

# Curriculum Vitae

## Robert James Perry

Department of Physics  
M2056 Physics Research Building  
191 West Woodruff Avenue  
Columbus, Ohio 43210

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(614) 397-1031

Birth: July 22, 1955, Wichita, Kansas  
Marital Status: Married to Kathleen M. Squillace  
Children: Jessica Lynn Perry, Alexander Jeffrey Perry

### Education:

St. John's College, Annapolis, Maryland  
B.A. in Liberal Arts, May, 1978  
University of Maryland, College Park, Maryland  
Ph.D. in Physics, August, 1984  
Thesis Advisor: E.F. Redish

### Employment:

Oct., 1995 - present : Professor, The Ohio State University  
July, 2003 - June, 2004: Associate Executive Dean, Arts & Sciences  
July, 2003 - June, 2004: Interim Senior Associate Vice President for Research  
Oct., 2001 - Aug., 2003 : Associate Dean, Mathematics & Physical Sciences  
July, 1995 - Sept., 1997: Vice Chair, Department of Physics  
Oct., 1991 - Sept., 1995 : Associate Professor, The Ohio State University  
Sept., 1987 - Sept., 1991 : Assistant Professor, The Ohio State University  
Sept., 1985 - Aug., 1987 : Postdoctoral Research Associate, University of Washington  
September, 1984 - August, 1985 : Visiting Research Scientist  
Service de Physique Theorique; CEN-Saclay, France

## **Awards:**

Ralph D. Meyers award for outstanding first year graduate student, 1980  
National Science Foundation Presidential Young Investigator, 1988  
Fellow, American Physical Society, 1999  
Distinguished University Service Award, Ohio State, 2001  
Fellow, American Association for the Advancement of Science, 2007  
Alumni Distinguished Teaching Award, Ohio State, 2008

## **Research Interests:**

Applications of the Similarity Renormalization Group in nuclear physics  
Effective field theoretic models for nuclear physics  
Renormalization Group  
Light-front Quantum Chromodynamics

## **Grants and Support:**

National Science Foundation Grant (PHY-8719526, 1988-1992)	\$146,199.00
Presidential Young Investigator Award (PHY-8858250, 1988-1994)	\$311,600.00
Ohio State Seed Grant (1988-1989)	\$ 16,000.00
Battelle Memorial Postdoctoral Fellowship (for Charlotte Elster, 1988-1989)	\$ 25,000.00
Battelle Memorial Postdoctoral Fellowship (for David Wasson, 1989-1990)	\$ 25,000.00
IBM (with Bunny Clark, 1989-1994)	\$150,000.00
University Postdoctoral Fellowship (for David Wasson, 1990-1991)	\$ 25,000.00
Omnigraphics, Inc. (1990-1991)	\$ 37,500.00
Cray Research and Development Grant (1990-1991)	\$ 26,800.00
National Science Foundation Grant (PHY-9102922, 1991-1994)	\$166,000.00
MAPS College Postdoctoral Fellowship (for Edsel Ammons, 1992-1994)	\$ 93,000.00

Omnigraphics, Inc. (1992-1993)	\$ 37,500.00
National Science Foundation Grant (PHY-9409042, 1994-1997)	\$255,565.00
National Science Foundation Grant (with Clark, Furnstahl, and Wilson) (PHY-9511923, 1995-1998)	\$475,000.00
National Science Foundation Grant (with Clark and Furnstahl) (PHY-9800964, 1998-2001)	\$762,000.00
National Science Foundation Grant (with Clark and Furnstahl) (PHY-0098645, 2001-2004)	\$840,000.00
National Science Foundation Grant (with Clark, Furnstahl and Jeschonnek) (PHY-0354916, 2004-2007)	\$574,699.00
National Science Foundation Grant (with Furnstahl and Jeschonnek) (PHY-0653312, 2007-2010)	\$660,000.00
Air Force STTR Contract through MNB Technologies, Inc. (with Furnstahl, 2007-08)	\$ 11,093.00

### **Memberships and Service to Profession:**

Member: American Physical Society, American Association of Physics Teachers,  
American Association for the Advancement of Science.

Referee: Annals of Physics, International Journal of Modern Physics A,  
Journal of Mathematical Physics, Journal of Physics A,  
Journal of Physics G, Modern Physics Letters A, Nuclear Physics A,  
Nuclear Physics B, Physical Review C, Physical Review D,  
Physical Review Letters, Physics Letters, Physics Reports, Science.

National  
Committees: Program Committee, Nuclear Physics Division of The American

Physical Society, 1988-1990.  
 Panel Chair, NSF Presidential Young Investigator Colloquium on  
 U.S. Engineering, Mathematics, and Science Education for  
 the Year 2010 and Beyond, Washington, D.C., November, 1990.  
 Vice-Chair, Bonner Prize Selection Committee, Nuclear Physics  
 Division of The American Physical Society, 1991.  
 Chair, Bonner Prize Selection Committee, Nuclear Physics Division  
 of The American Physical Society, 1992.  
 Presidential Young Investigator's Executive Committee on *America's  
 Academic Future*, 1992-1994.  
 Member, Committee on Minorities, American Physical Society, 1995-1997.  
 Member, Nuclear Science Advisory Committee, 1995-1998.  
 Member, National Science Foundation Special Emphasis Panel for  
 Theoretical Physics, 1996.  
 Member, DOE National Lab Theory Programs Site Review Team, 1998.  
 Member, NSF Information Technology Research Advanced Computational  
 Science Preproposal Review Panel, 1999.  
 Member, NSF Experimental Nuclear Physics Proposal Review Panel, 2001.  
 Member, Edward A. Bouchet Award Selection Committee, 2001-2003.  
 Member, NSF Physics Frontier Centers Pre-proposal Review Panel, 2001.  
 Member, NSF Review Panel for the Director's Award for Distinguished Teaching  
 Scholars, 2004.

#### Organizing

Committees: Program Advisory Committee, Workshop on 'Relativistic Nuclear  
 Many-Body Physics,' Columbus, OH, June, 1988.  
 Program Advisory Committee, Conference on 'Nuclear and Particle  
 Physics on the Light Cone,' Los Alamos, NM, July, 1988.  
 Organizing Committee, Workshop on 'From Fundamental Fields to  
 Nuclear Phenomena,' Boulder, CO, September, 1990.  
 International Organizing Committee, Workshop on Light-Cone  
 Quantization, Dallas, TX, May, 1992.  
 International Organizing Committee, Field Theory on the Light-Cone  
 and Non-perturbative Methods, Villigen, Switzerland, June, 1993.  
 International Organizing Committee, Third International Workshop  
 on Light-Cone QCD, Gran Sasso, Italy, August, 1993.  
 Local and International Organizing Committees, Light-Cone Quantization

and Non-Perturbative Dynamics, Seattle, Washington, June, 1994.  
 Local and International Organizing Committees, Fourth International  
 Workshop on Light-Cone QCD, Zgorzelisko, Poland, August, 1994.  
 International Organizing Committee, Field Theory on the Light-Cone and  
 Non-perturbative Methods, Regensburg, Germany, June, 1995.  
 International and Local Organizing Committee, Third International  
 Workshop on Light-Cone QCD, Telluride, Colorado, August, 1995.  
 International Organizing Committee, Fourth International Workshop  
 on Light-Cone QCD, Ames, Iowa, June, 1996.  
 International and Local Organizing Committee, Field Theory on the  
 Light-Cone and Non-perturbative Methods, Les Houches, France,  
 February, 1997.  
 International and Local Organizing Committee, Fifth International  
 Workshop on Light-Cone QCD, Lutsen, Minnesota, August, 1997.  
 Local Organizing Committee, International Conference on  
 Non-Perturbative Particle Dynamics, Aspen Center for Physics,  
 Aspen, Colorado, January, 1999.  
 International Organizing Committee, Renormalization Group 2002,  
 High Tatra Mountains, Slovakia, March, 2002.  
 Organizing Committee, Effective Field Theories in Physics: From Nano to Tera,  
 Ohio Center for Theoretical Science, The Ohio State University, June, 2005.

### **Courses taught:**

Fall	1987	Physics 131 (two recitation sections)
Winter	1988	Physics 131 (one recitation section)
		Physics 132 (one recitation section)
Spring	1988	Physics 133 (two recitation sections)
Fall	1988	Physics 880a.20 Field Theory
Winter	1989	Physics 880a.20 Field Theory
Fall	1989	Physics 880.05 Nuclear Physics
Winter	1990	Physics 880.05 Nuclear Physics
Spring	1990	Physics 880.05 Nuclear Physics
Fall	1990	Graduate Curriculum Development
Winter	1991	Physics 880.02 Particle Physics
Spring	1991	Physics 880.02 Particle Physics
Winter	1992	Physics 132 Electricity and Magnetism

Spring	1992	Physics 131 Mechanics
Fall	1992	Physics 827 Quantum Mechanics
Winter	1993	Physics 828 Quantum Mechanics
Spring	1993	Physics 829 Quantum Mechanics
Fall	1993	Physics 827 Quantum Mechanics
Winter	1994	Physics 828 Quantum Mechanics
Spring	1994	Physics 829 Quantum Mechanics
Winter	1995	Physics 880.20 Light-Front Field Theory
Spring	1996	Physics 132 Electricity and Magnetism Physics 880.20 Light-Front Field Theory
Spring	1998	Honors Physics 133 (double) Waves, Relativity & Quantum Mechanics
Autumn	1999	Physics 596 Writing and Speaking about Physics & Astronomy
Spring	2000	Honors Physics 133 (double) Waves, Relativity & Quantum Mechanics
Autumn	2000	Physics 103 The World of Energy
Spring	2001	Physics 103 The World of Energy (double)
Spring	2002	Physics 664 Theoretical Mechanics
Spring	2003	Physics 664 Theoretical Mechanics
Autumn	2004	Physics 631 Introductory Quantum Mechanics I
Winter	2005	Physics 632 Introductory Quantum Mechanics II
Spring	2005	Physics 633 Introductory Quantum Mechanics III
Summer	2005	Physics 730 Methods of Theoretical Physics
Autumn	2005	Physics 631 Introductory Quantum Mechanics I
Winter	2006	Physics 632 Introductory Quantum Mechanics II
Spring	2006	Physics 633 Introductory Quantum Mechanics III
Autumn	2006	Physics 631 Introductory Quantum Mechanics I
Winter	2007	Physics 632 Introductory Quantum Mechanics II
Spring	2007	Physics 633 Introductory Quantum Mechanics III
Autumn	2007	Physics 621 Statistical Physics I
Winter	2008	Physics 622 Statistical Physics II
Spring	2008	Physics 730 Methods of Theoretical Physics

Students graduated at Ph.D. level:

John Davis (1991), Yizhang Mo (1993), Martina Brisudova (1997),  
Billy Jones (1997), Brent Allen (1999), Roger Kylin (2001),  
Richard Mohr (2003).

Postdoctoral Research Associates Supervised:

Avaroth Harindranath (1988-1993), Charlotte Elster (1988-1991), David Wasson (1989-1991), Tim Walhout (1991-1993), Wei-Min Zhang (1991-1993), Edsel Ammons (1992-1994), Dave Robertson (1993-1995), Sergio Szpigel (1997-99), Scott Bogner (2006-07).

### **OSU Physics Department Committees:**

1987-88	Graduate Studies Committee
1988-89	Graduate Studies Committee Computer Committee
1989-90	Personnel Resources Committee Computer Committee Energy Course (Phys. 100) Advisory Committee
1990-91	Personnel Resources Committee Computer Committee, Chair Nuclear Theory Faculty Search Committee, Chair
1991-92	Computer Committee, Chair
1992-93	Computer Committee, Chair Particle Theory Faculty Search Committee
1993-94	Personnel Resources Committee Computer Committee Nuclear Experiment Faculty Search Committee
1994-95	Personnel Resources Committee, Chair High Energy Theory Faculty Search Committee
1995-96	Vice Chair for Administration Physics 11X and 13X Course Committees, Ex-officio
1996-97	Vice Chair for Administration Physics 11X and 13X Course Committees, Ex-officio
1997-98	Computer Committee, Chair Personnel Resources Committee Physics Education Research Faculty Search Committee
1998-99	Faculty Professional Leave
1999-00	Budget Committee, Chair Nuclear Theory Faculty Search Committee, Chair
2000-01	Budget Committee, Chair
2005-06	Budget Committee, Member Undergraduate Studies Committee, Member

2006-07	Society of Physics Students, Faculty Advisor Budget Committee, Member Undergraduate Studies Committee, Member
2007-08	Society of Physics Students, Faculty Advisor Society of Physics Students, Faculty Advisor

### **OSU College and University Service:**

1990-91	Feedback judge for Graduate Research Forum
1991-92	MAPS Computer Committee
1992-93	MAPS Computer Committee
1993-94	University Senate, Alternate
1994-95	University Senate, Alternate
1995-96	University Senate, Senator University Research Committee
1996-97	University Senate, Senator University Research Committee, Chair University Research Commission, Vice Chair Faculty Cabinet Research and Graduate Council Executive Committee Abstract judge for Graduate Research Forum CIC Academic Leadership Program Fellow MAPS Dean Search Committee
1997-98	University Senate, Senator University Research Committee, Chair University Research Commission, Vice Chair Faculty Cabinet Research and Graduate Council Executive Committee MAPS College P&T Committee
1998-99	Research Commission Implementation Committee Res. Comm. Implementation Fiscal Subcommittee, Chair
1999-00	University Senate, Senator University Senate Rules Committee Presidential Commission on Governance OSURF Board of Trustees MAPS College P&T Committee
2000-01	University Senate, Senator University Senate Rules Committee, Chair

	Faculty Cabinet
	Presidential Commission on Governance
	Abstract judge for Graduate Research Forum
	OSURF Board of Trustees
2001-02	OSURF Board of Trustees
	Vice President for Research Advisory Committee
	Abstract judge for Graduate Research Forum
2002-03	OSURF Board of Trustees
	Vice President for Research Advisory Committee
	Co-Organizer, Office of Research Grantmanship Workshop
2003-04	2004 Large Interdisciplinary Planning Grants Review Committee
	Chair, Arts & Sciences Strategic Planning Committee
	Administrative Liaison, Task Force on Interdisciplinary Barriers at OSU
	Administrative Liaison, OSURF Board of Trustees
	Administrative Liaison, University Research Committee
	Advisory Board, Center for Family Research
2004-05	Arts & Sciences Senate, Senator
	Abstract judge for Graduate Research Forum
2005-06	Arts & Sciences Senate, Senator
	Abstract judge for Graduate Research Forum
	MAPS Research Forum Judge
2006-07	University Senate, Senator
	University Senate Steering Committee
	University Senate Program Committee, Chair
	Faculty Council, Vice Chair and Chair-elect
	Arts & Sciences Senate, Vice Chair
2007-08	University Senate, Senator
	Faculty Council, Chair
	Talent Acquisition, Retention & Engagement Strategy Committee
	Excellence in Engagement Grants Award Committee
2008-09	University Senate, Senator

## Publications:

1. R. Perry, A. Nadasen, D.L. Hendrie, P.G. Roos, and N.S. Chant; “Energy Dependence of the  $^{208}\text{Pb}(^4\text{He},t)$  and  $(^4\text{He},^3\text{He})$  reaction from 10 to 20 MeV/nucleon.” *Physical Review C* 24, 1471 (1981).
2. Robert J. Perry; “Feynman Rules for Gauge Fields in the Presence of a Dielectric Medium.” *Physical Review D* 28, 2099 (1983).
3. O.W. Greenberg, R.J. Perry, and R.D. Smith; “String-Breaking Description of the Baryon-Meson Interaction.” *Physics Letters B* 131, 209 (1983).
4. R.J. Perry; “One-Loop Corrections to the Friedberg-Lee Nontopological Soliton,” in proceedings of the Lewes Center for Physics Workshop on “Solitons in Nuclear Physics and Particle Physics,” ed. A. Chodos, et al. (World Scientific, Singapore, 1984).
5. S. Kahana, R. Perry, and G. Ripka; “Infinite Coupling Limit of a Chiral Field.” *Physics Letters B* 163, 37 (1985).
6. Robert J. Perry and Mannque Rho; “Removing Bag Dynamics from Chiral Bag Models: An Illustrative Example.” *Physical Review D* 34, 1169 (1986).
7. Robert J. Perry; “Effects of the Dirac Sea on Finite Nuclei.” *Physics Letters B* 182, 269 (1986).
8. Robert J. Perry; “The Calculation of Dirac Sea Effects on Finite Solitons.” *Nuclear Physics A* 467, 717 (1987).
9. Robert J. Perry and Ming Li; “Convergence of Derivative and Inverse Effective Mass Expansions for the One-Loop Effective Action.” *Modern Physics Letters A* 2, 353 (1987).
10. Ming Li, Robert J. Perry and Lawrence Willets; “One Loop Corrections to Solitons in Two-Dimensional Theories.” *Physical Review D* 36, 596 (1987).
11. Robert J. Perry, “ ‘Vacuum Instability’ and Tachyon Poles in Non-asymptotically Free Field Theories.” *Physics Letters B* 199, 489 (1987).

12. Ming Li and Robert J. Perry; “Calculating Boson and Fermion Loops in 3+1 Dimensions and the Derivative Expansion.” *Physical Review D* 37, 1670 (1988).
13. George Fai, Robert J. Perry, and Lawrence Wilets; “The Chromo-Dielectric Model: Confinement, Effective Coupling and Chiral Invariance.” *Physics Letters B* 208, 1 (1988).
14. Robert J. Perry, “Validity of the Hartree Approximation in the Walecka Model,” in “Spin Observables of Nuclear Probes,” ed. C.J. Horowitz, et al. (Plenum, New York, 1989).
15. Robert J. Perry and David A. Wasson, “Quantum Corrections in Quantum Hydrodynamics,” in “Nuclear and Particle Physics on the Light Cone,” M.B. Johnson and L.S. Kisslinger, eds. (World Scientific, Singapore, 1989).
16. B.C. Clark, R.J. Perry, J.P. Vary, eds., “Proceedings of the Workshop on Relativistic Nuclear Many-Body Physics.” (World Scientific, Singapore, 1989).
17. R.N. Boyd, K. Takahashi, R. Perry and T. Miller, “On the Possible Existence of Negatively Charged Rare Particles.” *Science*, Vol. 244, 1450 (1989).
18. Richard Furnstahl, Robert J. Perry and Brian D. Serot, “Two-loop Corrections for Nuclear Matter in the Walecka Model.” *Physical Review C* 40, 321 (1989).
19. Ming Li, Lawrence Wilets, and Robert J. Perry; “Numerical Methods in Calculating Boson and Fermion Loop Corrections.” *Journal of Computational Physics* 85, 457 (1989).
20. David A. Wasson and Robert J. Perry; “Saturation in Weakly Coupled Relativistic Systems.” *Physical Review C* 42, 2040 (1990).
21. Robert J. Perry, A. Harindranath, and Kenneth G. Wilson; “Light-Front Tamm-Dancoff Field Theory.” *Physical Review Letters* 65, 2959 (1990).

22. A. Harindranath and Robert J. Perry; “Lowest Order Mass Corrections for Yukawa<sub>1+1</sub> in Light Front Perturbation Theory.” *Physical Review D* 43, 492 (1991).
23. John E. Davis and Robert J. Perry; “Relativistic Kinetic Equations with Mesonic Degrees of Freedom.” *Physical Review C* 43, 1893 (1991).
24. Robert J. Perry and Avaroth Harindranath; “Renormalization in the Light-Front Tamm-Dancoff Approach to Field Theory.” *Physical Review D* 43, 4051 (1991).
25. Robert J. Perry; “Beyond the Loop Expansion: Light-Front Tamm-Dancoff,” in “From Fundamental Fields to Nuclear Phenomena,” J.A. McNeil and C.E. Price, eds. (World Scientific, Singapore, 1991).
26. Stanisław D. Głazek and Robert J. Perry; “Fixed sources in light-front dynamics and Wilson’s model of coupling constant renormalization.” *Physical Review D* 45, 3734 (1992).
27. Stanisław D. Głazek and Robert J. Perry; “A Special Example of Relativistic Hamiltonian Field Theory.” *Physical Review D* 45, 3740 (1992).
28. A. Harindranath, Robert J. Perry and J. Shigemitsu; “Bound state problem in light-front Tamm-Dancoff: A numerical study in 1+1 dimensions.” *Physical Review D* 46, 4580 (1992).
29. Robert J. Perry; “Asymptotic Freedom in Hamiltonian Light-Front Quantum Chromodynamics.” *Physics Letters B* 300, 8 (1993).
30. Yizhang Mo and Robert J. Perry; “Basis Function Calculations for the Massive Schwinger Model in the Light-Front Tamm-Dancoff Approximation.” *Journal of Computational Physics* 108, 159 (1993).
31. Robert J. Perry and Kenneth G. Wilson; “Perturbative Renormalizability with an Infinite Number of Relevant and Marginal Operators.” *Nuclear Physics B* 403, 587 (1993).

32. Robert J. Perry; “A Renormalization Group Approach to Hamiltonian Light-Front Field Theory.” *Annals of Physics* 232, 116 (1994).
33. Kenneth G. Wilson, Timothy S. Walhout, Avaroth Harindranath, Wei-Min Zhang, Robert J. Perry, and Stanislaw Głazek; “Nonperturbative QCD: A Weak-Coupling Treatment on the Light-Front.” *Physical Review D* 49, 6720 (1994).
34. Robert J. Perry; “Hamiltonian Light-Front Field Theory and Quantum Chromodynamics.” *Proceedings of Hadrons '94*, V. Herscovitz and C. Vasconcellos, eds. (World Scientific, Singapore, 1995).
35. Robert J. Perry; “A Simple Confinement Mechanism for Light-Front Quantum Chromodynamics.” *Proceedings of the International Workshop on Light-cone QCD*, S. Głazek, ed. (World Scientific, Singapore, 1995).
36. Martina Brisudová and Robert Perry; “Initial Bound State Studies in Light-Front QCD.” *Physical Review D* 54, 1831 (1996).
37. Robert J. Perry; “A Constituent Picture of Hadrons from Light-Front QCD.” *Proceedings of Hadron Structure 96*, Stara Lesna, Slovakia, 1996.
38. Martina Brisudová and Robert J. Perry; “Note on Restoring Manifest Rotational Symmetry in Hyperfine and Fine Structure.” *Physical Review D* 54, 6453 (1996).
39. Martina Brisudová, Robert J. Perry, and Kenneth G. Wilson; “Quarkonia in Hamiltonian Light-Front QCD.” *Physical Review Letters* 78, 1227 (1997).
40. Billy D. Jones, Robert J. Perry, and Stanisław Głazek; “Nonperturbative QED: An Analytical Treatment on the Light Front.” *Physical Review D* 55, 6561 (1997).
41. Billy D. Jones and Robert J. Perry; “The Lamb Shift in a Light-Front Hamiltonian Approach.” *Physical Review D* 55, 7715 (1997).

42. Robert J. Perry; “Light-Front QCD: A Constituent Picture.”  
Proceedings of the NATO Advanced Study Institute *Confinement, Duality, and Non-Perturbative Aspects of QCD*, Newton Institute, Cambridge, England, June, 1997 (Plenum, London, 1998).
43. Martina M. Brisudov’a, Sergio Szpigel, and Robert J. Perry; “Effects of Massive Gluons on Quarkonia in Light-Front QCD.” *Physics Letters B* 421, 334 (1998).
44. Brent H. Allen and Robert J. Perry; “Systematic Renormalization in Light-Front Field Theory.” *Physical Review D* 58:125017 (1998).
45. Roger D. Kylin, Brent H. Allen, and Robert J. Perry; “Systematic Renormalization in Hamiltonian Light Front Field Theory: The Massive Generalization.” *Physical Review D* 60:067704 (1999).
46. Robert J. Perry; “Light-Front Quantum Chromodynamics.”  
Proceedings of the APCTP-RCNP Joint International School on the *Physics of Hadrons and QCD*, H. Yabu, K. Itakura, T. Matsui, and M. Oka, eds. (World Scientific, Singapore, 1999).
47. Sergio Szpigel and Robert J. Perry; “A New Renormalization Group for Hamiltonian Field Theory.” Proceedings of the 1998 YITP Workshop on the *Physics of Hadrons and QCD*, H. Yabu, K. Itakura, T. Matsui, and M. Oka, eds. (World Scientific, Singapore, 1999).
48. Sergio Szpigel and Robert J. Perry; Simple Applications of Effective Field Theory and Similarity Renormalization Group Methods.” Los Alamos preprint nucl-th/9906031 (1999).
49. Brent Allen and Robert J. Perry; “Glueballs in a Hamiltonian Light Front Approach to Pure Glue QCD.” *Physical Review D* 62:02500 (2000).
50. Sérgio Szpigel and Robert J. Perry; “The Similarity Renormalization Group.” *Quantum Field Theory, A 20th Century Profile*, A. N. Mitra, ed. (Indian National Science Academy, 2000), hep-ph/0009071.
51. Robert J. Perry; “Glue in the light-front pion.” *Nucl. Phys. Proc. Suppl. B* 90:87 (2000).

52. Robert J. Perry; “Using Wilson’s Renormalization Group to Repair Symmetries.” *Physics Reports* 348, 33-75 (2001).
53. R.F. Mohr, R.J. Furnstahl, H.-W. Hammer, R.J. Perry, K.G. Wilson; “Precise numerical results for limit cycles in the quantum three-body problem.” *Annals of Physics* 321: 225-259 (2006).
54. S.K. Bogner, R.J. Furnstahl, R.J. Perry; “Similarity Renormalization Group for Nucleon-Nucleon Interaction.” *Physical Review C* 75, 061001 (2007).
55. S.K. Bogner, R.J. Furnstahl, R.J. Perry, A. Schwenk; “Are low-energy observables sensitive to high-energy phase shifts?” *Physics Letters B* 649, 488 (2007).
56. S.K. Bogner, R.J. Furnstahl, R.J. Perry; “Three-Body Forces Produced by a Similarity Renormalization Group in a Simple Model.” arXiv:0708.1602, *Annals of Physics* 323, 1478 (2008).
57. S.K. Bogner, R.J. Furnstahl, P. Maris, R.J. Perry, A. Schwenk, J.P. Vary; “Convergence in the no-core shell model with low-momentum two-nucleon interactions.” arXiv:0708.3754, *Nuclear Physics A* 801, 21 (2008).
58. E.D. Jurgenson, S.K. Bogner, R.J. Furnstahl, R.J. Perry; “Decoupling in the Similarity Renormalization Group for Nucleon-Nucleon Forces.” arXiv:0711.4266, accepted for publication in *Physical Review C* (2008).
59. E. Anderson, S.K. Bogner, R.J. Furnstahl, E.D. Jurgenson, R.J. Perry and A. Schwenk; “Block Diagonalization using SRG Flow Equations.” arXiv:0801.1098, *Physical Review C*, 037001 (2008).
60. Stanisław D. Głazek and Robert J. Perry; “The impact of bound states on similarity renormalization group transformations.” arXiv:0803.2911, accepted for publication in *Physical Review D* (2008).
61. S.K. Bogner, R.J. Furnstahl, R.J. Perry, A. Schwenk; “The Brueckner-Bethe-Goldstone method and low-momentum interactions.” In preparation (2008).

## Invited Talks:

1. “Effects of the Dirac Sea on Finite Nuclei;” Boulder Workshop on Current Topics in Nuclear Physics, June, 1986.
2. “New Phenomena in Field Theoretic Models of Nuclear Systems;” Meeting of the Nuclear Physics Division, American Physical Society, New Brunswick, NJ, October, 1987.
3. “Validity of the Hartree Approximation in the Walecka Model;” Telluride Workshop on Spin Observables of Nuclear Probes, March, 1988.
4. “Quantum Corrections in Quantum Hadrodynamics;” Workshop on Nuclear and Particle Physics on the Light Cone, Los Alamos, NM, July, 1988.
5. “The Relevant Parameters for Fusion in Molecules and Materials;” Gordon Research Conference on Metal Hydrides, Tilton, NH, July, 1989.
6. “Challenges Confronting Hadronic Field Theories;” Gordon Research Conference on Nuclear Physics, Tilton, NH, July, 1989.
7. “Beyond the Loop Expansion: Light-Front Tamm-Dancoff;” Boulder Workshop *From Fundamental Fields to Nuclear Phenomena*, Boulder, CO, September, 1990.
8. “Light-Front Tamm-Dancoff and Quantum Chromodynamics;” International Workshop *Gauge Field Theory on the Light Cone*, Heidelberg, Germany, June, 1991.
9. “Asymptotic Freedom in Hamiltonian Light-Front QCD;” Workshop on *Light-Cone Quantization*, Dallas, Texas, May, 1992.
10. “Hamiltonian Light-Front Quantum Chromodynamics;” Gordon Research Conference on *Particle Physics in the 90’s*, New Hampshire, July, 1992.
11. “The Least Frontier;” Keynote Lecture, *Twentieth Annual High School Conference* of the College of Mathematical and Physical Sciences, The Ohio State University, December, 1992.

12. “A Renormalization Group Approach to Hamiltonian Light-Front Field Theory;” Third International Meeting on *Light-Cone Quantization and Non-perturbative Methods*, Zürich, Switzerland, June, 1993.
13. “A Renormalization Group Approach to Hamiltonian Light-Front Field Theory;” Third International Workshop on *Light-Cone QCD*, Gran Sasso, Italy, August, 1993.
14. “Light-Front Field Theory and QCD;” Three invited lectures at the Workshop *Hadron Physics 1994*, Gramado, Brazil, April, 1994.
15. “A Natural Confinement Mechanism for Light-Front QCD;” Fourth International Meeting on *Light-Cone Quantization and Non-Perturbative Dynamics*, Seattle, Washington, June, 1994.
16. “Confinement in Hamiltonian Light-Front QCD;” Fourth International Workshop on *Light-Cone QCD*, Zgorzelisko, Poland, August, 1994.
17. “How a Constituent Mass Scale Can Arise from Confinement in Light-Front QCD;” Fifth International Meeting on *Light-Cone Quantization and Non-Perturbative Dynamics*, Regensburg, Germany, June, 1995.
18. “A Constituent Picture of Hadrons from Light-Front QCD;” International Conference *Hadron Structure 96*, Slovakia, February, 1996.
19. “How a Constituent Picture Can Arise in Light-Front QCD;” Workshop on *QCD-based Studies of Hadron Spectroscopy and Interactions*, Argonne National Laboratory, July, 1996.
20. “Constituent Bound States in Light-Front QCD;” International Conference on Orbis Scientiae, Coral Gables, Florida, January, 1997.
21. “Light-Front QCD: A Constituent Picture of Hadrons;” Three invited lectures at the NATO Advanced Study Institute *Confinement, Duality, and Non-Perturbative Aspects of QCD*, Newton Institute, Cambridge, England, June, 1997.

22. “Confinement in Light-Front QCD;” International Workshop on Small-x Physics and Light Front Dynamics in QCD, St. Petersburg, Russia, July, 1998.
23. “Light-Front Quantum Chromodynamics;” Two invited lectures at the APCTP-RCNP Joint International School on Physics of Hadrons and QCD, Osaka University, Osaka, Japan, October, 1998.
24. “A New Renormalization Group for Hamiltonian Field Theory;” YITP Workshop on QCD and Hadron Physics, Yukawa Institute for Theoretical Physics, Kyoto, Japan, October, 1998.
25. “Using the Renormalization Group to Repair Symmetries in Light-Front Field Theory;” International Conference on Renormalization Group Theory at the Turn of the Millenium, Taxco, Mexico, January, 1999.
26. “Light-Front QCD;” International Conference on Non-Perturbative Particle Dynamics, Aspen Center for Physics, Aspen, Colorado, January, 1999.
27. “Deriving Few-Body Approximations in Light-Front QCD;” APS Centennial Meeting, Atlanta, Georgia, March, 1999.
28. “The Similarity Renormalization Group, Light-Front QED and QCD;” Four invited lectures at the Academia Sinica Nuclear Physics Spring School, Taiwan, May, 1999.
29. “Light-Front QCD;” Workshop on Light-Cone QCD and Nonperturbative Hadron Physics, National Institute for Theoretical Physics, Adelaide, Australia, December, 1999.
30. “Towards and Understanding of the Pion in Light-Front QCD;” Workshop on Field theories on the Light Cone and Hadron Phenomenology, Heidelberg, Germany, June, 2000.
31. “Chiral symmetry breaking from glue in light-front QCD;” Perspectives on Strong Continuum QCD, Argonne National Laboratory, August, 2000.

32. “Hamiltonian Light-Front QCD;” International Workshop on Relativistic Dynamics and Few-Hadron Systems, Trento, Italy, November, 2000.
33. “Renormalization Group Limit Cycles;” Renormalization Group 2002, High Tatra Mountains, Slovakia, March, 2002.
34. “Similarity Renormalization Group Evolution of Three-Body Forces;” Three-Nucleon Interactions from Few- to Many-Body Systems, TRIUMF, Vancouver, March, 2007.
35. “Applications of the Similarity Renormalization Group in Nuclear Physics;” Relativistic Hadronic and Nuclear Physics - LC2007, The Ohio State University, Columbus, Ohio, May, 2007.
36. “The impact of bound states on similarity renormalization group transformations;” Workshop on the Similarity Renormalization Group in Nuclear Physics, Oak Ridge National Laboratory, Oak Ridge, TN, December, 2007.

### **Seminars and Colloquia:**

1. “One Loop Corrections to Nontopological Solitons;” University of Maryland, March, 1984.
2. “One Loop Corrections to Nontopological Solitons;” Massachusetts Institute of Technology, March, 1984.
3. “One Loop Corrections to the Friedberg-Lee Nontopological Soliton;” Lewes Workshop on ‘Solitons in Nuclear and Elementary Particle Physics,’ Lewes, DE, June, 1984.
4. “One Loop Corrections to Fermion Matter and Solitons;” Saclay, France, Sept. 1984.
5. “A Simple Cheshire Cat Model;” Saclay, France, March, 1985.
6. “A Simple Cheshire Cat Model;” SUNY at Stony Brook, April, 1985.
7. “A Simple Cheshire Cat Model;” University of Maryland, April, 1985.

8. "A Simple Cheshire Cat Model;" University of Washington, April, 1985.
9. "Removing Bag Dynamics from Chiral Bag Models;" University of Washington, October, 1985.
10. "Removing Bag Dynamics from Chiral Bag Models;" TRIUMF, January, 1986.
11. "Effects of the Dirac Sea on Finite Nuclei;" University of Maryland, April, 1986.
12. "Effects of the Dirac Sea on Finite Nuclei;" University of Washington, May, 1986.
13. "Effects of the Dirac Sea on Finite Nuclei;" Lawrence Livermore National Laboratory, May, 1986.
14. "Calculating Dirac Sea Effects on Finite Systems;" SUNY at Stony Brook, December, 1986.
15. "The Dirac Sea in Quantum Hadrodynamics," Los Alamos National Laboratory, December, 1986.
16. "Effects of the Dirac Sea on Nuclear Systems;" Ohio State University, January, 1987.
17. "Effects of the Dirac Sea on Nuclear Systems;" University of Virginia, March, 1987.
18. "Pions and the Random Phase Approximation;" University of Maryland, March, 1987.
19. "Incorporating the Pion in Quantum Hadrodynamics;" Ohio State University, April, 1987.
20. "'Vacuum Instability' in Non-asymptotically Free Field Theories;" University of Washington, April, 1987.
21. "'Vacuum Instability' in Non-asymptotically Free Field Theories;" Indiana University, May, 1987.

22. "Is Field Theory Relevant to Nuclear Physics?" Carnegie Mellon University, October, 1987.
23. "Retreat to Simple Field Theories;" University of Maryland, November, 1988.
24. "Applications of Field Theory in Nuclear Physics;" Kent State University (Colloquium), November, 1988.
25. "QHD: Field Theory and/or Phenomenology;" California Institute of Technology, December, 1988.
26. "New Phenomena in Field Theoretic Descriptions of Nuclear Systems?" APS/DNP Town Meeting on Nuclear Theory, East Lansing, MI, April, 1989.
27. "Cold Fusion: Is It Dead?" The Ohio State University (Colloquium), May, 1989.
28. "Cold Fusion: It's Not Dead Yet;" The Ohio State University (Colloquium), June, 1989.
29. "An Update on Fusion Research;" Columbus Southern Power Company, August, 1989.
30. "The Rise and Fall of Cold Fusion;" Nuclear Engineering Dept., The Ohio State University, January, 1990.
31. "Fundamental Problems with Quantum Field Theory: Why we need to address them and how we might solve them;" The Ohio State University, April, 1990.
32. "Inconsistencies resulting from the use of electromagnetic form factors in QHD;" Spring Meeting of the American Physical Society, April, 1990.
33. "The Relevance of Field Theory for Nuclear Physics;" Notre Dame (colloquium), April, 1990.
34. "Light Front Tamm-Dancoff Field Theory;" University of Maryland, May, 1990.

35. "An Introduction to Fusion: What is it and why should you care?" Columbus Southern Power Company, July, 1990.
36. "The Tamm-Dancoff Approach to Light Front Field Theory;" University of Illinois, October, 1990.
37. "The Tamm-Dancoff Approach to Light Front Field Theory;" Stanford, December, 1990.
38. "New Approach to Relativistic Bound State Problem;" Dept. of Chemistry, The Ohio State University, March, 1991.
39. "Relativistic Bound States in the Light-Front Tamm-Dancoff Approach;" Los Alamos National Laboratory, March, 1991.
40. "Relativistic Bound States in the Light-Front Tamm-Dancoff Approach;" Argonne National Laboratory, April, 1991.
41. "Towards a Solution of QCD on the Light-Front;" Penn State University, October, 1991.
42. "Relativistic Bound States and Quantum Chromodynamics;" (colloquium) The University of Michigan-Dearborn, November, 1991.
43. "Towards a Solution of QCD on the Light-Front;" Caltech, November, 1991.
44. "Towards a Solution of QCD on the Light-Front;" MIT, December, 1991.
45. "Relativistic Bound States and Quantum Chromodynamics;" (colloquium) Drexel University, April, 1992.
46. "Solving QCD on the Light-Front;" University of Pennsylvania, April, 1992.
47. "A Renormalization Group for Light-Front QCD;" University of Kentucky, October, 1992.
48. "A Renormalization Group for Light-Front QCD;" Carnegie-Mellon, October, 1992.

49. "A Renormalization Group Approach to Light-Front Field Theory;"  
Institute for Nuclear Theory, Univ. of Washington, August, 1993.
50. "A Renormalization Group Approach to Light-Front Field Theory;"  
Iowa State University, November, 1993.
51. "A Renormalization Group Approach to Light-Front Field Theory;"  
Kansas State University, November, 1993.
52. "Light-Front Field Theory and QCD;" North Carolina State  
University, March, 1994.
53. "A Renormalization Group Approach to Light-Front Field Theory;"  
Duke University, March, 1994.
54. "Light-Front Field Theory and QCD;" University of Maryland,  
March, 1994.
55. "A Confinement Mechanism from the Light-Front Renormalization  
Group;" Fermilab, May, 1994.
56. "How Constituent Hadrons Can Emerge From Light-Front QCD;"  
CEBAF, June, 1994.
57. "Light-Front Quantum Chromodynamics;" (colloquium), Ohio State  
University, October, 1994.
58. "Progress in Solving QCD on the Light-Front;" Division of Nuclear  
Physics Theory Town Meeting, Argonne National Laboratory,  
January, 1995.
59. "How Constituent Hadrons Can Emerge From Light-Front QCD;"  
University of Maryland, March, 1995.
60. "How Constituent Hadrons Can Emerge From Light-Front QCD;"  
MIT, March, 1995.
61. "How a Constituent Picture Can Arise in Light-Front QCD;"  
University of Minnesota, December, 1995.
62. "How a Constituent Picture Can Arise in Light-Front QCD;" Florida  
State University, January, 1996.

63. "A Constituent Quark Model from Light-Front QCD;" Florida A&M, January, 1996.
64. "How a Constituent Picture Can Arise in Light-Front QCD;" University of Iowa, March, 1996.
65. "How a Constituent Picture Can Arise in Light-Front QCD;" Institute for Nuclear Theory, University of Washington, April, 1996.
66. "A Constituent Picture of Hadrons from Light-Front QCD;" Stanford Linear Accelerator Laboratory, April, 1997.
67. "Light-Front Quantum Chromodynamics;" (colloquium) University of California, Davis, April, 1997.
68. "Repairing Broken Symmetries Using Coupling Coherence;" University of California, Davis, April, 1997.
69. "Renormalization of Nuclear Effective Field Theory;" University of Florida, February, 2000.
70. "Two- and Three-Body Renormalization in Effective Field Theory;" University of Rome, Italy, November, 2000.
71. "Nuclear Effective Field Theory and the Three-Body Problem;" University of Rochester, February, 2001.
72. "The Renormalization Group in Nuclear Physics;" Indiana University, February, 2002.
73. "Simplifying Many-Body Problems with a Similarity Renormalization Group;" The Ohio State University, January, 2007.
74. "How the Renormalization Group Is Cleaning Up Nuclear Physics;" University of Iowa, November, 2007.