

## **GORDON L. KANE**

**Victor Weisskopf Distinguished University Professor of Physics  
Director Emeritus, Michigan Center for Theoretical Physics  
Adjunct Professor, School of Art and Design**

### **Education:**

1963 Ph.D. University of Illinois  
1961 M.S. University of Illinois  
1958 B.A. University of Minnesota

### **Professional Experience:**

2011 Victor Weisskopf Distinguished University Professor of Physics, University of Michigan  
**2007** Member, Institute for Advanced Studies, Princeton  
2002 Victor Weisskopf Collegiate Professor of Physics, University of Michigan  
1986 Scientific Associate, CERN (Jan. - Aug.)  
1975- Professor, University of Michigan  
1969-75 Associate Professor, University of Michigan  
1965-69 Assistant Professor, University of Michigan  
1963-65 Research Associate, Johns Hopkins University

### **Awards and Honors:**

2014- Edge.org contributor  
2011 Awarded Julius Edgar Lilienfeld Prize of the American Physical Society  
2011 Appointed Victor Weisskopf Distinguished University Professor of Physics, University of Michigan  
2009 Member, triennial Committee of Visitors, National Science Foundation, Division of physical and mathematical sciences; Chair, theoretical physics subpanel  
2008 Reappointed Adjunct Professor, School of Art and Design  
2008 Invited to give Lewiner Lectures, Technion, Tel-Aviv, Israel  
2007 Invited visiting member, Institute for Advanced Study, Princeton, Sept – Dec 2007  
2004 Appointed Professor (without salary or tenure) in School of Art and Design  
2003 In the Chair, at Inaugural Lecture of Professor S. King, University of Southampton  
2003 Elected a Fellow of the Institute of Physics, Great Britain  
2001 Elected Fellow of American Association for Advancement of Science  
1999 Appointed Dozor Fellow, Ben-Gurion University  
1997 The University Senate invited 14 faculty from around the university to write essays on “The Future of The Research University”. The essays are to be bound together and presented to the incoming President, Lee Bollinger. I am one of the faculty requested to do this.

- 1997 Invited to be an “American Physical Society Centennial Speaker”, a group of “outstanding lecturers” from all fields of physics who will have names and possible lecture topics listed in a book that will be widely distributed to encourage many broad colloquia during the Centennial Year 1999 that will give a sense of “excitement and accomplishments of 20th century physics”.
- 1994-98 Elected as Senior Fellow of the Michigan Society of Fellows
- 1994-95 Elected Chairman, SLAC Experimental Program Advisor Committee
- 1992 Appointed Member, U.S. Delegation to U.S. Japan Joint Working Group on the SSC
- 1992 Appointed Distinguished Visiting Speaker, University of California at Davis
- 1991-92 Invited to nominate candidates for European Physical Society High Energy Physics Prize
- 1991-92 Appointed Associate of the Institute for the Humanities, University of Michigan
- 1988 Appointed Delphus Lecturer, University of California, Santa Cruz
- 1986-90 Appointed to four year term on the SLAC Scientific Policy Committee, as one of two theorists on the Committee, which has representatives from Europe and Japan, and reports to the President of Stanford and to Department of Energy
- 1986-88 Elected to Executive Committee of the Division of Particles and Fields of the APS, with highest vote and therefore longest term
- 1984 Member, U.S. Delegation to International Committee on Future Accelerators (ICFA), and Panel participant, Japan, May 1984
- 1982- Leader (with M. Perl) “Beyond the Standard Model” part of Division of Particles and Fields National Planning Study for Future Facilities (Snowmass '82) The studies of our group formed an important foundation for the scientific goals of the SSC and LHC
- 1982- Elected as a Member of the Johns Hopkins University Society of Scholars
- 1976- Elected Fellow, American Physical Society
- 1971-72 J.S. Guggenheim Fellow, Rutherford Laboratory and Oxford University, England

**Services:**

- 2010 Invited participant, Strings at the LHC and in the early universe, by invitation only, KITP Program, May 2010
- 2008 Organizer, Cook’s Branch meeting on dark matter, LHC, and string phenomenology, March 2009
- 2008 Member, Provost’s Council on Student Honors, University of Michigan (has responsibility for Rhodes Scholarships, Mitchell Fellowships, etc)
- 2007 European Research Council Referee, 2007-2013
- 2006 Invited Participant, “New Directions Beyond the Standard Model in Field and String Theory”, Galileo Institute, Florence May 2006.
- 2006 Invited Participant, “String Vacua and the Landscape”, International Center for Theoretical Physics, Trieste, May-June 2006.
- 2006 Co-Organizer, String phenomenology Program, Kavli Institute for Theoretical Physics, Santa Barbara, CA Aug- Dec 2006.
- 2005-06 Member, Advisory Committee, LS&A Theme Semester on Physics
- 2005-06 Member, Advisory Committee, LS&A Theme Semester on Evolution

- 2005-06 Co-organizer, LHC Olympics Challenge and summer and Winter CERN conferences
- 2005 Reviewer, Finnish Research Centers of Excellence Program
- 2005 PPARC International Review Panel, Institute of Phenomenological Particle Physics, Durham, England, Jan. 2005
- 2004 Co-Organizer (with James Wells), 3rd International Conference on String Phenomenology, Ann Arbor, July 2004
- 2003 Member, National Science Foundation Panel to review Theory Division proposals, Feb. 10-12, 2003, Washington, D.C.
- 2002 Invited member, Panel on Proton Decay and Neutrino Physics, National Underground Laboratory Symposium, Washington, D.C., Nov. 2002
- 2002 Advisor to DoE for Review of Fermi National Accelerator Laboratory
- 2001 Participant, "Research Horizon Scanning", Canadian Institute of Advanced Research --- A panel to advise on what major research directions might be exciting to support
- 2001 Appointed to Editorial Board, Journal of Physics G, London, England
- 2000 Chair, Selection Committee for J.J. Sakurai Prize of the American Physical Society
- 1999 Selected as participant in the Institute for Theoretical Physics, Santa Barbara, Program on Supersymmetric Unification and String Theory
- 1999 Member, 1999 Search Committee for LS&A Dean
- 1998 National Science Foundation Review Panel for Particle and String Theory
- 1997 Physics Department Visiting Committee, University of California at Riverside
- 1997 International Organizing Committee, Cosmos97, International Workshop on Particle Physics and the Early Universe, Ambleside, Lake District, England, Sept. 1997
- 1996 National reviewer, NSF CAREER Program (that replaces the Presidential Young Investigator Awards) --- Chairman of National Panel for particle theory and cosmology
- 1996 Invited to talk to the national meeting of science writers (acknowledgment letter in file), on "Supersymmetry"
- 1995 Invited coordinator, "Frontier Science and Technology Workshop", Jet Propulsion Laboratory, Pasadena, January
- 1995 Invited participant, "Unification from the Weak Scale to the Planck Scale", Institute of Theoretical Physics, Santa Barbara, July-December
- 1995 Consultant to the DoE for Review of Lawrence Berkeley Laboratory HEP program, March 1995
- 1994-97 Elected to Barton Hills Village Board of Trustees
- 1994-95 Physics Department General Colloquium
- 1994 Organizer of International Conference "Supersymmetry 1994", Ann Arbor, May 14-17 (over 100 participants, over 40 from outside U.S.)
- 1994 Member, Committee to choose Rackham Predoctoral Fellowship recipients
- 1994 Convener (with D. Gross and E. Witten) of the "Supersymmetry, Gravity, and Strings" Working Group of the DPF Study of High Energy Physics. Results summarized in report "The State of Exploratory Theory Beyond the Standard Model".

- 1994 Consultant to the DoE for its annual review of High Energy Physics at Brookhaven National Laboratory, April 1994
- 1993-96 Appointed Member, SLAC Experimental Program Advisory Panel
- 1993-94 Consultant to the DoE for its annual review of High Energy Physics at Brookhaven National Laboratory, April 1993
- 1993 Consultant to the DoE for its 5-year review of the L3 detector at CERN LEP Dec. 1993
- 1991-93 Elected member of the Nominating Committee of the American Physical Society for a three year term
- 1991-93 Selection committee to award the Regent's Award for Distinguished Public Service, University of Michigan
- 1991 November, Member SSC Lab subpanel on small  $P_T$  physics and  $b$ -physics facilities
- 1991 Member, Visiting Committee for Department of Physics of Case Western Reserve University, Jan. -- Feb. 1991
- 1991 Co-organizer of Workshop and Topical Conference on Precision Electroweak Measurements, Santa Barbara Institute for Theoretical Physics, Feb. 1991
- 1990 Organized meeting "Thinking About the Top Quark", Santa Barbara Institute for Theoretical Physics, Feb. 1990
- 1989-92 Member, Budget Priorities Committee, University of Michigan (this committee is the more-or-less the executive committee of the University, advising the Provost on policy matters and on budget decisions and their impact on academic matters)
- 1989-91 Appointed national leader of information lobbying activity for the SSC by the APS Division of Particles and Fields and the SSC User's Executive Committee
- 1988-91 Elected Member of the International Executive Committee of the SSC Users Organization (UOSSC)
- 1988-90 U.S. -- Spain Joint Committee for Scientific and Technological Cooperation
- 1988-89 Member, Finance Committee, University of Michigan (this committee reviewed and advises the Vice President for Financial Affairs)
- 1988- Chairman, Physics Department Committee on Uhlenbeck Distinguished Visiting Professor Program
- 1988 Reviewer for the Department of Energy Outstanding Junior Investigator Program
- 1988 Invited to give lectures in Beijing, May 1988
- 1988 Appointed Group Leader for New Particles at Accelerators (with C. Baltay) at 1988 Summer Study on High Energy Physics in the 1990's of the Division of Particles and Fields of the American Physical Society.
- 1987-88 Reviewer, Research Partnership Program of the Graduate School and Office of the Vice President for Research
- 1987 Reviewer for Department of Energy Outstanding Junior Investigator Program
- 1986 Co-Organizer of Theory and Physics parts of the 1986 Study on the Design and Utilization of the SSC, Snowmass, June

- 1985 Invited to organize and run four parallel sessions on Particle Physics Beyond the Standard Model, for Annual Meeting of the Division of Particles and Fields, Portland, August 1985
- 1985 Participant, Panel on Physics Beyond the SSC, Berkeley future collider conference, January 1985
- 1984-85 Asked to extend term on Board of Editors of Physical Review to help with editorial policy modifications
- 1984 Invited Participant and Speaker, Conference on Verification and Arms Control, UCLA Center for International and Strategic Affairs, January 1984
- 1984 Consultant to Department of Energy on SLAC Physics Program and Budget for FY 1985, FY 1986
- 1984 Appointed correspondent for Comments on Nuclear and Particle Physics
- 1984 Member, Panel on Future Accelerator Physics, at Fourth "Physics in Collision" conference, Santa Cruz, August, 1984
- 1983 Member, AGSII Task Force for the future of the Brookhaven AGS, with particular contribution to the group on rare K decays
- 1983 Invited Senior Participant, International Student Pugwash Conference on Science, Technology, and Global Responsibility, Ann Arbor, June 1983
- 1982-90 Consultant, Brookhaven National Laboratory
- 1982-86 Initiator and member of the National Advisory Board for a pedagogical advanced study institute in particle physics. This is now the TASI School which meets annually to provide courses in frontier topics to supplement the education of Ph.D. students.
- 1982-85 Member, Brookhaven National Laboratory High Energy Advisory Committee
- 1982 Member, Dept. of Energy Technical Assessment Panel to Review Lawrence Berkeley Laboratory, Argonne National Laboratory, MIT and other universities, and recommend future levels of funding for High Energy Physics
- 1981-85 Member of the Editorial Board of Physical Review
- 1981-84 Initiator and member of Interdisciplinary Faculty Arms Control Seminar
- 1981 Reviewer, DoE Junior Investigators Program, Feb. 1981
- 1981- Member, History of Science Society
- 1980 Senior Referee, Phys. Rev. Lett. 1980-1981
- 1980 Member, NSF EVIST Review Panel
- 1980 Initiated joint Astrophysics, Particle Physics Meetings at Rencontre de Moriond, with some common sessions
- 1980 Director, FNAL Summer Study on Fixed Target Tevatron Physics Program
- 1977-85 Initiated and directed for two years, a University of Michigan interdisciplinary faculty Institute to examine science and values questions (the Collegiate Institute for Values and Science)
- 1975-78 Chairman, DPF Publications Committee of the Division of Particles and Fields of the American Physical Society
- 1975 Chairman, Argonne National Lab. Technical Advisory Panel on "Physics with Polarized Beams"
- 1973-75 Publications Committee, Division of Particles and Fields of American Physical Society

Member of over 40 international organizing committees for conferences in 13 countries

**Listings:**

American Men and Women of Science  
Who's Who in the Midwest  
Who's Who in Science and Engineering  
International Who's Who of Contemporary Achievement  
Who's Who in the World  
Who's Who in America

**Radio talk shows (selected):** Milt Rosenberg Show, Chicago, twice; The Green Room; National Public Radio Science Friday; Diane Rehm National Show, NPR

**Publications:**

1. *Cosmological Moduli and the Post-Inflationary Universe: a Critical Review*, arXiv:1502.07746, Gordon Kane, Kuver Sinha, Scott Watson
2. *Dark Matter Production Mechanisms with a non-Thermal Cosmological History – A Classification*, Gordon Kane, Piyush Kumar, Brent Nelson, and Bob Zheng, arXiv:1502.05406
3. *Superpartners at LHC and Future Colliders: Predictions from Constrained Compactified M-Theory*, Sebastian Ellis, Gordon Kane, and Bob Zheng, arXiv:1408.1961
4. *Theoretical Prediction and Impact of Fundamental Electric Dipole Moments*, Sebastian Ellis and Gordon Kane, arXiv:1405.7719
5. *R-Parity Conservation from a Top Down Perspective*, Bobby Acharya, Gordon Kane, Piyush Kumar, Ran Lu, and Bob Zheng, arXiv:1403.4948,
6. *Review and Update of the Compactified M/String Theory Prediction of the Higgs Boson Mass and Properties*, Gordon Kane, Ran Lu, Bob Zheng, arXiv:1211.2231, Int. J. Mod. Phys A28(2013)1330002
7. *Particle Physics is at a turning point*, Gordon Kane, Invited Worldview, Nature 480(2011)415
8. *Mixed Wino-Axion Dark Matter in String/M Theory and the 130 GeV Gamma-line ‘Signal’*, Bobby Samir Acharya, Gordon Kane, Piyush Kumar, Ran Lu, Bob Zheng, arXiv:1205.5789 [hep-ph]
9. *Compactified String Theories – Generic Predictions for Particle Physics*, Bobby Samir Acharya, Gordon Kane, Piyush Kumar, Int.J.Mod.Phys. A27 (2012) 1230012, arXiv:1204.2795 [hep-ph]
10. *Discovering Gluino Events at LHC-8 via Disappearing Chargino Tracks*, Gordon Kane, Ran Lu, Bob Zheng, Feb. 2012, arXiv:1202.448 [hep-ph] Phys Rev D85(2012)075026
11. *Higgs Mass Prediction for Realistic String/M-Theory Vacua*, Gordon Kane, Piyush Kumar, Ran Lu, Bob Zheng, arXiv:1112.1059
12. *The Baryon-Dark Matter Ratio via Moduli Decay after Affleck-Dine Baryogenesis*, Gordon Kane, Jing Shao, Scott Watson, Hai-Bo Yu, JCAP 1111 (2011) 012, arXiv:1108.5178
13. *Flavour issues for string-motivated heavy scalar spectra with a low gluino mass: the G2-MSSM case*, Kenji Kadota, Gordon Kane, Joern Kersten, Liliana Velasco-Sevilla, arXiv:1107.3105 Eur. Phys.J. (2012) 2004
14. *Extracting the Wavefunction of the LSP at the LHC*, Gordon Kane, Eric Kuflik, Brent D. Nelson, Phys.Lett. B703 (2011) 151-159, arXiv:1105.3742
15. *A new (string motivated) approach to the little hierarchy problem*, Daniel Feldman, Gordon Kane, Eric Kuflik, Ran Lu, published in Phys.Lett. B704 (2011) 56-61 arXiv:1105.3765

16. *The gluino 4-top signature at 7 TeV*, Gordon Kane, Eric Kuflik, Ran Lu and Liantao Wang, in preparation
17. *The  $\mu$  parameter in M-theory: Theory and Phenomenology*, Bobby Acharya, Gordon Kane, Erik Kuflik, and Ran Lu, arXiv:1102.0556 JHEP 1105(2011)033
18. *String Theories with Moduli Stabilization Imply Non-Thermal Cosmological History, and Particular Dark Matter*, By Bobby Samir Acharya, Gordon Kane, Eric Kuflik. [arXiv:1006.3272]
19. *Dark Matter as a Guide Toward a Light Gluino at the LHC*, by Daniel Feldman, Gordon Kane, Ran Lu, Brent D. Nelson. [arXiv:1002.2430] Phys.Lett.B687:363-370,2010
20. *The Hunt for New Physics at the Large Hadron Collider*, by P. Nath, et.al., [arXiv:1001.2693] (Jan 2010).
21. *A Non-thermal WIMP Miracle*, by Bobby Samir Acharya, Gordon Kane, Scott Watson, Piyush Kumar. Phys.Rev.D80:083529, 2009, [arXiv:0908.2430].
22. *PAMELA Satellite Data as a Signal of Non-Thermal Wino LSP Dark Matter*, by Gordon Kane, Ran Lu, Scott Watson. Phys.Lett.B681:151-160, 2009, [arXiv:0906.4765].
23. *CP-violating Phases in M-theory and Implications for EDMs*, by Gordon Kane, Piyush Kumar, Jing Shao, [arXiv:0905.2986] Phys. Rev. D82(2010)055005
24. *The Footprint of F-theory at the LHC*, by Jonathan J. Heckman, Gordon L. Kane, Jing Shao, Cumrun Vafa. JHEP 0910:039, 2009, [arXiv:0903.3609].
25. *Identifying Multi-Top Events from Gluino Decay at the LHC*, by Bobby Samir Acharya, Phill Grajek, Gordon L. Kane, Eric Kuflik, Kerim Suruliz, Lain-Tao Wang, [arXiv:0901.3367] MCTP-09-03 (Jan 2009) 20p.
26. *Studying Gaugino Mass unification at the LHC*, by Baris Altunkaynak, Phillip Grajek, Michael Holmes, Gordon Kane, Brent D. Nelson. JHEP 0904:114, 2009, [arXiv:0901.11458].
27. *Is the PAMELA Positron Excess Winos?* By Phill Grajek, Gordon Kane, Dan Phalen, Aaron Pierce, Scott Watson. Phys.Rev.D79:043506, 2009, Phys.Rev.D79:043506, 2009, [arXiv:0812.4555].
28. *The LHC: A "Why" Machine and a Supersymmetry Factory*, by Gordon Kane. In Kane, Gordon (ed.) et al., Perspectives on LHC Physics 1-11.
29. *Unraveling strings at the CERN LHC*, Gordon L. Kane, Piyush Kumar, Jing Shao. Phys.Rev.D77:116005, 2008. [arXiv:0709.4259]
30. *The G(2)-MSSM: An M Theory motivated model of Particle Physics*, Bobby S. Acharya, Konstantin Bobkov, Gordon L. Kane, Jing Shao, Piyush Kumar. Phys.Rev.D78:065038, 2008. [arXiv:0801.0478] .
31. *Non-thermal Dark Matter and the Moduli Problem in String Frameworks*, Bobby S. Acharya, et al., JHEP 0806:064, 2008 [arXiv:0804.0863].
32. *Initial Determination of the Spins of the Gluino and Squarks at LHC*, by Gordon L. Kane, Alexey A. Petrov, Jing Shao, Lian-Tao Wang. [arXiv:0805.1397] J.Phys.G., G37, (2010)045004
33. *Neutralino Dark Matter from Indirect Detection Revisited*, by Phill Grajek, Gordon Kane, Daniel J. Phalen, Aaron Pierce, Scott Watson. [arXiv:0807.1508] MCTP-08-54 (Jul 2008) 23p.
34. *Dark Matter and LHC: What is the Connection?* By Gordon Kane and Scott Watson, Mod.Phys.Lett.A23:2103-2123, 2008 [arXiv:0807.2244].
35. *Explaining the Electroweak Scale and Stabilizing Moduli in M Theory*, Bobby S. Acharya, Konstantin Bobkov, Gordon L. Kane, Piyush Kumar, Jing Shao. Jan 2007. 71pp.hep-th/070103. Phys.Rev.D76:126010, 2007.
36. *Connecting (Supersymmetry) LHC Measurements with High Scale Theories*, Gordon L. Kane, Piyush Kumar, David E. Morrissey, Manuel Toharia. Dec 2006. 39pp. hep-ph/0612287, Phys.Rev.D75 115018, 2007.
37. *Inflation without Inflation(s)*, Scott Watson, Malcolm J. Perry, Gordon L. Kane, Fred C. Adams. Oct. 2006. 13pp.hep-th/0610054, JCAP 0711:017, 2007.
38. *LHC String Phenomenology*, Gordon L. Kane, Piyush Kumar, Jing Shao, Oct. 2006. 50pp. hep-ph/0610038, J.Phys.G34:1993-2036, 2007.

39. *An M Theory Solution to the Hierarchy Problem.* Bobby Acharya, Konstantin Bobkov, Gordon Kane, Piyush Kumar, Diana Vaman, published in Phys.Rev.Lett.97:191601, 2006. hep-th/0606262.
40. *How Can We Go From Hadron Collider Data Toward the Underlying Theory That Extends the Standard Model? After the Champagne...* hep-ph/0504257.
41. *Supersymmetry and the LHC Inverse Problem* (with N. Arkani-Hamed, J Thaler, and L. Wang) hep-ph/0512190, JHEP 0608:70, 2006.
42. *Twenty-five Questions for String Theorists*, [hep-th/0509157] (September 2005) (with P. Binetury, J. Lykken, B. D. Nelson) J. Phys.G32 (2006) 129.
43. *Is it SUSY?* [hep-ph/0510204] (Oct 2005) (with A. Datta, M. Toharia).
44. *Study of Theory and Phenomenology of Some Classes of Family Symmetry and Unification Models*, JHEP 0508:083, [hep-ph/0504038], (2005) (with S.F. King, I.N.R. Peddie, L. Velasco-Sevilla).
45. *Some Top-down and Stringy Perspective on Flavor Physics*, J. Korean Phys.Soc.45:S313-S317, 2004.
46. *Outside the mSUGRA box*, [hep/0504170], (April 2005) (with J. Bourjaily, P. Kumar, Ting T Wang).
47. *The Minimal U(1)' Extension of the mssm*, [hep-ph/0503290], (March 2005) (with D. Demir and Ting T. Wang), Phys. Rev. D72 (2005) 015012.
48. *Massive Neutrinos and (Heterotic) String Theory*, [hep-th/0502032] MCTP-05-01 (with Joel Giedt, Paul Langacker, and Brent D. Nelson). Phy Rev D71 (2005) 115013
49. *What is the Cosmological Significance of a Discovery of Wimps at Colliders or Indirect Experiments?*, [hep-ph/0501262] (Jan. 2005) (with Jacob Bourjaily).
50. *Some Phenomenology of Intersecting D-brane Models*, [hep-ph/0411125] (with Piyush Kumar, Joseph Lykken, and Ting T. Wang), Phys. Rev.D7 (2005) 115017.
51. *High Scale Study of Possible B(d) → phi K(S) CP Physics*, [hep-ph/0407351] (with Hai-bin Wang, Lian-tao Wang, and Ting. T. Wang).
52. *Spontaneous Summetry Breaking and Tunneling in de Sitter Space*, [hep-th/0407217] DAMTP-2004-77 (Aug. 2004) (with Malcolm Perry and Anna Zytkow).
53. *Theoretical Implications of the LEP Higgs Search*, [hep-ph/0407001], Phys.Rev. D71, 035006 (2005) (with Ting T. Wang, B.D. Nelson, and Lian-Tao Wang).
54. *Relating Incomplete Data and Incomplete Theory*, [hep-ph/0312248], Phys.Rev. D70, 095006 (2004) (with Brent D. Nelson, Lian-Tao Wang, and Ting T. Wang).
55. *An Approach to the Cosmological Constant Problem*, [hep-ph/0408169], Phys.Lett B609, 7-12 (2005) (with Malcolm Perry and Anna Zytkow).
56. *B(s) → μ\mu as a Probe of tan \beta at the Tevatron*, [hep-ph/0310042], (with Christopher Kolda and Jason E. Lennon).
57. *Phenomenology and Theory of Possible Light Higgs Bosons*, [hep-ph/0304134] (with Brent D. Nelson, Ting T. Wang, and L.-T. Wang).
58. *The Soft Supersymmetry Breaking Lagrangian: Theory and Applications, Physics Reports*, [hep-ph/0312378], 407, 1-203 (2005) (with D. Chung, L.Everett, J. Lykken, S. King, and L.-T. Wang).
59. *B(D) → PHI K(S) and Supersymmetry*, [hep-ph/0212092], Phys. Rev. Lett. 90, 141803 (2003) (with P. Ko, Haibin Wang, C. Kolda, Jae-Hyeon Park, and Lian-Tao Wang).
60. *Theory Motivated Benchmark Models and Superpartners at the Tevatron*, [hep-ph/0209061], Phys. Rev. D67, 045008 (2003) (with J. Lykken, S. Mrenna, B. D. Nelson, Lian-Tao Wang, and Ting T. Wang).
61. *Reexamination of Electroweak Symmetry Breaking in Supersymmetry and Implications for Light Superpartners*, Phys. Lett. B551, 146-160 (2003) (with J. Lykken, B. D. Nelson, and Lian-Tao Wang).
62. *Supersymmetry and the Cosmic Ray Position Excess*, [hep-ph/0202156], Phys. Lett. B536, 263 (2002) (with Lian-Tao Wang and Ting Wang).
63. *CP Violation beyond the Standard Model*, J. Phys. G 28, 345 (2002) (with D.D. Doyle).



64. *Supersymmetric Pati-Salam Models and Interacting D-Branes*, Phys. Lett. B351, 263 (2002) (with L. Everett, S. King, S. Rigolin, and Lian-Tao Wang).
65. *Alternative Approach to  $b \rightarrow s \gamma$  in the UMSSM*, [hep-ph/0112126], JHEP (2002) 0201:022 (with L. Everett, Lian-Tao Wang, and Ting Wang).
66. *Supersymmetry and the position excess in cosmic rays*, [hep-ph/0108138], Phys. Rev. D65, 057701 (2002) (with Lian-Tao Wang and James D. Wells).
67. *Intermediate scale supersymmetric inflation, matter and dark energy*, [hep-ph/0109111], New Physics Journal 3, 21 (2001) (with S.F. King).
68. *Supersymmetry: What? Why? When?*, Contemp. Physics, 41, 359-367 (2000)
69. *Implications of the Muon Anomalous Magnetic Moment for Discovering Superpartner and their properties*, hep-ph/0102145, Phys. Rev. Lett. 3484, 86 (2001) (with L. Everett, S. Rigolin, and L. Wang).
70. *What will we learn if a Higgs Boson is Found*, hep-ph/0010312, Phys. Rev. D64, 095013 (2001) (with S. King and L. Wang).
71. *Proton Decay, Black Holes, and Large Extra Dimensions*, hep-ph/0009154, International Journal Mod. Phys. A, 2399, 16 (2001) (with F. Adams, M. Mbonye, and M. Perry).
72. *The Supersymmetry soft-breaking Lagrangian: Where Experiments and String Theory Meet*, hep-ph/0008190, Lectures at the SILAF AE III, Cartagena, Colombia, April (2000)
73. *D-Branes and Textures*, JHEP 0008, 12 (2000) (with L. Everett and S.F. King).
74. *Pursuing the Origin of Electroweak Symmetry Breaking: A Bayesian Physics Argument for Total Energy 600 GeV  $e^+e^-$  Collider*, hep-ph/0003249 (with J. Wells).
75. *Implications of Supersymmetry phases for Higgs Boson Signals and Limits*, Phys. Lett. B488, 383 (2000) (with L. Wang).
76. *The beginning of the End of the Antleropic Principle*, astro-ph/0001197, New Astronomy, in press, (with M. Perry and A. Zytchow).
77. *Weighing the universe with accelerators and detectors*, hep-ph/0005158, International Journal of Modern Physics D 367, 10 (2001) (with M. Brhlik and D. Chung).
78. *Effects of large CP violating soft phases on supersymmetric electroweak baryogenesis*, Phys. Rev. D, 63, 035002 (2001) (with M. Brhlik and G. Good).
79. *Fine-tuning constraints on supergravity models*, Phys. Lett. B474, 103 (2000) (with M. Bastro-Gill and S. King).
80. *Measuring gaugino soft phases and the LSP mass at Fermilab*, Phys. Lett. B483, 175 (2000) (with S. Mrenna and L. Wang).
81. *Can Supersymmetry soft phases be the source of all CP violation?*, Phys. Rev. Lett. 84, 3041 (2000) (with M. Brhlik, L. Everett, S. King, and O. Lebedev).
82. *Superstring Theory and CP violation phases: can they be related?*, Phys. Rev. D, 62, 035005 (2000) (with M. Brhlik, L. Everett, and J. Lykken).
83. *A resolution to the supersymmetric CP problem with large soft phases*, Phys. Rev. Lett. 83, 2124 (1999) (with M. Brhlik, L. Everett and J. Lykken).
84. *Nearly Degenerate Neutrinos and Broken Flavor Symmetry*, hep-ph/9901228 (with R. Barbieri, L. Hall, and G. Ross).
85. *Electronic Dipole Moments Do Not Require the CP Violating Phases of Supersymmetry to be Small*, to appear in Phys. Rev. (with M. Brhlik and G. Good).
86. *Naturalness Implications of LEP Results*, to appear in Phys. Lett. (with S. King).
87. *Measuring the Supersymmetry Lagrangian*, Phys. Rev. Lett. B437, 331 (1998) (with M. Brhlik).
88. *Recognizing Superpartners at LEP*, Phys. Lett. B408, 222 (1997) (with G. Mahlon).
89. *Supersymmetric Contributions to the Decay of an Extra Z Boson*, Phys. Rev. D57, 3178 (1998) (with T. Gherghetta, T.A. Kaeding).
90. *Searching for a Light Stop at the Tevatron*, Phys. Rev. D55, 2779 (1997) (with G. Mahlon).
91. *Low-Energy Supersymmetry with a Neutralino LSP and the CDF  $ee\gamma\gamma$  Missing  $E_{T\cancel{E}_T}$  event*, Phys. Rev. D55, 1372 (1997) (with S. Ambrosanio, G. Kribs, S. Martin, S. Mrenna).

92. *Search for Supersymmetry with a Light Gravitino at Fermilab and CERN LEP Colliders*, Phys. Rev. D54, 5395 (1996) (with S. Ambrosanio, G. Kribs, S. Martin, and S. Mrenna).
93. *Do about half the top quarks at FNAL come from Gluino Decays?*, Phys. Rev. Lett. 77, 3502 (1996) (with S. Mrenna).
94. *Higgsino Cold Dark Matter Motivated by Collider Data*, Phys. Rev. Lett. 76, 4458 (1996) (with J. Wells).
95. *Supersymmetric Analysis and Predictions Based on the CDF  $e\bar{e}\gamma\gamma+E/\tau$  event*, Phys. Rev. Lett. 76, 3498 (1996) (with S. Ambrosanio, Graham D. Kribs, Stephen P. Martin).
96. *Implications for Supersymmetry of the Reported Deviations from the Standard Model for  $\Gamma(Z \rightarrow b\bar{b})$  and  $\hat{\alpha}_s(M_Z^2)$* , Phys. Rev. Lett. 76, 869 (1996) (with J. Wells).
97. *Two-Photon Decays of the Lightest Higgs Boson of Supersymmetry at the LHC*, Phys. Rev. D53, 213 (1996) (with G. Kribs, S. Martin, and J. Wells).
98. *Chaotic Inflation and a Radiatively Generated Intermediate Scale in the Supersymmetric Standard Model*, Phys. Lett. B354, 300 (1995) (with T. Gherghetta).
99. *A Global Fit of LEP/SLC Data with Light Superpartners*, Phys. Lett. B354, 350 (1995) (with J. Wells and R. Stuart).
100. *Possible Signals of Constrained Minimal Supersymmetry at High Luminosity Fermilab Tevatron Collider*, Phys. Rev. D53, 1168 (1996) (with J. Wells, S. Mrenna, and G. Kribs).
101. *On the Theory, Phenomenology, and Detection of Supersymmetric Cold Dark Matter*, Phys. Rev. D52, 4223 (1995) (with J. Wells, C. Kolda, and E. Diehl).
102. *Implications of  $\Gamma(Z \rightarrow b\bar{b})$  for Supersymmetry Searches and Model-Building*, Phys. Lett. B338, 219 (1994) (with C. Kolda and J. Wells).
103. *Possible Detection of a Higgs Boson at Higher Luminosity Hadron Colliders*, submitted to Phys. Rev. Lett. (with S. Mrenna).
104. *Predictions for Minimal Supersymmetry with Bottom-Tau Mass Unification*, Phys. Rev. D50, 3498 (1994) (with C. Kolda, J. Wells, and L. Roszkowski).
105. *Study of Constrained Minimal Supersymmetry*, Phys. Rev. D49, 6173 (1994) (with C. Kolda, J. Wells, and L. Roszkowski).
106. *Calculable Upper Limit on the Mass of the Lightest Higgs Boson on any Supersymmetric Theory*, Phys. Rev. Lett. 70, 2686 (1993) (with C. Kolda and J. Wells).
107. *Could Large CP Violation Be Detected at Colliders?*, Phys. Lett. B317, 454 (1993) (with C.J.-C. Im and P.J. Malde).
108. *Detecting Invisible Higgs Bosons at the SSC*, Phys. Rev. D50, (1994) (with S. Fredrickson, N. Johnson, and J. Reid).
109. *The Top Quark as a Probe of Standard Model Symmetries*, Phys. Rev. D45, 124 (1992) (with C.-P. Yuan and G. Ladinsky).
110. *Detectable Beyond-the-Standard-Model CP Violation in  $K_{\mu 3}$  Decays*, Phys. Rev. D44, 2038 (1991) (with R. Garisto).
111. *Is There Any Evidence for a Heavy Neutral Fermion ( $\nu_{\tau R}$ )?*, Phys. Rev. Lett. 66, 2943 (1991) (with F. del Aguila, J. Moreno, and M. Quiros).
112. *The Search for Higgs Bosons of Any Mass, Comments in Nuclear & Particle Physics* 14, 259 (1990) (with S. Dawson, J. Gunion, H. Haber, A. Seiden).
113. *Vector-Like Fermions and Standard Higgs Production at Hadron Colliders*, Nucl. Phys. B334, 1 (1990) (with F. del Aguila, L. Ametller, and J. Vidal).
114. *A Possible Method to Produce and Detect Higgs Bosons at Hadron Colliders*, Phys. Rev. Lett. 63, 942 (1989) (with F. del Aguila and M. Quiros).
115. *How to Study Longitudinal W's in the TeV region*, Phys. Rev. D40, 2231 (1989) (with C.-P. Yuan).
116. *Using Multiplicity to Separate Color-Singlet Real W's from Colored Fake W's*, Phys. Rev. D40, 2223 (1989) (with C.-P. Yuan, J. Gunion, A. Seiden, H. Sadrozinski, and A. Weinstein).
117. *Comments on How to Elucidate the Mechanism of CP Violation*, Phys. Rev. D39, 2633 (1989) (with P. Castoldi and J.-M. Frère).

118. *Comments on Testing the ZWW and  $\gamma WW$  Vertices*, Phys. Rev. D38, (1989), (with J. Vidal and C.-P. Yuan).
119. *Could the Quark Electroweak and Mass Eigenstates Coincide?*, Phys. Lett. 196, 531 (1987) (with F. del Aguila and M. Quiros).
120. *Using Rare Decay Modes to Detect Intermediate Mass Neutral and Charged Scalars at Hadron Colliders*, Nucl. Phys. B, 200, 231 (1988) (with J. Gunion and J. Wudka).
121. *Higgs Physics at Future  $e^+e^-$  Colliders*, Nucl. Phys. B291, 221 (1987) (with J. Scanio).
122. *A Possible New Signature for Higgs Bosons*, Nucl. Phys. B283, 111 (1987) (with H.E. Haber, I. Kani and M. Quiros).
123. *WW Scattering at Future Colliders*, Nucl. Phys. B272, 517 (1986) (with M.J. Duncan and W.W. Repko).
124. *Cross-Sections for Dark Matter Particles and Implications for Allowed Masses, Interactions, and Detection*, Nucl. Phys. B277, 525 (1986) (with I. Kani).
125. *A Supergravity Model Consistent with all Experimental Constraints*, Nucl. Phys. B273, 333 (1986) (with M. Quiros and H.E. Haber).
126. *Supersymmetry: Lost or Found?*, Nucl. Phys. B267, 625 (1986) (with R.M. Barnett and H.E. Haber).
127. *Cosmic Ray Antimatter from Supersymmetric Dark Matter*, Nucl. Phys. B263, 399 (1986) (with J.S. Hagelin).
128. *A New Standard Model Test for Future Colliders*, Phys. Rev. Lett. 55, 773 (1985) (with M.J. Duncan and W. W. Repko).
129. *Is Low-Energy Supergravity Consistent with Cosmology and Particle Physics Experiments?*, Phys. Lett. 160B, 297 (1985) (with H.E. Haber and M. Quiros).
130. *The Search for Supersymmetry*, Phys. Rept., 117, 75 (1985) (with H.E. Haber).
131. *Implications of a Systematic Study of the CERN Monojets for Supersymmetry*, Phys. Rev. Lett. 54, 1985 (1983) (with R.M. Barnett and H.E. Haber).
132. *Implications of a Higgs Interpretation of the  $\zeta(8.3)$* , Nucl. Phys. B250, 716 (1985) (with H.E. Haber).
133. *Anomalous  $\bar{p}p$  Events and Decay of New Types of Quark Matter into  $e^+e^-$* , Phys. Lett. 147, 469 (1984) (with L. Maiani).
134. *The Effective  $W\pm Z^0$  Approximation for High Energy Collisions*, Phys. Lett. 148B, 367 (1984) (with W. Repko and W. Rolnick).
135. *Signatures and Possible Evidence for Supersymmetry at the CERN Collider*, Phys. Lett. 142B, 212 (1984) (with H. Haber).
136. *Restrictions on Scalar Neutrinos from  $\tau$  Decays*, Nucl. Phys. B232, 21 (1984) (with W. Rolnick).
137. *Gluino Decays and Experimental Signatures*, Nucl. Phys. B232, (1984) (with H. Haber).
138. *Perhaps Scalar Neutrinos Are the Lightest Supersymmetric Particles*, Nucl. Phys. B241, 638 (1984) (with J.S. Hagelin and S. Raby).
139. *Some Tests for Whether a Narrow Neutral Resonance Can Be a Higgs Particle*, Phys. Lett. 135B, 196 (1984) (with H. Haber).
140. *Search for Neutral Gauge Fermions in  $e^+e^-$  Annihilation*, Phys. Lett. 132B, 436 (1983) (with J. Ellis, J.-M. Frere, J.S. Hagelin, and S. Petkov).
141. *On the Possibility of Finding Light, Uncolored Supersymmetric Partners at Present and Future Machines*, Nucl. Phys. B223, 331 (1983) (with J.-M. Frere).
142. *A Calculation of  $Z^0 \rightarrow 2$  Gluinos*, Nucl. Phys. B217, 117 (1983) (with W. Rolnick).
143. *Experimental Constraints on Gluino Masses and Supersymmetric Theories*, Phys. Lett. 112B, 227 (1982) (with J.P. Leveille).
144. *Observations on Horizontal Symmetries and Flavor Changing Neutral Currents*, Nuc. Phys. B198, 45 (1982) (with D.R.T. Jones and J.P. Leveille).
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146. *Semileptonic D Meson Decays and the Mechanism of CP Violation*, Phys. Rev. D25, 173 (1982) (with G. Senjanovic).
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150. *Branching Ratios in Baryon Decay*, Phys. Rev. D22 2808 (1980) (with G. Karl).
151. *Polarization of Gluon Jets in Photon-Photon Scattering*, Phys. Lett. 90B, 436 (1980) (with A. DeVoto, J. Pumplin, and W.W. Repko).
152. *Models for  $D \rightarrow K^* \ell \nu$  Decay*, Nucl. Phys. B165, 299 (1980) (with W.B. Rolnick, and K. Stowe).
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154. *Polarization of High Transverse Momentum Single Photons as a Test of QCD*, Phys. Rev. Lett. 43, 1062 (1979); Erratum-Ibid 43, 1540 (1979) (with A. DeVoto, J. Pumplin, and W. Repko).
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156. *Diquark Contributions to Scaling Violations and to  $\sigma(L)/\sigma(T)$* , Phys. Lett. 98B, 157 (1979) (with L.F. Abbott, E.L. Berger, R. Blankenbecler).
157. *Estimating Inclusive  $\psi$  and  $\eta_c$  Production in  $e^+e^-$  Annihilation*, Phys. Lett. 85B, 115 (1979) (with J.P. Leveille and D.M. Scott).
158. *The Fermion Mass Scale and Possible Effects of Higgs Boson on Experimental Observables*, Nucl. Phys. B161, 493 (1979) (with H.E. Haber and T. Sterling).
159. *General Analysis of  $D \rightarrow K^* \ell \nu$  Physics*, Nucl. Phys. B152, 390 (1979) (with K. Stowe and W.B. Rolnick).
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161. *Detection of Intermediate Vector Bosons and High-Energy Weak Interactions from Decay of Hadron Resonances*, Nucl. Phys. B146, 109 (1978) (with H.E. Haber).
162. *Will Large Weak Interaction Effects be Observable at Very High Energies?*, Nucl. Phys. B144, 525 (1978) (with H.E. Haber).
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164. *Studying Gluon Properties Experimentally*, Nucl. Phys. B137, 313 (1978) (with Y.-P. Yao).
165. *The Possibility of a  $(c,s)$  Vector Current and  $D \rightarrow K^* \ell \nu$* , Phys. Lett. 70B, 227-230 (1977).
166. *The Search for the  $A_1$  Meson*, Nucl. Phys. B129, 429 (1977) (with H. Haber).
167. *Parity Violations in Hydrogen and the Fundamental Structure of the Weak Current*, Phys. Lett. 71B, 348-352 (1977) (with R.N. Cahn).
168. *Diffraction Production of Vector Mesons in Lepton Nucleon Reactions*, Nucl. Phys. B118, 345-359 (1977) (with M.S. Chen and F.S. Henyey).
169. *Model for Charged Second Class Currents*, Nucl. Phys. B114, 147-156 (1976) (with M.S. Chen and F.S. Henyey).
170. *An Interpretation of Two Body Hadron Reactions*, Rev. Mod. Phys. 48, 309-355 (1976) (with A. Seidl).
171. *Importance of the  $N\Delta$  Inelastic Threshold for Understanding Low Energy NN Amplitudes*, Phys. Rev. D13, (1976) (with G. Thomas).
172. *Do Two Large Gaps Signify Double-Pomeron Exchange?*, Phys. Lett. 60B, 192 (1976) (with M.S. Chen).
173. *Some Chiral Symmetry Sum Rules without an  $A_1$* , Phys. Rev. D13, (1976) (with M.S. Chen and J. Krisch).

174. *Extensions of the Derivative Dispersion Relations for Amplitude Analyses*, Phys.Rev. D12 3431-3440 (1975) (with U. Sukhatme, R. Blankenbecler, and M. Davier).
175. *Does the Pomeron Have Vacuum Quantum Numbers?*, Phys. Rev. D12 1183-1187 (1975) (with J. Pumplin).
176. *Counting Hadron States*, Phys. Rev. D11 136-139 (1975) (with R. Dashen).
177. *Why does the Pomeron Appear to Factorize?*, Phys. Rev. Lett. 32, 963-966 (1974) (with J. Pumplin).
178. *Rising Total Cross Sections and Amplitudes at Large Impact Parameters*, Phys. Rev. 10, 2918-2921 (1974) (with J. Pumplin and F.S. Henyey).
179. *Obtaining Real Parts of Scattering Amplitudes Directly from Cross Section Data Using Derivative Analyticity Relations*, Phys. Letters 49B, 262-267 (1974) (with J. Bronzan and U. Sukhatme).
180. *Interpreting Data from Polarized Proton Beams*, Nucl. Phys. B78, 110-128 (1974) (with U. Sukatme).
181. *Impact Parameter Study of High Energy Elastic Scattering*, Nucl. Phys. B70, 445-460 (1974) (with R. Hong Tuan and F.S. Henyey).
182. *Understanding the Residue of the  $\pi, N$  3-3 Resonance Pole*, Phys. Rev. D9~No.~1 302-304 (1974) (with F. Henyey).
183. *Toward A General Description of Two-Body Hadron Reactions*, Nuc. Phys. B5, 157-211 (1973) (with B.J. Hartley).
184. *n-Particle Cross Sections in Diffraction-Production Models*, Phys. Rev. Letters 30, 67-71 (1973) (with H.D.I. Abarbanel).
185. *Phenomenology of Diffractive Reactions*, Acta Physica Polonica B3, 845-878 (1972).
186. *A Simple Description of High-Energy Elastic Scattering*, Phys. Letters 40B, 363-367 (1972).
187. *An Interpretation of the High-Energy  $\pi N$  Scattering Amplitudes and Data*, Phys. Letters 39B, 531-538 (1972) (with B.J. Hartley).
188. *Unitarity, Duality, and Absorption; A General Discussion and a Definite Model*, Nuc. Phys. B45, 109-142 (1972) (with F.S. Henyey, W.J. Zakrzewski, D. Richards, G. Cohen-Tannoudji and R. Lacaze).
189. *On the Interest of Polarization in Multiparticle Reactions*, Nuc. Phys. B45, 157-180 (1972) (with I. Drummond).
190. *How Much of  $|q|$  Diffraction Dissociation" Cross Section is Diffractive*, Nuc. Phys. B37, 77-85 (1972) (with C. Quigg and G. Cohen-Tannoudji).
191. *Comparison of High Energy Models for Neutral Meson Photoproduction and Related Hadronic Processes*, Nuc. Phys. B32, 429-452 (1971) (with F. Gault and A.D. Martin).
192. *Beyond One-Particle Exchange*, Phys. Rev. Letters 27~No.~6 350-353 (1971) (with F.S. Henyey and J.J.G. Scanio).
193. *Dual, Crossing-Symmetric Amplitude with Mandelstam Analyticity*, Phys. Rev. Letters 26~No.~2 112-115 (1971) (with G. Cohen-Tannoudji, F.S. Henyey and W. Zakrzewski).
194. *Strong Absorptive Regge-Cut Model for Pion Photoproduction,  $np \rightarrow pn$ , and Related Processes*, Phys. Rev. Letters 25~No.~21 1519-1522 (1970) (with F. Henyey, D.R. Richards, Marc Ross and G. Williamson).
195. *On the Structure of High Energy Two Body Non-Diffractive Reactions*, Nucl. Phys. B23, 269-314 (1970) (with M. Ross and F. Henyey).
196. *Strong-Cut Reggeized Absorption Model for Backward Scattering*, Phys. Rev. Letters 24~No.~26 1511-1516 (1970) (with R.L. Kelly and F. Henyey).
197. *Regge Cuts, Absorption Model, and Diffractive Effects in Inelastic Scattering*, Phys. Rev. 182, 1579-1594 (1969) (with F. Henyey, J. Pumplin and M.H. Ross).
198. *Possible Zero at a Wrong-Signature Sense Point on the  $\Delta$  Trajectory*, Phys. Rev. 180, 1607-1608 (1969) (with Frank Henyey).
199. *Modified Extrapolation to Determine the  $\pi \pi$  Cross Section*, Phys. Rev. 177, 2353-2357 (1969) (with Marc Ross).

200. *Can the Parity of the  $\Omega^-$  be Measured?* Phys. Rev. 176, 1733-1734 (1968) (with M.J. Moravcsik).
201. *Regge-Pole with Cuts Generated by Absorption for the Reaction  $\pi+n \rightarrow wp$ ,* Phys. Rev. Letters 21, 1782-1785 (1968) (with F. Henyey and K. Kajantie).
202. *Regge Cuts, Absorption Model, and Diffraction Dips in Inelastic Scattering,* Phys. Rev. Letters 21, 946-949 (1968) (with F. Henyey, Jon Pumplin, and Marc Ross).
203. *Interference of Kaon Resonances,* Phys. Rev. 171, 1533-1539 (1968) (with H.S. Mani).
204. *Bootstrap Calculation of Vector-Meson-Baryon Coupling Constants,* Phys. Rev. 172, 1648-1663 (1968).
205. *Simplified Procedure for Performing Absorption Corrections,* Phys. Rev. 163, 1544-1548 (1967).
206. *Some Consequences of SU(3) and Charge-Conjugation Invariance for K-Meson Resonances,* Phys. Rev. 156, 1738-1741 (1967).
207. *Modified Analysis of Nucleon Electromagnetic Form Factor Data,* Phys. Rev. 151, 1239-1243 (1966) (with R.A. Zdanis).
208. *Observations Concerning Production Amplitudes and Models for  $J^P = 3/2^+$  Baryons,* Nuovo Cimento 44A, 1120-1138 (1966) (with M.T. Grisaur).
209. *Coupled Channel, Several Force Models for a Baryon Antidecuplet,* Phys. Rev. Letters 17, 764-766 (1966) (with J.J. Brehm).
210. *Dynamical Models and Mass Formulas for Resonance Multiplets,* Phys. Rev. Letters 17, 719-720 (1966).
211. *Study of a Self-Consistent Calculation of the  $\Omega^-$  as a K Bound State,* Phys. Rev. 135 B843-B849 (1964).
212. *Modified Phase Shift Analysis of Pion-Nucleon Scattering Data,* Phys. Rev. Letters 11, 45-48 (1963) (with T.D. Spearman).
213. *Final State Enhancement Factors,* Nuovo Cimento 23, 444-447 (1962) (with J.D. Jackson).

**Invited Talks and Lectures at National and International Meetings, Schools, and Public Talks. [NOT including the many seminars and colloquia at universities and laboratories.]**

**2015**

1. “Generic Predictions”, MCTP workshop on string/M-theory compactifications and stabilization, March 2015, Ann Arbor
2. Invited talk at Cook’s Branch Stephen Hawking meeting, Great Brampton House, England, March 2015, “M-Theory and cosmology”,
3. Invited talk, Conference “From the Planck Scale to the Electroweak Scale”, Ioannina, Greece, May 2015, “Predictions for LHC and future colliders”
4. Invited talk, “Spacetime Odyssey Returns”, Nordita, Stockholm, June 2015, “Moduli and non-Thermal Cosmology”
5. Invited talk at annual international “String Phenomenology 2015”, “Light Gauginos”, Madrid, June 2015
6. Invited talk at annual international “Supersymmetry 2015”, Superpartners at LHC and future colliders, Granlibakken, CA, August 2015
7. Invited talk, “String Theory *is* testable like other physics”, Conference of physicists and philosophers, Munich, December 2015

**2014**

8. G2 Manifolds and the Real World, invited talk at Workshop on G2 Manifolds Organized by Simon Donaldson, Simons Center, Stony Brook University, September 2014
9. Annual Institute of Nuclear and Particle Physics Lecture, University of Virginia, April 2014, “String Theory and the Real World”
10. Invited Conference Summary talk on Particle Physics, International Workshop on the Interconnection between particle physics and cosmology, Leon Mexico, June 2014 (this had to be cancelled for family reasons)
11. Two lectures at CFHEP (Center for Future High Energy Physics), Institute for High Energy Physics, Beijing, May 2014, String/M theory and future colliders
12. Invited talk to COMET Collaboration group measuring  $\mu \rightarrow e\gamma$  on lepton flavor physics, IHEP, Beijing, May 2014
13. Colloquium, Institute for Theoretical Physics, Chinese Academy of Sciences, May 2014, “String/M theory and the Real World”
14. 10<sup>th</sup> Anniversary Colloquium, Particle Physics Institute, Tsinghua University, Beijing, May 2014
15. 9<sup>th</sup> Workshop on TeV Physics, Sun Yat Sen University, GuangZhou, May 2014, “Superpartners at LHC and Future Colliders”

**2013**

16. Trieste LHC meeting, June 2013, “String/M theory and LHC physics”
17. KITP, July 2013, “Anticipating the Higgs mass and properties”, Santa Barbara
18. Higgs Mass MCTP workshop, “Anticipating the Higgs mass and properties in compactified M-Theory”, February 2013, Ann Arbor
19. Meeting honoring Haber and Dine, “M-Theory and the Real World”, Santa Cruz, January 2013

**2012**

20. Saturday Morning Physics, Feb 11

21. Distinguished Professor Inaugural talk, March 6, 2012
22. American Physical Society Lilienfeld Prize talk, April 1
23. Talk to American Physical Society Executive officers and Division Heads, April 20
24. Simons Center, Stony Brook, String theory, LHC, Higgs bosons, and the real world, May
25. Newton Institute, University of Cambridge, String theory, LHC, Higgs bosons, and the real world, June
26. Supersymmetry 2012, Beijing, August

**2011**

27. SpaceX POTUS meeting, Jan 2011
28. String Vacuum Project, Relating Moduli and Gravitino masses, Philadelphia, May
29. The  $\mu$  problem and Xenon experiments, June, Shanghai
30. International String Phenomenology, Madison, String/M theory, Our String Vacuum, and Higgs bosons, August
31. Panel on Fermilab, Sept, Fermilab
32. Valencia workshop series, seminar and colloquium, Oct

**2010**

33. Invited talk, one of three “Big Picture” talks at “The Physics of the Universe Summit”, CalTech and SpaceX, January 2010
34. Invited talk, “Implications of Explaining Pamela data with wino annihilation for LHC and Cosmology”, Dark Matter 2010, Santa Monica, February 2010
35. Invited talk, Review of Higgs physics, Dark Matter, and string phenomenology, Cook’s Branch, April 2010
36. Invited talk, “String Phenomenology, Cosmological History, Dark Matter, and LHC”, KITP, May 2010
37. Invited talk, “Progress with M-Theory Compactified on a  $G_2$  Manifold and its Phenomenology”, String Phenomenology 2010, Paris, July 2010
38. Two lectures on Supersymmetry at the LHC, National Center for Theoretical Physics, LHC Physics School, October 2010
39. String Theory and Xenon100, Princeton Center for Theoretical Science, Dark Matter Workshop, November 2010

**2009**

40. Invited Public talk, Dow Corning Corporation, Midland Michigan, “The Significance of LHC”, February 2009
41. “Non-thermal dark matter and string phenomenology”, Cook’s Branch, March 2009
42. “Wino LSP dark matter, satellite data, and LHC”, Ricap09, Rome, May 11-15, 2009
43. “LSP dark matter and LHC”, SUSY09, Northeastern, June 5, 2009
44. “Non-thermal wino dark matter and string phenomenology”, String Phenomenology 2009, Warsaw, June 2009
45. Invited talk, CERN Institute LHC2FC, “Dark matter, LHC, and missing energy”
46. Invited Public Talk, Texas A&M University, Dark Matter, LHC, and our quest for the laws of nature
47. Invited Public Talk, “Unveiling the Ultimate Laws of Nature” Rensselaer Polytechnic Institute, Troy, NY, October 2009
48. Invited Public Talk, “Unveiling the Ultimate Laws of Nature: Supersymmetry and the LHC”, Warsaw, July 2009



- 49. Invited talk, “Describing PAMELA data with Wino-LSP Annihilation”, TeV Particle Astrophysics, Stanford, July 2009
- 50. Invited talk, “Wino Dark Matter and LHC”, ICTP, Trieste, LHC physics workshop, July 2009

**2008**

- 51. Madison annual Phenomenological Particle Physics Meeting, April 2008, “Interpreting LHC and dark matter data”
- 52. KITP Santa Barbara LHC conference, May 2008, “Footprint and Signature studies of LHC data to test string theories”
- 53. Particle Physics and Cosmology, Albuquerque, May 2008, “Summary talk”
- 54. 16<sup>th</sup> Annual international supersymmetry conference, June 2008, Seoul, Korea, “Toward the underlying theory, Learning to interpret LHC data”
- 55. Clay Mathematical Institute, workshop on LHC and string theory, October 2008, “Excursions below the string scale”
- 56. Kavli Institute for Theoretical Physics-China, Beijing, October 2008, “Interpreting LHC and dark matter data”
- 57. International Center for Theoretical Physics, Trieste, Italy, December 2008, “LHC—a Why Facility”
- 58. Lewiner Lectures, Technion, Tel-Aviv, Israel, December 2008 “Dark Matter”; “Predictions and tests from string theory”; “Strings and the Real World”

**2007**

- 59. Invited talk, LHC Theory and Phenomenology Meeting, Princeton, Mar-2007 “Explaining the Electroweak Scale from M-Theory and Associated Phenomenology”
- 60. Invited talk, Mitchel Symposium on Cosmology and Particle Physics, “Dark Matter and LHC”, May 2007
- 61. Society of Physics Student, University of Michigan, “Supersymmetry: What , Why, When?”, April 2007
- 62. Public Talk, University of California- Davis, “We Need Extra Dimensions”, April 2007
- 63. Invited Plenary talk, “LHC and Dark Matter String Phenomenology”, VI International String Phenomenology Conference, Rome June 2007
- 64. International “From the Planck Scale to the Electroweak Scale” Meeting, Planary Talk “From M Theory to the Electroweak Scale”, June 9-13 2007, Warsaw
- 65. Conference on Cosmology and particle Physic, Stockholm June 16-20 2007, Plenary Talk “A Small Cosmology Constant and Inflation without Inflatons”
- 66. Conference on String Theory and Cosmology, ICTP, Trieste, July 9-13, 2007 “A Small Cosmology Constant and Inflation without Inflatons”
- 67. LHC Physics Workshop, CERN, Aug 7-24 2007, “Explaining the Electroweak Scale from M-Theory and associated Collider Phenomenology

**2006**

- 68. Invited talk to Michigan Skeptics Society, Particle Physics and Cosmology, present and Future, November 2006.

69. Invited talk, University of Michigan Origins Symposium, “The first 13 Billion Years, a Summary”, Jan. 2006.
70. Invited talk, 2<sup>nd</sup> Cairo International Conference in High Energy Physics, Feb. 2006.
71. Invited talk at LHC Winter Olympics, LHC Inverse Problem, CERN, Feb. 2006.
72. Invited talk, World Summit on Physics Beyond the Standard Model, “Supersymmetry”, Galapagos Island, June 2006.
73. Invited talk, 2<sup>nd</sup> Mitcehl Symposium on Astronomy, Cosmology, and Fundamental Physics, April 2006 “Finding and Interpreting Evidence for Supersymmerty and Dark Matter.
74. Invited talk “String Theory and Patterns of LHC Signatures” Abdus Salarn International Center for Theoretical Physics, Trieste, Italy, June 2006
75. Plenary Session Panel, “Getting Ready for the LHC”, Supersymmetry 06, Irvine CA, July 2006
76. Invited talk, PASCOS 06, Columbus OH Sept 2006.
77. Invited Colloquium, Kavli Institute for Theoretical Physics, “String Phenomenology?—What Could That Be?”, Aug 2006

#### 2005

78. “Why Einstein would be a string phenomenologist today”, Monterrey, Mexico (part of Mexican year of Physics conference), Jan. 2005.
79. “What Counts as String Phenomenology”, Perimeter Institute String Phenomenology meeting, Invited initial talk, March 2005.
80. Invited Plenary talk, 4th Annual String Phenomenology meeting, Munich, June 2005.
81. Invited Lecturer on LHC Physics, TASI School, June 2005.
82. Invited Lecturer on Supersymmetry, Perimeter String Theory School, June 2005.
83. Invited opening talk, LHC Olympics, CERN, June 2005.
84. Invited Aspen Colloquium, SuperCosmology, Aug. 2005.
85. Invited Aspen lecture on LHC physics, Aug. 2005.
86. Invited talk, the Internet Publication of Scientific Work, in Symposium, “Future of Scientific Writing”, University of Michigan, Sept. 2005.

#### 2004

87. Invited Plenary Talk, “An Approach to the Cosmological Constant, Problems(s)”, Rencontre de Moriond, La Thuile, Italy, March 2004.
88. Invited Plenary Talk, “A Possible Mechanism to get a Small Positive Cosmological Constant”, from the Planck Scale to the Electroweak Scale, Bonn, Germany, May 2004.
89. Invited Plenary Talk, Supersymmetry 2004, “An Approach to the Cosmological Constant Problems”, Tokyo, June 2004.
90. Colloquium, Aspen Center for Physics, “What is String Phenomenology”, Aug. 2004.
91. “Learning Physics from Hadron Colliders”, LHC Physics meeting, Vienna, July 2004.
92. “Learning Physics from Hadron Colliders”, TeV4LHC meeting, Fermilab, Sept. 2004.

#### 2003

93. Invited talk, Aspen Winter Particle Physics Meeting, “Connecting String Theory and Data”, Aspen, CO, Jan. 2003.
94. Invited talk, Relating Data, Supersymmetry, and String Theory, at SUPERGRAVITY 20, Northeastern University, Boston, MA, March 2003.
95. Invited talk, “Why is There No Good Supersymmetric Standard Model?”, From the Weak to the Planck Scale, Madrid, May 2003.

96. Invited talk, “What Do We Know About Superpartners and Higgs Bosons”, Supersymmetry03, Tucson, AZ, June 2003.
97. Invited talk, “Questions for String Theorists”, String Phenomenology03, Durham, England, July 2003.
98. Invited Public talk, “Connecting Particles and the Universe”, in connection with the NASA exhibit “Cosmic Questions”, Midland, MI, April 2003.
99. Invited talk, “Top-down Perspective on Flavor Physics”, Seoul, Korea, “International Conference on Flavor Physics”, October 2003.
100. Invited Public Talk, “Anthropic Questions”, Phi Kappa Phi Honor Society Innauguration, April 2003.

### 2002

101. Invited talk, First String Phenomonology Meeting, Oxford, England, June 2002.
102. Invited talk, European particle Theory Network annual meeting, Durham, England, May 2002.
103. Invited talk, Supersymmetry 2002, Hamburg Germany, July 2002.
104. Invited talk, Fifth European Meeting “From the Planck Scale to the Electroweak Scale”, Kazimierz, Poland, May 2002.
105. Four Invited Lectures on Supersymmetry, Beijing Supersymmetry School, July 2002.
106. Invited Lecture, “What Would Dirac Think About Particle Physics Today,” Dirac Century Conference, Baylor University, Oct. 2002.
107. Invited talk, Victor Weisskopf Memorial Symposium, MIT, Nov. 2002.

### 2001

108. Invited talk, The Supersymmetry Soft-Breaking Lagrangian, Cairo International Conference on High Energy Physics, Jan. 2001.
109. Invited talk, Implications of Recent Results on Higgs Physics, CP violation, and the Muon Magnetic Moment, La Thuile, Italy, March 2000.
110. Invited talk, Institute of Physics Annual conference, Southampton, England, New Clues to Particle Physics of the New Millennium, April 2001.
111. Invited public talk, How well can we understand the Physical Universe, University of Southampton, April 2001.
112. Invited talk, PASCOS 2001, Supersymmetric Interpretation of New Clues --- a Higgs Boson, Muon  $g-2$ , and CP violation, Durham, NC, April 2001.
113. Invited talk, Strings, Cosmology, and Particle Physics Seminar, University of Chicago, String Based Model of Almost Everything, March 2001.
114. Invited talk, Strings, Cosmology, and Particle Physics Lecture, University of Cambridge, England, Unifying the several forms of Dark Matter, May 2001.
115. Invited talk, University of Durham Institute of Particle Physics Inaugural Conference, Implications of Recent Discoveries, May 2001.
116. Four Invited lectures on Supersymmetry, at the U.S. Theoretical Advance Study Institute, Boulder, CO, June 2001.
117. Invited talk, SUSY2001, June 2001, Dubna, Russia.
118. Invited talk, COSMO 2001, Helsinki, Finland, Sept. 2001.
119. Three Invited talks, Snowmass 2001, “Origins of Electroweak Symmetry Breaking”, “What is the Cold Dark Matter of the Universe”, and “Status of Supersymmetry in 2011”, 2001, Denver, CO.

120. Invited Public talk, Dartmouth University, How Well Can We Understand the Physical Universe, Nov. 2001.

**2000**

121. Invited talk, Future Collider Workshop, “There IS a physics case for the NLC”, Berkeley, CA, March 2000.
122. Invited lectures, South American Physics School, “the Supersymmetry Soft-breaking Lagrangian”, Cartagena, Colombia, March 2000.
123. Invites lecture, “Higgs Physics” as 20th anniversary speaker for the University of Michigan SPS, April 2000.
124. Invited talk, Ford Scientific Research Laboratory Sigma Xi Lecture, “How well can we understand the physical universe?”, March 2000.
125. Invited talk, ANL supersymmetry workshop, “The Soft-breaking Lagrangian”, May 2000.
126. Invited talk, Workshop on Supersymmetry Tools, Colmar, France, April 26-28.
127. Invited talk, The Physics Basis for a 600 GeV Linear Electron Collider, at SUSY 2000, CERN, June 2000.
128. Invited talk, Can We Learn What is the Cold Dark Matter of the Universe, at COSMO 2000, Cheju, Korea, Sept. 2000.
129. Invited Lecture in Arts and Sciences Program, Saline Public Library, Saline MI, “How Well Can We Understand The Physical Universe?”, Nov. 2000.
130. Invited presentation on why to build  $e^+e^-$  collider, Aspen, CO, Aug. 2000.

**1999**

131. Invited talk, Division of Particles and Fields Annual Meeting, The Supersymmetry Soft-Breaking Lagrangian, Where Experiment and Theory Meet, UCLA, Jan. 1999.
132. Invited Plenary Talk, Supersymmetry, at Conference on Higgs and Supersymmetry Discovery, Gainesville, Florida, March 1999.
133. Invited Plenary Talk, Particle Physics for the Third Millenium, at Conference Phenomenology for the Third Millenium, Madison, WI, April 1999.
134. Three Lectures on Higgs Physics, Frascati National Laboratory, Frascati School on Subnuclear Physics, Frascati, Italy, April 1999.
135. Invited talk at Gran Sasso Institute on Massive Neutrinos in Physics and Cosmology, Sept. 1999.
136. Invited talk, Beyond the Desert 1999 --- Accelerators, non-Accelerator, and Space Approaches, Heidelberg, Germany, June 1999.
137. Invited Plenary talk --- to conclude meeting, Supersymmetry 1999, Fermilab, June 1999.
138. Invited talk, Institute for Theoretical Physics Workshop “The Supersymmetry Soft-breaking Lagrangian and CP-Violation”, Oct. 1999.
139. Invited talk, ITP conference on Supersymmetry and String Theory, “D-branes, supersymmetric soft phases, and b-factories”, Nov. 1999.
140. Invited talk, Joint Theory Seminar, Nevav Shalon, Israel, “D-branes, supersymmetry phases, and CP violation”, Dec. 1999.
141. Invited talk, PASCOS, (particles, strings, and cosmology) 1999 Lake Tahoe, “Supersymmetry phases and a universal origin for all CP violation”, Dec. 1999.
142. Invited talk, Muon Collider Conference, “Where are the superpartners and how should we study them?”, San Francisco, CA, Dec. 1999.

- 143. Invited lecture at the Quarknet Institute for High School Teachers, “The Standard Model of Particle Physics”, Fermilab, Nov. 1999.
- 144. Invited talk, Particle Physics and Cosmology in Space, “How do we learn the relic density of cold dark matter?”, Sonoma State University, Oct. 1999.

**1998**

- 145. Invited lectures on Supersymmetry, 15th Nordic Meeting on Particle Physics, Spatind, Norway, January 1998.
- 146. Invited talk, “Interpreting Data on Supersymmetry at Hadron Colliders”, at LHC Workshop, CERN, February 1998.
- 147. Invited talk, “How well Can We Learn the Cold Dark Matter Relic Density from Particle Physics Data?”, at Dark Matter in the Universe, Marina del Rey, CA, February 1998.
- 148. Invited talk, “Measuring the Parameters of Supersymmetry”, CNRS Workshop “Tools for Supersymmetry”, Annecy, France, March 1998.
- 149. Invited Talk, “The Parameters of Supersymmetry --- Where Theory and Experiment Meet”, at Particles, Strings, and Cosmology, Boston, March 1998.
- 150. Invited Talk, International Dark Matter Workshop, Buxby, England, Sept. 1998.
- 151. Invited Talk, “Are Gluinos a Major Source of Tops?”, Top Quark Thinkshop, Fermilab, Nov. 1998.
- 152. Invited Opening Talk, Workshop on Supersymmetry at Fermilab, May 1998.
- 153. Invited Plenary Talk, Measuring the Supersymmetry Soft Breaking Lagrangian, Fermilab, Nov. 1998.
- 154. Invited Plenary Remarks --- An overview of the related origins of matter in the universe, Asilomar, Dec. 1998.

**1997**

- 155. Invited talk, “Predictions from Supersymmetry for  $BR(b \rightarrow \gamma s)$ , Symposium on Flavor Changing Neutral Interaction, Santa Monica, CA, Feb. 1997.
- 156. Invited talk and summary, OPAL LEP2 Workshop, CERN, Geneva, March 1997.
- 157. Invited talk, “Evidence for Supersymmetry and Associated Predictions”, Rencontre de Moriond, Les Arc, France, March 1997.
- 158. Invited talk, “Evidence for Supersymmetry, Tests and Implications, Beyond the Standard Model 1997, Ringberg Castle, Tegnersee, Germany, June 1997.
- 159. Invited Lectures on Supersymmetry, Trieste School on Advanced Particle Physics, June 1997.
- 160. Invited talk, ASPEN Workshop, “Possible Signals of Supersymmetry”, Aug., 1997.
- 161. Invited lecture, International School of Subnuclear Physics, Erice, Sicily, August 1997.
- 162. Invited General Colloquium, CERN, November 1997.
- 163. Invited talk, “Higgs Physics”, Muon Collider Workshop, San Francisco, December 1997.

**1996**

- 164. Invited talk, at the CDF Supersymmetry Workshop “Supersymmetry --- Find it or Exclude It”, Fermilab, Jan. 1996.
- 165. Invited talk, “Realistic Models of Supersymmetric Dark Matter”, at Dark Matter 1996, Santa Monica, CA, Feb. 1996.
- 166. Invited talk, “Physics Opportunities for the Tevatron Collider”, 1996 Annual Meeting of the American Physical Society, Indianapolis, May 1996.
- 167. Invited opening talk, “Is There Experimental Evidence for Superpartners or Other New Physics?”, Supersymmetry 1996, College Park, MD, May 1996.

- 168. Invited talk, “Evidence for Supersymmetry and Implications for Cold Dark Matter”, at Neutrinos, Dark Matter, and the Universe, Blois, France, June 1996.
- 169. Invited talk, “Evidence for Superpartners -- Test and Implications”, 28<sup>th</sup> International Conference on High Energy Physics, Warsaw, Aug. 1996.
- 170. Invited talk, “Evidence for Supersymmetry and Cold Dark Matter”, 28<sup>th</sup> International Conference on High Energy Physics, Warsaw, Aug. 1996.
- 171. Invited talk, “Increasing Evidence for Supersymmetry and Implications for Cold Dark Matter, University of Tokyo, Conference on Dark Matter in the Universe, Nov. 1996.
- 172. Invited lecture, “Increasing Evidence for Supersymmetry and Implications”, I Latin American Symposium on High Energy Physics, Merida, Yucatan, Nov. 1996.

**1995**

- 173. Invited Talk at American Physical Society Washington Meeting, “Is the World Supersymmetric? When Will We Know?”, April 1995.
- 174. Invited Talk at D0 Group Meeting, “Exciting Opportunities at the Tevatron Collider”, June 1995.
- 175. Invited Opening Talk, “Physics Opportunities for the Next Linear Collider”, June 1995, Estes Park, CO, International NLC Workshop.
- 176. Invited talk, Conference on Unification from the Weak Scale to the Planck Scale, Institute for Theoretical Physics, Santa Barbara, CA, Oct. 1995.

**1994**

- 177. Invited talk “Comments on Yukawa Couplings and Higgs Bosons from the CMSSM”, at the Workshop on Yukawa Couplings, Gainesville, FL, Feb. 1994.
- 178. Invited talk “Cold Dark Matter from Constrained Minimal Supersymmetry”, at Neutrino 1994, Eilat, Israel, May 1994.
- 179. Invited talk “Constrained Minimal Supersymmetry --- Results, Tests, Predictions”, at PASCOS 1994, Syracuse, NY, May 1994.
- 180. Invited Talk “Supersymmetry Physics and its Implications for Discoveries at Present and Upgraded and Future Colliders”, at Workshop on Future Physics and Accelerators, Saariselka, Finland, Aug. 1994.
- 181. Invited Talk “Strong Physics Motivation for Upgrading the FNAL Collider”, Beyond the Standard Model IV, Lake Tahoe, Dec. 1994.
- 182. Invited Summary Talk, at Beyond the Standard Model IV, Lake Tahoe, Dec. 1994.

**1993**

- 183. Invited talk “Expectations for Masses of SUSY Higgs Bosons”, Aspen Winter Conference, Aspen, January 1993.
- 184. Invited talk, Conference on “Unified Symmetry in the Small and in the Large”, “Is Nature Supersymmetric? When Will We Know?”, Coral Gables, Florida, January 1993.
- 185. Invited talk, “Indirect Evidence for Supersymmetry”, 29<sup>th</sup> Rencontre de Moriond, Les Arc, France, March 1993.
- 186. Invited talk, “Upper limit on  $m_h^0$  and SUSY Higgs Masses”, at Supersymmetry '93, Boston, March 1993.
- 187. Invited Plenary Session Summary, “Supersymmetry and NLC”, at Physics and Experiments with Linear  $e^+e^-$  Colliders, Hawaii, April 1993.

**1992**

188. Invited talk, “Status of Higgs Physics”, Beyond the Standard Model III, June 1992, Ottawa, Canada.
189. Invited talk, “Supersymmetry Forever?”, SSC Physics Symposium, Madison, Wisconsin, April 1992 .
190. Invited talk, “Super Collider Physics”, Rencontre de La Thuile, March 1992.
191. Invited talk, “Higgs Physics”, Trieste Workshop on the Search for New Elementary Particles, May 1992.
192. Invited talk, Erice Supersymmetry Workshop “Supersymmetry Models”, September 1992.
193. Invited talk, introduction to the Conference “The Top Question”, Madison workshop on Top Quark Physics, November 1992.
- 1991**
194. Invited talk, “What Comes After LEP and FNAL?”, 27<sup>th</sup> Annual Rencontre de Moriond, Les Arcs, France, March 1991.
195. Invited talk, “If We're Lucky, at LEP and FNAL We'll Discover. . . , 15<sup>th</sup> Johns Hopkins Workshop on Current Problems in Particle Physics, Baltimore, Aug 1991.
196. Lectures on Top Quark Physics, July 1991, Mexico City Workshop.
- 1990**
197. Invited Lecturer, XXII G.I.F.T. International Seminar on Theoretical Physics, June 4-9, 1990, Santander, Spain, “Higgs Physics”
198. Invited Lecturer, 18<sup>th</sup> Annual SLAC Summer Institute, July 1990, “Top Quark Topics”
199. Invited Lecturer, “Beyond the Standard Model II”, Norman, OK, Nov. 1990
- 1989**
200. Invited talk, “How to Study  $WW$  Interactions in the TeV Region”, Argonne National Laboratory SSC Workshop, June 1989.
201. Invited talk, “Physics Goals of the SSC”, 1989 U.S. Particle Accelerator School.
- 1988**
202. Invited Review talk “Status of the Standard Model?”, 11<sup>th</sup> Johns Hopkins Workshop, Baltimore, (June 1988), published in the Proceedings.
203. Invited talk on Future Collider Physics, International Conference on Hadron Interactions, Prague, (June 1988).
204. Invited talk “Theory Beyond the Standard Model”, 1988 Topical Workshop on  $\bar{p}p$  Collider Physics, Fermilab (June 1988).
205. Invited Summary talk, “New Particles at Colliders”, DPF Study on “Particle Physics of the 1990's”, Snowmass, Co., July 1988.
206. Invited Introductory talk “Beyond the Standard Model”, IX European Symposium on  $\bar{p}p$  Interactions and Symmetries, Mainz, September 1988, published in Proceedings.
207. Invited talk “Supersymmetry --- 1988”, Conference on Beyond the Standard Model, Ames Iowa, November 1988, published in Proceedings.
208. Invited talk, “How to Elucidate the Mechanism of CP Violation”, Vancouver Workshop on CP Violation, December 1988, published in Proceedings.
- 1987**
209. Invited Rapporteur for “Beyond the Standard Model”, International Conference on High Energy Physics, Uppsala, (June 1987).
210. Invited talk on “Physics Goals for the SSC” and Conference Summary, 8<sup>th</sup> Vanderbilt High Energy Conference, Nashville, (October 1987).

**1986**

- 211. “Status of the Search for Supersymmetry”, Invited talk, Rencontre de Moriond, (March 1986)
- 212. “The Search for New Particles”, Invited talk at the XVII Symposium on Multiparticle Physics, Vienna, (June 1986)
- 213. “Physics from Future Colliders”, Lectures at the 2<sup>nd</sup> Mexican School on Particle Physics, Cuernavaca, (December 1986)
- 214. “Physics for the SSC”, Invited talk at the Ohio SSC Siting Conference, (November 1986)

**1985**

- 215. “Comments on Anomalous Events”, Invited review talk at the Aspen Winter Meeting, (January 1985).
- 216. “Physics from Future Hadron Colliders”, three lectures at the XIII International Winter Meeting on Fundamental Physics, Cuenca, Spain (April 1985).
- 217. “The Physics of Hadron Colliders”, Invited talk, XVI Symposium on Multiparticle Dynamics, Kiryat-Anavim, Israel, (June 1985).
- 218. Invited Lectures at the School on High Energy Physics and Cosmology, Trieste, (June 1985)

**1984**

- 219. “How Excluded by the Absence of Proton Decay are Models with a Desert?”, Invited talk at the Park City Nuclear Decay and Grand Unification Conference, (January 1984).
- 220. “The Experimental Search for Supersymmetry”, Invited talk at Europhysics Topical Conference on Flavor Physics, Erice, Sicily, (March 1984).
- 221. “Production and Uses of Heavy Quarks”, Invited lectures at the 1984 SLAC Summer Institute, (July 1984).
- 222. “Opportunities for New Physics at Future Colliders”, Fourth “Physics in Collision” Conference, Santa Cruz, (August 1984).
- 223. Lectures on Experimental Tests of Supersymmetry, NATO Advanced Study Institute, Bonn, Germany, (August 1984).
- 224. “Physics at Future Colliders”, Invited final talk at 7th annual proton-antiproton collider conference, Durham, England, (July 1984).
- 225. Lectures on Supersymmetry and Experiment, at University of Michigan Theoretical Advanced Study Institute, (June 1984).
- 226. “The Future of Rare Decays”, Invited talk at the Conference “50 Years of Weak Interactions”, Wingspread Foundation, (May 1984)

**1983**

- 227. “Review of Higgs Physics”, Invited talk at Workshop on Exotic Particles, Institute for Theoretical Physics, Santa Barbara, (January 1983).
- 228. “New Ideas in Particle Physics and Their Implications for Future Experiments”, Invited talk at Rencontre de Moriond, (March 1983).
- 229. “Testing Supersymmetry”, Invited talk at Fourth Workshop on Grand Unification, (April 1983).
- 230. “Testing Supersymmetry”, lectures at 21st International School of Subnuclear Physics, Erice, (August 1983).
- 231. “Windows for New Physics at Supercolliders”, Invited talk at the Arizona meeting “Physics of the XXI Century”, (December 1983).



**1982**

- 232. “The Search for Experimental Evidence for Supersymmetry”, Invited talk at Washington APS meeting, (April 1982).
- 233. “Beyond the Standard Model”, Invited talk at Annual Meeting, Division of Particles and Fields of the APS, (October 1982).

**1981**

- 234. “Physics at the  $Z^0$ ”, Invited opening talk to Workshop at Cornell, (January 1981).
- 235. “How to Search for Higgs Particles”, Invited talk at Division of Particles and Fields annual meeting, Santa Cruz, (September 1981).
- 236. Lectures on Technicolor and Higgs Phenomenology, Les Houches Gauge Theory Summer Institute.

**1980**

- 237. Physics for the Fermilab Tevatron Fixed Target Program, Introductory talk, Summer Study, (July 1980).
- 238. “Experimental Predictions from Technicolor”, Invited Parallel Session Talk at XX International Conference on High Energy Physics, (Madison, 1980).
- 239. “Production of Technicolor Particles”, talk at Fermilab Workshop on 2 TeV Collider Program, (November 1980).
- 240. “Higgs Physics”, Invited talk at Workshop on Gauge Theories, Virginia Polytechnic Institute, (December 1980).

**1979**

- 241. Poland QCD Conference (talk on spin in QCD), (May 1979).
- 242. Poland, Zakopane Summer School, Higgs boson physics, (June 1979).
- 243. Talk on finding important meson resonances with this technique, Lake Tahoe Two-Photon Physics Conference, (August 1979).
- 244. “Could Higgs Bosons be Found Before LEP?”, Wisconsin Workshop on Production of New Particles in Super High Energy Collisions, Invited talk, (October 1979).

**1978**

- 245. “How Should Gluons be Studied Experimentally?”, XIII Annual Recontre de Moriond, Les Arcs, France, in hadronic week, (March 1978).
- 246. Comments on the Observability of Weak Interactions at Very High Energies, XIII Annual Recontre de Moriond, weak interaction week, Les Arcs, France, (March 1978).
- 247. Current Status of New Quarks and Leptons, Invited talk, Annual Meeting of Canadian Physical Society, (June, 1978).
- 248. Review talk on Parity Violation in Gauge Theories, Seattle Weak Interactions Institute, (August, 1978).
- 249. Panel on physics interest of quark polarizations, Argonne National Lab, October, 1978.
- 250. Speculations concerning Particle Interactions at Very High Energies, Bartol Research Institute Workshop on Cosmic Rays and High Energy Accelerators, Delaware (October 1978).

**1977**

- 251. Gluon Interactions or, Hadron Physics at ISABELLE, ISABELLE Summer Study, 1977.

**1975**

- 252. Argonne Symposium on Hadron Resonance Physics, (July 1975).

253. Division of Particles and Fields, APS, Annual Meeting in Seattle, Invited Parallel Session Talk on Diffraction Dissociation, 1975.
- 1974**
254. The Importance of Absorption for Understanding Hadron Reactions, in SLAC Topical Conference on Hadron Physics, August, 1974.
255. Hadrons without Pointlike Structure, in International Gordon Conference on Hadron Structure, New Hampshire, August, 1974.
- 1973**
256. Rapporteur on “Two Body Hadron Reactions”, in Division of Particles and Fields, APS, Annual Meeting in Berkeley, 1973.
257. Lecture Series at the Canadian School, Particle Physics (Montreal).
- 1972**
258. Lecture Series at the German School, Hadron Physics (Kaiserslautern).
259. Lecture Series at the Polish School, Diffractive Physics (Zakopane).
- 1971**
260. Invited talk on “Regge and Duality Physics”, British Physical Society Annual Meeting, (Sept. 1971).
- 1969**
261. Invited talk on “Absorption Model Theory”, American Physical Society West Coast Meeting, (Dec. 1969).
262. Finnish School in Hadron Physics, (Liperi), Lecture Series.

**Other Publications:**

1. Perspectives on String Phenomenology, edited with B. Acharya and P. Kumar, World Scientific, 2014
2. Particle Physics is at a Turning Point, published in Nature 480 (2011) 41,5
3. String Theory and the Real World, invited article for Physics Today, November 2010
4. Perspectives on Supersymmetry II, World Scientific, 2010, edited by G. Kane, Second Edition a decade later.
5. Perspective on LHC Physics, World Scientific, August 2008 Edited by G. Kane and A. Pierce.
6. What's the Matter, Anthology of Writings by Physicists, Great Books Foundation, 2007, includes Chapter 3 of my Supersymmetry book (26, above). Other authors in the anthology include, Feynman, Galileo, Newton, Faraday, Maxwell, Joule, Eddington, Planck, Einstein, Gamov, Heisenberg, Hawking, Weinberg.
7. Scientific American Special Issue on Physics, Extra Edition, reprinted two of my articles (33, 35 above) from a total of eleven, Dec. 2006.
8. Invited article for Scientific American, "The Mysteries of Mass", Sci. Am. 293N7:30-37, 2005.
9. Invited lecture on "Emergence and Effective Theories", University of Michigan Program "Case Studies in Emergence", March 2003.
10. Invited article for Scientific American, "Physics Beyond the Standard Model", Sci. Am. 288N6(2003)68.
11. Invited article, "Anthropic Questions", Phi Kappa Phi Forum, Fall 2002.
12. Invited article for New Scientist "Higgs Physics: What? Why? When?", New Sci 173N2336(2002)28 (with E. Witten).
13. Invited articles for Grolier Encyclopedia, "Higgs Physics", "Dark Matter and Dark Energy", "Supersymmetry", "Fundamental Constants", 2002.
14. Co-Editor with M. Shifman, "The Supersymmetric World: The Beginnings of the Theory", World Scientific, 2001.
15. Invited exhibitor, "Gardens", Villa Medici, Rome, Fall 2000.
16. Invited articles for Grolier Encyclopedia, "Fundamental Particles" and "Fundamental Forces", 2001.
17. "Supersymmetry: Squarks, Photinos, and the Unveiling of the Ultimate laws of Nature", Perseus Books, April 2000.
18. Invited author, Microsoft Encarta Encyclopedia article on Quantum Theory.
19. "How Science Progresses", invited article, LSA Magazine, Fall 1998.
20. "The Physics Potential of LEP", invited article for CERN Courier, April 1998.
21. Winner, Physics Today Essay Contest - Physics Tomorrow, "Experimental Evidence for More Dimensions Reported". May 2001.
22. Edited the book "Perspectives on Supersymmetry", 1998, World Scientific.
23. Edited (2nd Edition) the book "Perspectives on Higgs Physics II", Fall 1997, World Scientific.
24. "Superstring Theory is Testable, Even Supertestable", Physics Today, February 1997, 40.
25. Invited to write Chapter in El Pais Year Book on Science, on "U.S. Scientific Policy and the Supercollider", for publication in 1995.

26. "The Particle Garden - Our Universe as Understood by Particle Physicists", Dec. 1994, Helix Books, Addison-Wesley. Paperback edition June 1996.
27. "Modern Elementary Particle Physics", updated and published in paperback edition, (March 1993).
28. Editor, "Perspectives on Higgs Physics", a book with chapters giving different views and current status of thinking on electroweak symmetry breaking and Higgs physics, (World Scientific, 1993).
29. Invited review, "The Scientific Goals of the SSC", for Contemporary Physics.
30. "The SSC", for the 1992 McGraw Hill Encyclopedia of Science and Technology.
31. "The Higgs Hunters Guide" a book covering all aspects of what is known about how to search for Higgs bosons. Addison-Wesley, April 1990 (with J. Gunion, H.E. Haber, and S. Dawson).
32. "Physics for Future Supercolliders", in *Collider Physics*, edited by G Altarelli and L. DiLella (World Scientific 1988).
33. "Modern Elementary Particle Physics", a book describing the Standard Model at a level suitable for people having an introductory knowledge of quantum theory, (AddisonWesley, September 1987).
34. How Can We Find Out If Nature Is Supersymmetric? (July 1986), Scientific American (with H.E. Haber).
35. "National Security in a Nuclear Age", Michigan Alumnus (January 1985). Planned entire issue and wrote overview article.
36. Verification of Testing Limitation as New Strategic Systems, UCLA Center for International and Strategic Affairs, Research Note No. 15.
37. Are We the Center of the Universe, Invited article for Michigan Quarterly Review Special Issue on "Science and the Human Image" XXIV 227 (1985).
38. Strategic Arms Control through Test Restraints: Principles and Case Studies, International Security, 8, 108-151 (1983) (with MB Einhorn and M Nincic).
39. Compton's Encyclopedia entry on particle physics.
40. Early Research on the Biological Effects of Microwave Radiation: 1940-1960, Annals of Science 37, 323-351 (with NH Steneck HJ Cook AJ Vander).
41. The Origin of US Safety Standards for Microwave Radiation Science 208, 1230-1237 (1980) (with NH Steneck HJ Cook AJ Vander).
42. What Should the Price Anderson Act Accomplish Forum XII, 622-628 (1977).

## DISSERTATION COMMITTEE MEMBERSHIPS SINCE 1989

Emplid	Name	Committee Role	Committee Type	Committee Member Start Date
49372057	Phalen, Daniel James	Member	RackDsrtn	10/30/2008
	Lu, Ran	Chair	RackDsrtn	12/08/2009
85614009	Gauthier, Christopher Survilas	Member	RackDsrtn	08/22/2008
39841333	Grajek, Phillip R	Chair	RackDsrtn	03/25/2008
93518163	Shao, Jing	Chair	RackDsrtn	05/18/2007
08140243	Cui, Yanou	Member	RackDsrtn	04/11/2007
50465456	Thomas, Brooks Delzell	Member	RackDsrtn	09/29/2006
19281448	Kumar, Piyush	Chair	RackDsrtn	06/06/2005
28603044	Deconinck, Wouter	Member	RackDsrtn	01/28/2005
44388038	Cooper, Robert L	Member	RackDsrtn	01/28/2005
79117962	Savage, Christopher Michael	Member	RackDsrtn	01/28/2005
44162011	Burrington, Benjamin A	Member	RackDsrtn	09/29/2004
11692420	Pawl, Andrew Eric	Co-Chair	RackDsrtn	09/02/2003
14552904	Kang, Jian	Member	RackDsrtn	09/02/2003
77202971	Goldschmidt, Nathan J	Member	RackDsrtn	09/02/2003
11813805	Ray, Heather L	Member	RackDsrtn	05/02/2003
56040225	Wen, Wen-Yu	Member	RackDsrtn	04/29/2003
62282617	Batrachenko, Olexiy Victorovich	Member	RackDsrtn	10/23/2002
56347545	Wang, Ting	Chair	RackDsrtn	01/16/2002
76986718	Wang, Liantao	Chair	RackDsrtn	09/21/2000
34002656	Good, Gerald James	Chair	RackDsrtn	03/13/2000
74320581	Wolinski, David Scott	Member	RackDsrtn	01/19/2000
34471854	Sati, Hisham A	Member	RackDsrtn	01/18/2000
74260579	Guimaraes Da Costa, Joao Pe	Member	RackDsrtn	10/08/1999
82058729	Reichhardt, Charles Michael	Member	RackDsrtn	08/05/1998
56444224	Button, Alan Mark	Member	RackDsrtn	07/23/1998
01577845	Leggett, Charles George	Member	RackDsrtn	06/04/1998
66391024	Sinkovics, Annamaria	Member	RackDsrtn	04/08/1998
81275776	Choi, Incheol	Cognate (Soc Psych)	RackDsrtn	03/16/1998
06063524	Burkett, Kevin Alan	Member	RackDsrtn	11/21/1997
36579440	Graff, David Steven	Member	RackDsrtn	11/20/1996

52146048	Rosenberry,Mark Allen	Member	RackDsrtn	09/05/1996
15316206	Kribs,Graham D	Chair	RackDsrtn	10/12/1995
54892596	Wells,James Daniel	Chair	RackDsrtn	03/29/1995
31055964	Kolda,Christopher Frank	Chair	RackDsrtn	03/28/1995
33213457	Moore,Ronald Scott	Member	RackDsrtn	11/18/1994
38383548	Crandell,Donald Alan	Member	RackDsrtn	10/05/1994
54974134	Guillian,Eugene Hall	Member	RackDsrtn	09/16/1994
91034178	Malde,Paresh J	Chair	RackDsrtn	08/27/1993
57705197	Loinaz,William Alfredo	Member	RackDsrtn	07/26/1993
78967750	Arzt,Christopher Ethan	Member	RackDsrtn	11/24/1992
16445452	Metzler,Christopher Alan	Member	RackDsrtn	08/19/1992
66841068	Park,Jaehoon	Member	RackDsrtn	08/19/1992
36345158	Diehl,Edward Brereton	Member	RackDsrtn	11/06/1989