

November 6, 2002

## CURRICULUM VITAE

**Stephen Parke**

### PROFESSIONAL ADDRESS:

Theoretical Physics Department  
Fermi National Accelerator Laboratory  
P. O. Box 500  
Batavia, IL 60510, USA

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### PUBLICATIONS, PREPRINTS and INVITED CONFERENCE SEMINARS:

See attachments

### PHYSICS EMPLOYMENT:

Fermi National Accelerator Laboratory:

Senior Scientist 1995-present

Scientist 1988-1995

Associate Scientist 1983-88.

Stanford Linear Accelerator Center:

Post-Doctoral Fellowship 1980-83.

Harvard University:

Research/Teaching Assistant 1975-80.

### EDUCATION:

Ph.D., M.A. June 1980, Theoretical Particle Physics:

Harvard University, Cambridge, Massachusetts

Thesis Advisor: Professor Sidney Coleman.

B.Sc. (Honours) May 1973, First Class Honours:

University of Auckland, Auckland, New Zealand

Majors: Physics, Pure and Applied Mathematics.

### PROFESSIONAL and ACADEMIC AWARDS:

Fermilab:

Fellow of the American Physical Society

Marquis Who's Who in America

Harvard University:

Fulbright, Frank Knox Memorial Fellowship, Polaroid Company Fellowship

University of Auckland:

Junior National Scholarship, N.Z. Sugar Company Scholarship

# PUBLICATIONS and PREPRINTS

Stephen Parke

- (1) “Can One Dent a Dyon?”,  
with S. Coleman, A. Neveu and C.M. Sommerfield:  
Physical Review **D15**, 544(1977).
- (2) “Quark Liberation in (1+1)-Dimensions”,  
with P.J. Steinhardt:  
Annals of Physics **114**, 215(1978).
- (3) “How many Conserved Currents are Necessary for the Calculation of the S-matrix in the Massive Thirring Model?”:  
Physics Letters **88B**, 287(1979).
- (4) “Absence of Particle Production and Factorization of the S-matrix in (1+1)-Dimensional Models”,  
Ph. D. Thesis Harvard University:  
Nuclear Physics **B174**, 166(1980).
- (5) “The Phase Structure of the Early Universe in the Minimal SU(5) Grand Unified Theory”, with S.-Y. Pi:  
Physics Letters **107B**, 54(1981).
- (6) “Gravity and the Decay of the False Vacuum”:  
Physics Letters **121B**, 313(1983).
- (7) “Energy Loss of Slowly Moving Magnetic Monopoles in Matter”,  
with S.D. Drell, N.M. Kroll, M.T. Mueller and M. H. Ruderman,  
Physical Review Letters **50**, 644(1983).
- (8) “Excitation of Simple Atoms by Slow Magnetic Monopoles”,  
with N. M. Kroll, V. Ganapathi and S.D. Drell:  
Monopole '83 Conf., Ann Arbor, MI, Oct 6-9,1983.  
Published in Monopole '83, 295.
- (9) “Constraints on Radiative  $Z_0$  Decays”,  
with S.D. Drell:  
Physical Review Letters **53**, 1993(1984).
- (10) “Searching for Quark and Lepton Compositeness at the SSC”,  
with C.H. Albright, I. Bars, B. Blumenfeld, K. Braune, M. Dine, T. Ferbel,  
H.J. Lubatti, W.R. Molzon, J.F. Owens, T.R. Taylor, M.P. Schmidt and G. Snow:  
Published in Snowmass Summer Study **1984**, 635.
- (11) “Perturbative QCD Utilizing Extended Supersymmetry”,  
with T.R. Taylor:  
Physics Letters **157B**, 81(1985).
- (12) “The Cross Section for Four-Gluon Production by Gluon-Gluon Fusion”,  
with T.R. Taylor:  
Nuclear Physics **B269**, 410(1986).

- (13) “The Cross Section for Hard Processes involving Two Quarks and Four Gluons”,  
with T.R. Taylor:  
Physical Review **D35**, 313(1987).
- (14) “An Amplitude for N Gluon Scattering”,  
with T.R. Taylor:  
Physical Review Letters **56**, 2459(1986).
- (15) “Gluon and Massless Gluino Scattering using N=2 Supersymmetry”,  
Invited seminar, presented at the Int. Symp. on Particle and Nuclear Physics,  
Beijing, China, Sep 2-7, 1985.  
Published in Particle and Nuclear Physics **1985**, 189.
- (16) “Non-Adiabatic Level Crossing in Resonant Neutrino Oscillations”,  
Physical Review Letters **57**, 1275(1986).
- (17) “Resonant Solar Neutrino Oscillation Experiments”,  
with Terry P. Walker:  
Physical Review Letters **57**, 2322(1986).
- (18) “Resonant Neutrino Oscillations within the Solar Interior”,  
XXIII Int. Conf. on High Energy Physics, Berkeley, CA, July 16-23, 1986.  
Published in proceedings pg. 921.
- (19) “Resonant Neutrino Oscillations”,  
14<sup>th</sup> SLAC Summer Institute on Particle Physics, Stanford, CA, July 28-August 8, 1986.  
Published in proceedings pg. 349.
- (20) “Effects of Resonant Neutrino Oscillations on the Solar Neutrino Experiments”,  
Workshop on Quarks and Galaxies: Berkeley, CA, July 28-August 15, 1986.  
Published in proceedings pg. 153.
- (21) “Dual Amplitudes and Multi-Gluon Processes”,  
with M. Mangano and Z. Xu:  
Les Recontres de Physique de la Vallee d’Aoste: La Thuile, Italy, March 1-7, 1987.  
Published in proceedings pg. 513. Editor M. Greco.
- (22) “Duality and Multi-Gluon Scattering”,  
with M. Mangano and Z. Xu:  
Nuclear Physics **B298**, 653(1988).
- (23) “Soft and Collinear behavior of Dual Amplitudes”,  
with M. Mangano:  
Proc. of Int. Europhysics Conf. on HEP, Uppsala, Sweden, June 25 - July 1, 1987.  
Published in proceedings pg. 201.
- (24) “Quark - Gluon Amplitudes in the Dual Expansion”,  
with M. Mangano:  
Nuclear Physics **B299**, 673(1988).

- (25) “Approximate Four Jet Cross Sections in QCD”,  
with M. Mangano:  
7<sup>th</sup> Topical Workshop on Proton-Antiproton Collider Physics,  
Batavia, IL, Jun 20 - 24, 1988  
Published in proceedings pg. 288.
- (26) “Approximate Multi-Jet Cross Sections in QCD”,  
with M. Mangano:  
Physical Review **D39**, 758(1989).
- (27) “The Structure of Gluon Radiation in QCD”,  
with M. Mangano:  
Workshop on QED Structure Functions: Ann Arbor, MI, May 22-25, 1989.  
Published in proceedings pg. 91.
- (28) “Atmospheric, Solar and Supernova Neutrinos”,  
New Directions in Neutrino Physics at Fermilab: Batavia, IL, Sept 14-16,1988.  
Published in proceedings pg. 157.
- (29) “W Boson Plus Two Jet production at the Tevatron”,  
with M. Mangano:  
Physical Review **D41**, 59(1990).
- (30) “Multi-Parton Amplitudes in Gauge Theories”,  
with M. Mangano:  
Physics Reports **200**, 301(1991).
- (31) “Hard Amplitudes in Gauge Theories”.  
IV Mexican School of Particle and Fields,  
Oaxtepec, Morelos, Mexico, December 3-14, 1990.  
Published in proceedings pg. 320 .
- (32) “Terrestrial Long-Baseline Neutrino Oscillation Experiments”,  
with R. Bernstein:  
Physical Review **D44**, 2069, (1991).
- (33) “Approximate the Production of a Vector Boson plus Multi-Jets at Hadron Colliders”,  
with C. Maxwell:  
Physical Review **D44**, 2727, (1991).
- (34) “Long Baseline Searches for Neutrino Oscillations”,  
Joint Int. Symp. Lepton-Photon & Europhysics Conf.  
on High Energy Physics, Geneva, Switzerland, July 25 - Aug 1, 1991.  
Published in proceedings Vol. 2, pg. 631.
- (35) “Long-Baseline Neutrino Oscillations”,  
15<sup>th</sup> Johns Hopkins Workshop,  
Baltimore, MD, August 26 -28, 1991.  
Published in proceedings pg. 83.

- (36) “Top Quark Production by W Gluon Fusion”,  
with R.K. Ellis:  
Published in Phys.Rev.D46:3785-3788,1992
- (37) “Long Baseline Searches for Neutrino Oscillations”,  
Conference on Fluid Mechanics and Theoretical Physics  
in honor of Professor Pei-Yuan Chou,  
Beijing, China, Jun 1-4, 1992.  
Published in proceedings pg. 516.
- (38) “Overview of Accelerator Long Baseline Neutrino Oscillation Experiments”,  
28th Rencontres de Moriond; Perspectives in Neutrinos, Atomic Physics and Gravitation:  
Villars sur Ollon, Switzerland, Jan 30 - Feb 6, 1993.  
Published in proceedings pg. 229. hep-ph/9304271
- (39) “Heavy Top Quark Searches in the Dilepton Mode at the Tevatron”,  
with T. Han:  
Physical Review Letters **71**, 1494 (1993). hep-ph/9306203
- (40) “Top Production: Sensitivity to New Physics”,  
with C. Hill:  
Physical Review **D49**, 4454 (1994). hep-ph/9312324
- (41) “Summary of Top Quark Physics”,  
Presented at 1994 Meeting of the American Physical Society,  
Division of Particles and Fields (DPF 94):  
Albuquerque, NM, 2-6 Aug 1994.  
FERMILAB-Conf-94-322-T, Sep 1994; hep-ph/9409312.
- (42) “Status of the Solar Neutrino Puzzle”,  
Physical Review Letters **74**, 839 (1995). hep-ph/9408397
- (43) “Finite Width Effects in Top Quark Decays”,  
with G. Mahlon:  
Physics Letters **B 347**, 394 (1995). hep-ph/9412250
- (44) Xth International Pbar P Workshop:  
Fermilab, Batavia, IL, 9-13 May 1995.  
“Top Quark Production Dynamics”.  
FERMILAB-Conf-95-307-T. hep-ph/9511472
- (45) Workshop on the Physics of the Top Quark:  
University of Iowa, Ames, 24-26 May 1995.  
“Top Quark Production: Sensitivity to New Physics”.  
FERMILAB-Conf-95-306-T.
- (46) XV International Conference of Physics in Collision:  
Krakow, Poland, 8-10 June 1995.  
“The Solar Neutrino Puzzle; Update”.  
FERMILAB-Conf-95-308-T. hep-ph/9511475
- (47) International Symposium on Heavy Flavor and Electroweak Theory:  
Institute for Theoretical Physics, Beijing, China, 17-19 Aug 1995.  
“Top Quark Production: Sensitivity to New Physics”.  
FERMILAB-Conf-95-373-T. hep-ph/9511468

- (48) “Angular Correlations in Top Quark Pair Production and Decay at Hadron Colliders”,  
with G. Mahlon:  
FERMILAB-PUB-95-362-T, Dec 1995; hep-ph/9512264.  
Physical Review **D 53**, 4886 (1996).
- (49) “Spin Correlations in Top Quark Pair Production at Lepton Colliders”,  
with Y. Shadmi:  
FERMILAB-PUB-96-042-T, Jun 1996; hep-ph/9606419  
Physics Letters **B 387**, 199 (1996).
- (50) “Improved Spin Basis for Angular Correlation Studies  
in Single Top Quark Production at the Tevatron”,  
with G. Mahlon:  
FERMILAB-PUB-96-417-T, Nov 1996; hep-ph/9611367.  
Physical Review **D 55**, 7249 (1997).
- (51) “Maximizing Spin Correlations in Top Quark Pair Production at the Tevatron”,  
with G. Mahlon:  
FERMILAB-PUB-97-185-T, Jun 1997; hep-ph/9706304.  
Physics Letters **B 411**, 173 (1997).
- (52) “Precision Measurements of Heavy Objects Working Group Summary”,  
with M. Demarteau, V. Koulovassilopoulos, J. Lykken, F. Olness, R. Scalise,  
E. Varnes, G. P. Yeh: Contributed to Very Large Hadron Collider Physics  
and Detector Workshop: Beyond the LHC, Fermilab, Batavia, IL, USA.  
Mar 1997; hep-ph/9708331.
- (53) “Top Quark, W-boson and Light Higgs”,  
FERMILAB-CONF-97-355-T, May 1997; hep-ph/9710351.  
Contribution at Frontiers in Contemporary Physics;  
Elementary Particles and Interactions, Vanderbilt University, Nashville, TN, May 1997.
- (54) “Top Quark Physics: Overview”  
FERMILAB-CONF-97-431-T, Dec 1997; hep-ph/9712512.  
Contributed at International Symposium on Large QCD Corrections  
and New Physics, Hiroshima, Japan, Oct 1997.
- (55) “Top Pair Production in  $e^+e^-$  and Gamma-Gamma Processes”.  
with M. Hori, Y. Kiyo, J. Kodaira and T. Nasuno.  
FERMILAB-CONF-98-022-T, Jan 1998; hep-ph/9801370.  
Contributed at International Symposium on Large QCD Corrections  
and New Physics, Hiroshima, Japan, Oct 1997.
- (56) “Top Quark Physics at Polarized Muon Collider”,  
FERMILAB-CONF-98-056-T, Feb 1998; hep-ph/9802279.  
Contributed to Physics at the First Muon Collider, Batavia, IL, Nov 1997  
and to Fourth International Conference on the Physics Potential of  $\mu^+\mu^-$  Colliders,  
San Francisco, CA, Dec 1997.

- (57) “Deconstructing Angular Correlations in ZH, ZZ and WW Production at LEP-2”,  
with G. Mahlon:  
FERMILAB-PUB-98-077-T, Mar 1998; hep-ph/9803410.  
Physics Review **D 58**, 054015 (1998).
- (58) “QCD Corrections to Spin Correlations in Top Quark Production at Lepton Colliders”,  
with J. Kodaira and T. Nasuno:  
FERMILAB-PUB-98-193-T, Jul 1998; hep-ph/9807209.  
Physics Review **D 59**, 014023 (1998).
- (59) “Why  $e^+ e^- \rightarrow t \bar{t}$  is Different”,  
FERMILAB-CONF-98-212-T, Jul 1998; hep-ph/9807573.  
Contributed to the Sid Drell Symposium, Stanford CA, July 1998.
- (60) “Distinguishing W H and W B anti-B Production at the Fermilab Tevatron”,  
with Sinisa Veseli:  
FERMILAB-PUB-99-032-T, Mar 1999; hep-ph/9903231.  
Phys.Rev.**D60**: 093003, (1999).
- (61) “Muon Colliders: A Scenario for the Evolution of Fermilab.”  
with numerous authors:  
FERMILAB-FN-677, Aug 1999. 47pp.
- (62) “Cross-Sections for Topcolor Z-Prime Decaying to T anti-T”,  
with Robert Harris and Christopher Hill:  
FERMILAB-FN-687, Nov 1999; hep-ph/9911288.
- (63) “Single Top Quark Production at the LHC: Understanding Spin”,  
with Gregory Mahlon :  
FERMILAB-PUB-99-361-T, Dec 1999; hep-ph/9912458.  
Phys.Lett.**B476**: 323-330, (2000).
- (64) “Top Polarization at  $\mu^+ \mu^-$  Collider”,  
with Gregory Mahlon:  
FERMILAB-CONF-00-017-T, Dec 1999; hep-ph/0001201 .  
Contribution at 5th International Conference on Physics Potential and Development of  
Muon Colliders (MUMU 99), San Francisco, California, 15-17 Dec 1999.
- (65) “Top Quark Physics”,  
with numerous co-authors:  
CERN-TH-2000-100, Mar 2000; hep-ph/0003033.
- (66) “Report of the SUGRA Working Group for Run II of the Tevatron”,  
with numerous co-authors:  
By SUGRA Working Group Collaboration (S. Abel et al.). Mar 2000: hep-ph/0003154.
- (67) “The Spin Correlations in Top Quark Production:  
QCD Corrections Versus Anomalous Couplings”,  
with Yuichiro Kiyo, Jiro Kodaira, Kazushige Morii, Takashi Nasuno:  
Nucl.Phys.Proc.Suppl.**89**: 37-42, 2000: hep-ph/0006021.
- (68) “P anti-P  $\rightarrow$  T anti-T H: A Discovery Mode for the Higgs Boson at the Tevatron”,  
with J. Goldstein, C.S. Hill, J. Incandela, D. Rainwater, D. Stuart:  
FERMILAB-PUB-00-146-T, Jun 2000: hep-ph/0006311.  
Phys.Rev.Lett.**86**: 1694-1697, 2001.

- (69) “Physics at a Neutrino Factory”,  
with numerous co-authors:  
FERMILAB-FN-692, Aug 2000: hep-ex/0008064.
- (70) “Optimizing T Violating Effects for Neutrino Oscillations in Matter”,  
with Thomas J. Weiler:  
FERMILAB-PUB-00-300-T, Nov 2000: hep-ph/0011247.  
Phys.Lett.**B501**:106-114,2001.
- (71) “On the Normalization of the Neutrino-Deuteron Cross-Section”,  
with John F. Beacom:  
FERMILAB-PUB-01-157-T, Jun 2001: hep-ph/0106128.  
Submitted to Phys.Rev.D
- (72) “PROSPECTS FOR OBSERVING T ANTI-T H AT RUN II:  
A DISCOVERY MODE FOR THE HIGGS BOSON?”,  
with J. Goldstein, J. Incandela, D. Rainwater, D. Stuart, C.S. Hill:  
DPF 2000: Columbus, Ohio, 9-12 Aug 2000.  
Int.J.Mod.Phys.A16S1A:308-310,2001.
- (73) “CP AND T TRAJECTORY DIAGRAMS FOR A UNIFIED GRAPHICAL  
REPRESENTATION OF NEUTRINO OSCILLATIONS”.  
with Hisakazu Minakata, Hiroshi Nunokawa:  
FERMILAB-PUB-02-064-T, IFT-P-024-2002, Apr 2002: hep-ph/0204171.  
Phys.Lett.B537:249-255,2002.
- (74) “PARAMETER DEGENERACIES IN NEUTRINO OSCILLATION  
MEASUREMENT OF LEPTONIC CP AND T VIOLATION”,  
with Hisakazu Minakata, Hiroshi Nunokawa:  
FERMILAB-PUB-02-0184-T, IFT-P-052-2002, Aug 2002: hep-ph/0208163.  
Submitted to PRD.
- (75) “Letter of Intent to Build an Off-axis Detector to study  
 $\nu_\mu \rightarrow \nu_e$  Oscillations with the NuMI Neutrino Beam”.  
with numerous co-authors:  
hep-ex/0210005.

# INVITED CONFERENCE SEMINARS

Stephen Parke

- (1) Monopole '82 Conference,  
Wingspread, WI, Oct 14-17, 1982:  
"Energy Loss of Slowly Moving Magnetic Monopoles in Matter".
- (2) Monopole '83 Conference,  
Ann Arbor, MI, Oct 6-9, 1983:  
"Excitation of Simple Atoms by Slow Magnetic Monopoles".
- (3) International Symposium on Particle and Nuclear Physics,  
Beijing, China, Sep 2-7, 1985:  
"Gluon and Massless Gluino Scattering using N=2 Supersymmetry".
- (4) XXIII International Conference on High Energy Physics,  
Berkeley, CA, July 16-23, 1986:  
"Resonant Neutrino Oscillations within the Solar Interior".
- (5) 14<sup>th</sup> SLAC Summer Institute on Particle Physics,  
Stanford, CA, July 28- August 8, 1986:  
"Resonant Neutrino Oscillations".
- (6) Workshop on Quarks and Galaxies,  
Berkeley, CA, July 28-August 15, 1986:  
"Effects of Resonant Neutrino Oscillations on the Solar Neutrino Experiments".
- (7) General Meeting of the American Physical Society,  
Crystal City, VA, April 20-23, 1987:  
"Neutrino Oscillations in the Sun".
- (8) Conference on QCD and its Applications,  
ITP, Santa Barbara, CA, January 18-22, 1988:  
"Duality and Multi-Gluon Amplitudes".
- (9) General Meeting of the American Physical Society,  
Baltimore, MD, April 18-22, 1988:  
"Duality in QCD".
- (10) 7<sup>th</sup> Topical Workshop on Proton-Antiproton Collider Physics,  
Batavia, IL, Jun 20 - 24, 1988:  
"Approximate Four Jet Cross Sections in QCD".
- (11) New Directions in Neutrino Physics at Fermilab,  
Fermilab, Batavia, IL, Sept 14-16, 1988:  
"Atmospheric, Solar and Supernova Neutrinos".
- (12) Workshop on QED Structure Functions,  
Ann Arbor, MI, May 22-25, 1989:  
"The Structure of Gluon Radiation in QCD".

Invited Conference Seminars;      Stephen Parke.

- (13) IV Mexican School of Particle and Fields,  
Oaxtepec, Morelos, Mexico, December 3-14, 1990:  
“Hard Amplitudes in Gauge Theories”.
- (14) Joint Int. Symp. Lepton-Photon & Europhysics Conf. on High Energy Physics,  
Geneva, Switzerland, July 25 - Aug 1, 1991:  
“Long Baseline Searches for Neutrino Oscillations”.
- (15) 15<sup>th</sup> Johns Hopkins Workshop,  
Baltimore, MD, August 26 -28, 1991:  
“Long-Baseline Neutrino Oscillations”.
- (16) Conference on Fluid Mechanics and Theoretical Physics  
in honor of Professor Pei-Yuan Chou,  
Beijing, China, Jun 1-4, 1992:  
“Long Baseline Searches for Neutrino Oscillations”.
- (17) 28th Rencontres de Moriond; Perspectives in Neutrinos, Atomic Physics and Gravitation,  
Villars sur Ollon, Switzerland, Jan 30 - Feb 6, 1993:  
“Overview of Accelerator Long Baseline Neutrino Oscillation Experiments”.
- (18) Tenth Aspen Winter Workshop on Elementary Particle Physics,  
Aspen, January 16-23,1994,  
“Top Production: Sensitivity to New Physics”.
- (19) American Physical Society, Division of Particles and Fields, 1994 (DPF 94):  
Albuquerque, NM, 2-6 Aug 1994.  
“Summary of Top Quark Physics”.
- (20) Workshop on the Origin of Fermion Masses and Mixings:  
Fermilab, Batavia, IL, 14-16 Oct 1994.  
“Top Quark Production”.
- (21) CTEQ Workshop:  
Fermilab, Batavia, IL, 6 Apr 1995.  
“Correlations in Top Quark production and Decay”.
- (22) Xth International Pbar P Workshop:  
Fermilab, Batavia, IL, 9-13 May 1995.  
“Top Quark Production Dynamics”.
- (23) Workshop on the Physics of the Top Quark:  
University of Iowa, Ames, 24-26 May 1995.  
“Top Quark Production: Sensitivity to New Physics”.
- (24) XV International Conference of Physics in Collision:  
Krakow, Poland, 8-10 June 1995.  
“The Solar Neutrino Puzzle; Update”.

Invited Conference Seminars;      Stephen Parke.

- (25) International Symposium on Heavy Flavor and Electroweak Theory:  
Institute for Theoretical Physics, Beijing, China, 17-19 Aug 1995.  
“Top Quark Production: Sensitivity to New Physics”.
- (26) Next Linear Collider Workshop:  
Stanford Linear Accelerator Center, Stanford, CA; Feb 29 - Mar 2 1996.  
“Spin Correlations in Top Quark Pair Production”.
- (27) International Conference on Advanced Science and Technology:  
University of Illinois, Chicago, IL; 6 April 1996.  
“Particle Physics”.
- (28) Solar Neutrino Workshop:  
Fermi National Accelerator Laboratory, Batavia, IL; 25-26 April 1996.  
“Neutrino Oscillations as the Solution”.
- (29) Frontiers in Contemporary Physics: Elementary Particles and Interactions:  
Vanderbilt University, Nashville, TN, USA. May 11-16, 1997.  
“Top Quark, W-Boson and Light Higgs”.
- (30) International Symposium on Large QCD Corrections and New Physics:  
Hiroshima, Japan, Oct 27-29, 1997.  
“Top Quark Physics: Overview”.
- (31) Physics at the First Muon Collider and at the Front End of the Muon Collider:  
Fermi National Accelerator Laboratory, Batavia, IL; 6-9 Nov 1997.  
“Top Quark Physics at a Polarized Muon Collider”.
- (32) Fourth International Conference on Physics Potential and Development  
of  $\mu^+\mu^-$  Colliders: San Francisco, CA, 10-12 Dec 1997.  
“Top Quark Physics at a Polarized Muon Collider”.
- (33) Mini-Workshop on Physics at the first Muon Collider:  
Fermi National Accelerator Laboratory, Batavia, IL; 22-23 April 1998.  
“ $t\bar{t}$  above Threshold at the First Muon Collider”.
- (34) Workshop on the Physics and Detectors for Future  $e^+e^-$  Linear Colliders:  
Keystone, CO; 26-29 Sept 1998.  
“Top Quark Polarization at the NLC”.
- (35) Thinkshop on Top Physics:  
Fermi National Accelerator Laboratory, Batavia, IL; 16-18 Oct 1998.  
“ $M_{t\bar{t}}$  Distribution and its Physics”.
- (36) New Strong Dynamics Workshop:  
Fermi National Accelerator Laboratory, Batavia, IL; 30-31 Oct 1998.  
“Topcolor Theory and  $M_{t\bar{t}}$ ”.

Invited Conference Seminars;      Stephen Parke.

- (37) Neutrino Physics Factory Workshop:  
Fermi National Accelerator Laboratory, Batavia, IL; 17-18 Feb 2000.  
“Neutrino Oscillation Scenarios”.
- (38) 2000 AAAS Annual Meeting:  
Washington, DC: Feb 20, 2000  
Session: Neutrino Experiments: A New Window on the Universe  
“Neutrino Discoveries - Implications for Particle Physics and Cosmology”.
- (39) Particle Physics at the Millennium:  
Aspen Center Physics, Jan 7-13, 2001.  
Co-chairperson with Joe Kroll U of Penn.
- (40) Frontiers in Contemporary Physics 2001  
Vanderbilt U, March 5-10, 2001.  
Co-convenor of Neutrino Physics Session with Jerry Busenitz.
- (41) ”XVIII th International Workshop on Weak Interactions and Neutrinos” (WIN '02)  
Canterbury University, Jan 20-26, 2002.  
Co-chairperson with Jenni Adams of U. of Canterbury.
- (42) Cosmo '02.  
Adler Planetarium, Chicago, Sept. 18-21, 2002.  
“CP Violation in the Lepton Sector.”