangzhou, China, November, 2006.

110. Ridges and v_2 without using hydrodynamics, talk given at 37th International Symposium on Multiparticle Dynamics, Berkeley, CA, 2007.
111. Phantom jets: the Ω puzzle and v_2 without hydrodynamics, Early time Dynamics in Heavy-ion Collisions, Montreal, CA, July 2007.
112. Physics revealed at intermediate p_T , Plenary talk given at Quark Matter 2008, Jaipur, India, February 2008.
113. Dependence of ridge formation on trigger azimuth, talk given at Ridge Workshop, Brookhaven National Laboratory, September 2008.
114. Probing Dense Medium by Dijets, Invited talk at the 10th Workshop on Non-perturbative QCD, Paris 2009.
115. Jets and Ridges at RHIC and LHC, talk given at INT Workshop, Seattle, WA, May 2010.
116. Phenomenological Implications of the p_T Spectra of ϕ and Ω produced at LHC and RHIC, talk given at the 16th International Conference on Strangeness in Quark Matter, Berkeley, CA, June 2016.