CLAUDIO REBBI

Curriculum Vitae

Personal Data

Born in Trieste, Italy — March 1, 1943.

U.S. Citizen.

Married — 2 children.

Studied at the University of Turin — 1961-1967.
Laurea in fisica, 1965.
Specializzazione in fisica nucleare (Ph.D.), 1967.

Employment History

Post-doctoral fellow at the California Institute of Technology — 1968, 1969.

Professor at the University of Trieste — 1970, 1971.

Research associate at CERN, Geneva — 1972, 1973.

Visitor at the California Institute of Technology — February-May, 1974.

Visitor at the University of Sao Paulo, Brazil — June-August, 1974.

Visiting professor at the Massachusetts Institute of Technology — 1974/75,1975/76, 1976/77.

Tenured staff member at Brookhaven National Laboratory —
as scientist, 1977-1983; as senior scientist, 1983-1987 (on joint appointment with Boston University from 2/1986).

Professor of Physics at Boston University, Boston, MA — 1986-present.

Director of the Boston University Center for Computational Science — 1990-2012.

Chair, Physics Department — 2008-2011.

Other Activities

Visiting scientist at CERN (on leave from BNL) during the academic years 1980/81 and 1984/85.

Coorganizer of the International Conference on Supercomputing held at the Brookhaven National Laboratory in May 1983.

Lecturer and discussion leader at the Summer Workshops on High Energy Physics and Cosmology at the Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy, in the Summers of 1985 through 1990.

Coorganizer of the International Symposium on Lattice Gauge Theories at Brookhaven National Laboratory, September 15-19, 1986.

Codirector of the International School on Advanced Techniques in Computing in Physics, ICTP, Trieste, Italy, October 6-28, 1986.

Codirector of the International Conference on Perspectives in Computational Physics, ICTP, Trieste, Italy, October 29-31, 1986.

Codirector of the Second International School on Advanced Techniques in Computing in Physics, ICTP, Trieste, Italy, February, 1988.

Principal Organizer of the First General Meeting of the Topical Group on Computational Physics of the APS, held at Boston University on June 5-8, 1989.

Invited speaker at the Adriatico Research Conf. on Computing in Physics and Physics in Computing, ICTP, Trieste, Italy, Sept. 5-8, 1989.

Invited speaker at the 7th IBM Europe Institute on Monte Carlo Methods on High Performance Computers, Oberlech, Austria, Aug. 1990.

Codirector of the International School on Multilevel Techniques in Physics, ICTP, Trieste, Italy, January 21 - February 1, 1991.

Invited speaker at the 7th Meeting on Nuclear Code Development of the Japan Atomic Energy Research Institute, Tokai, Japan, Oct. 30, 1992.

Invited speaker at the International Symposium on Lattice Gauge Theories, Tsukuba, Japan, Nov. 5-9, 1992.

Distinguished Lecturer at the MITRE Institute, Bedford, MA, Nov. 18, 1991.

Invited speaker at the Washington Meeting of the APS, April 24, 1992.

Specialist editor for Computer Physics Communications (1986 -) and member of the editorial board of Physical Review D (1990-1992).

Scientific Consultant at the Brookhaven National Laboratory, 1988-2002.

Vice-Chairman of the Topical Group on Computational Physics of the American Physical Society, 1988-1990.

Chairman of the Topical Group on Computational Physics of the American Physical Society, 1990-1991.

Discussion Leader and Lecturer at the International Summer Workshop on High Energy Physics and Cosmology, ICTP, Trieste, Italy, July 6 - 17, 1992.

Organizer, Codirector and Lecturer for the College on Computational Physics, ICTP, Trieste, Italy, May 17 - June 11, 1993.

Discussion Leader and Lecturer at the International Summer Workshop on High Energy Physics and Cosmology, ICTP, Trieste, Italy, June 30 - July 13, 1993.

Invited Speaker at the DESY Theory Workshop, Hamburg, Germany, Sept. 30, 1993.

Discussion Leader and Lecturer at the International Summer Workshop on High Energy Physics and Cosmology, ICTP, Trieste, Italy, July 4-15, 1994.

Invited speaker at the Physics Computing '94 International Conference, Lugano, Switzerland, Aug. 22-26, 1994.

Organizer, Codirector and Lecturer for the College on Computational Physics, ICTP, Trieste, Italy, May 15 - May 30, 1995.

Invited speaker at the Physics Computing '95 International Conference, Pittsburgh, June 5-9, 1995.

Discussion Leader and Lecturer at the International Summer Workshop on High Energy Physics and Cosmology, ICTP, Trieste, Italy, July 3-15, 1995.

Invited speaker at the HPC Asia 1995 International Conference, Taipei, Taiwan, Sept. 19-22, 1995.

Divisional associate editor for Physical Review E (1996-1999).

Discussion Leader and Lecturer at the International Summer Workshop on High Energy Physics and Cosmology, ICTP, Trieste, Italy, July 8-19, 1996.

Organizer, Codirector and Lecturer for the College on Computational Physics, ICTP, Trieste, Italy, May 19 - June 10, 1997.

Invited speaker at the Physics Computing '97 International Conference, Santa Cruz, CA, August 25-28, 1997.

Invited speaker at the Centennial Meeting of the APS, Atlanta, GA, March 25, 1999.

Member of the Executive Committee and Chairman of the Scientific Program Committee for the United States Lattice Gauge Theory Project, 2002 - 2008.

Invited speaker at the Quark 2002 International Conference, Novgorod, Russia, June 2002.

Invited lecturer at the ICTP Summer School on Particle Physics, Trieste, Italy, June 2003.

Invited speaker at an International Conference on Computing, Univ. of Ferrara, Ferrara, Italy, November 2003.

Invited speaker at the Quark 2004 International Conference, Pushkinskie Gory, Russia, June 2004.

Invited speaker at the Frontier Science 2005 International Conference, Milan, Italy, September 2005.

Invited speaker at the Quark 2006 International Conference, St. Petersburg, Russia, June 2006.

Invited speaker at the Quark 2008 International Conference, Sergiev Posad, Russia, June 2008.

Invited speaker at the Quark 2012 International Conference, Yaroslav, Russia, June 2012.

Invited speaker at the Quark 2014 International Conference, Suzdal, Russia, June 2014.

Special Educational Activities

Developed and introduced in the Physics Department curriculum the graduate course PY502 "Computational Physics", 1988-89.

Developed and introduced in the Physics Department curriculum the undergraduate course PY421 "Advanced Computing in Physics", later cross listed with augmented requirements at the graduate level as PY621, 1993-94.

Director of ACES, "Advanced Computing in Engineering and Science", a multidisciplinary and multidepartmental graduate training program in computational science, for students supported by the NSF IGERT grant as well as other Ph.D. students, 2003-

Major awards

CoPrincipal Investigator, "Research in Theoretical Particle Physics", DOE, 1988- present, average funding per CoPI approx. $65,000/year.

Principal Investigator, "Undergraduate Curriculum in Massively Parallel Computing", NSF Educational Infrastructure program, $397,000, 1992-96.

Principal Investigator, "A New Generation Connection Machine for Multidisciplinary Research and Training in Massively Parallel Computing", NSF Academic Research Infrastructure program, $2,000,000, 1994-97.

Principal Investigator, "MARINER: Metacenter Affiliated Resource in the New England Region", NSF, $821,000, 1995-98.

Principal Investigator, "Partnerships for Advanced Computational Infrastructure (PACI): Regional Partners", NSF, $2,433,000, 1997-2004.

Principal Investigator, "Acquisition of a Power4-based IBM SP and PC-based Scalable Display Wall for Multidisciplinary Computational Science", NSF Major Research Infrastructure program $938,000, 2001-04.

Principal Investigator, "National Computational Infrastructure for Lattice Gauge Theory", DOE, $604,000, 2001-06.

Principal Investigator, "IGERT: Multidisciplinary Approach to the Integration of High Performance Computing in Science Education", NSF, average funding approx. $600,000/year for five years starting 2002.

Principal Investigator, "Acquisition of a Blue Gene/L Supercomputer for Computational Science Research", NSF Major Research Infrastructure program $800,000, 2005-07.

CoPrincipal Investigator, "National Computational Infrastructure for Lattice Gauge Theory", DOE, approx. $180,000 per year, 2006-2011.

Principal Investigator, "ITR - (ASE) - (sim): Optimized Dirac Inverter for Quantum Field Theory", NSF $800,000/year, 2004-08.

CoPrincipal Investigator, "Collab. Research: Multigrid QCD at the Petascale", NSF, $743,000, 2007-2011.

CoPrincipal Investigator, "MRI Consortium: Acquisition of a Heterogeneous, Shared, Computing Instrument to Enable Science and Computing Research by the Mass. Green High Performance Computing Consortium," NSF, $1,622,830, 2012-2015.

Honors

Fellow of the American Physical Society.

2013 Gitner Award for distinguished teaching in the College of Arts and Sciences.

Area of Specialization: Particle Theory – Computational Physics

Research Interests

Applications of simulation techniques to field theory and particle theory. Quantum lattice gauge theories. Calculations of non-perturbative properties of Quantum Chromodynamics: interquark potential, spin-splittings, hadronic spectrum, transition to a quark-gluon plasma, properties of the QCD vacuum.

Renormalization group methods for quantum field theories and spin systems; non-perturbative properties of gauge-Higgs systems.

Semiclassical methods for quantum field theory.

Algorithm development; inclusion of fermionic degrees of freedom in computer simulations; multigrid methods.

Publication List

1. On the correction to the Gell-Mann-Okubo baryon linear mass formula.
   Nuovo Cimento 43A, 214 (1966)
   w/M. Boiti

2. A new approach to the kinematics of relativistic scattering and to the constraints among partial waves.
   Annals of Physics 49, 106 (1968)

3. Elementary approach to daughters and conspiracy.
   Nuovo Cimento 58A, 87 (1968)
   w/V. de Alfaro, P. Kuo, C. Rossetti

4. Crossing matrices for SU(2) and SU(3).
   Revs. Modern Phys. 42, 68 (1970)
   w/R. Slansky

5. Doubled resonances and unitarity.
   Phys. Rev. 185, 1838 (1969)
   w/R. Slansky

6. Duality and the hadron spectrum.
   Phys. Rev. Letts. 22, 1147 (1969)
   w/J. Mandula, R. Slansky, J. Weyers, G. Zweig

7. Behavior of baryon-baryon and baryon-antibaryon total cross sections at high energy.
   Phys. Rev. 188, 2367 (1969)
   w/J. Rosner, R. Slansky

8. Factorization properties of the dual resonance model: a general treatment of linear dependencies.
   Phys. Rev. Letts. 23, 1526 (1969)
   w/C. Chiu, S. Matsuda

9. A general approach to the symmetry and the factorization properties of the N point dual amplitudes.
   Nuovo Cimento 57A, 437 (1970)
   w/C. Chiu, S. Matsuda

10. Doubled resonances in the eigenchannel representation.
    Phys. Rev. <u>1D</u>, 1499 (1970)
    w/R. Slansky

11. A new dual resonance amplitude.
    Nuclear Phys. <u>B25</u>, 557 (1971)

12. A solvable model for high energy scattering.
    Nuovo Cimento <u>4A</u>, 330 (1971)
    w/G. Calucci, R. Jengo

13. Off-mass shell extrapolation of the dual amplitude.
    Nuovo Cimento Letts. <u>1</u>, 967 (1971)

14. High energy proton-proton collision by a solvable model.
    Nuovo Cimento <u>6A</u>, 601 (1971)
    w/G. Calucci, R. Jengo

15. Smoothness near the light-cone and superconvergence.
    Phys. Letts. <u>37B</u>, 416 (1971)
    w/G. Calucci, G. Furlan, R. Jengo

16. Generalized sum rules from null plane commutators.
    Nuovo Cimento <u>9A</u>, 487 (1972)
    w/G. Furlan, R. Jengo

17. On the loop contribution to the sum rules for inclusive cross-sections.
    Nuovo Cimento Letts. <u>2</u>, 1245 (1971)
    w/F. Arbab, J.C. Gallardo, L. Masperi

18. Lorentz covariance and the physical states in the dual resonance model.
    Nuovo Cimento <u>12A</u>, 425 (1972)
    w/P. Goddard, C. Thorn

19. Resonance production and inclusive cross-sections in dual models.
    Nuovo Cimento <u>13A</u>, 689 (1973)
    w/L. Masperi

20. Quantum dynamics of a massless relativistic string.
    Nuclear Physics <u>B56</u>, 109 (1973)
    w/P. Goddard, J. Goldstone, C. Thorn

21. The missing gauge conditions for the dual fermion emision vertex and their consequences.
    Phys. Letts. <u>45B</u>, 379 (1973)
    w/L. Brink, D. Olive, J. Scherk

22. The physical interpretation of dual models.
    in **"Laws of Hadronic Matter"**,
    <u>Proc. 1973 Ettore Majorana School of Subnuclear Physics</u>,
    A. Zichichi, ed., Academic Press, New York (1975)

23. Dual models and relativistic quantum strings.
    Physics Repts. <u>12C</u>, 1 (1974); reprinted in
    "Dual Theory", M. Jacob, ed., North Holland, Amsterdam (1974)

24. Effective degrees of freedom in strong interaction processes.
    Nuovo Cimento <u>23A</u>, 331 (1974)
    w/S. Fubini

25. On the commutation properties of normal mode operators and vertices in the theory of relativistic quantum string.
    Nuovo Cimento <u>26A</u>, 105 (1975)

26. Non-spherical deformations of hadronic bags.
    Phys. Rev. <u>D12</u>, 2407 (1975)

27. A functional integrations approach to the theory of the one-dimensional bag.
    Nucl. Phys. <u>B99</u>, 287 (1975)

28. The small oscillations of the relativistic bag.
    in **"New Phenomena in Subnuclear Physics"**
    <u>Proc. 1975 Ettore Majorana School of Subnuclear Physics</u>,
    p. 533, A. Zichichi, ed., Plenum Press, New York-London (1977)

29. Solitons with fermion number 1/2.
    Phys. Rev. <u>D13</u>, 3398 (1976)
    w/R. Jackiw

30. Spin from isospin in a gauge theory.
    Phys. Rev. Letts. <u>36</u>, 1116 (1976)
    w/R. Jackiw

31. Conformal properties of a Yang-Mills pseudoparticle.
    Phys. Rev. <u>D14</u>, 517 (1976)
    w/R. Jackiw

32. Vacuum periodicity in a Yang-Mills quantum theory.
    Phys. Rev. Letts. <u>37</u>, 172 (1976)
    w/R. Jackiw

33. Spectrum of P-wave baryonic excitations in a model with field confinement.
    Phys. Rev. <u>D14</u>, 2362 (1976)

34. Conformal properties of pseudoparticle configurations.
    Phys. Rev. <u>D15</u>, 1642 (1977)
    w/R. Jackiw, C. Nohl

35. Degrees of freedom in pseudoparticle systems.
    Phys. Letts. <u>67B</u>, 189 (1977)
    w/R. Jackiw

36. Spinor analysis of Yang-Mills theory.
    Phys. Rev. <u>D16</u>, 1052 (1977)
    w/R. Jackiw

37. Self-dual Yang-Mills fields in Minkowski space-time.
    Phys. Rev. <u>D17</u>, 483 (1978)

38. Classical and semi-classical solutions of the Yang-Mills theory.
    in **"Particles and Fields"**, p. 199, D. Boal and A. Kamal, eds.,
    Plenum Press, New York (1978)
    w/R. Jackiw, C. Nohl

39. Coulomb-gauge description of large Yang-Mills fields.
    Phys. Rev. <u>D17</u>, 1576 (1978)
    w/R. Jackiw, I. Muzinich

40. Radial excitations of hadronic bags.
    Phys. Rev. <u>D17</u>, 2358 (1978)
    w/T. DeGrand

41. Multimeron field configurations.
    Phys. Rev. <u>D18</u>, 1137 (1978)
    s/L. Jacobs

42. Topological solitons and instantons.
    Comments Nucl. Part. Phys. <u>8</u>, 129 (1978)
    w/R. Jackiw

43. Solitons in particle physics.
    Scientific American, Vol. 240, No. 2, p. 92, Feb., 1979

44. Interaction energy of superconducting vortices.
    Phys. Rev. <u>B19</u>, 4486 (1979)
    w/L. Jacobs

45. Static Yang-Mills fields with sources.
    Phys. Rev. <u>D20</u>, 474 (1979)
    w/R. Jackiw, L. Jacobs

46. Experiments with a gauge-invariant Ising system.
    Phys. Rev. Lett. <u>42</u>, 1390 (1979)
    w/M. Creutz, L. Jacobs

47. Monte Carlo study of Abelian lattice gauge theories.
    Phys. Rev. <u>D20</u>, 1915 (1979)
    w/M. Creutz, L. Jacobs

48. Interaction of superconducing vortices.
    in **"Geometrical and Topological Methods in Gauge Theories"**, <u>Proc. Canadian
    Mathematical Society Summer Research Inst., McGill Univ.</u>,
    J.P. Harnad and S. Schnider, eds., Springer Verlag, Berlin-Heidelberg-New York (1980)

49. Monte Carlo renomalization-group studies of q-state Potts models in two dimensions.
    Phys. Rev. <u>B21</u>, 4094 (1980)
    w/R.H. Swendsen

50. Phase structure of non-Abelian lattice gauge theories.
    Phys. Rev. <u>D21</u>, 3350 (1980)

51. Monte Carlo simulations of lattice gauge theories.
    Phys. Repts. <u>67C</u>, 55 (1980)

52. Monte Carlo studies of lattice gauge theories.
Proc. XX International Conf. in High Energy Physics,
Madison, WI, 1980, L. Durand and L.G. Pondrom, eds., AIP, NY (1981)

53. Multimonopole solutions in the Prasad-Sommerfield limit.
Phys. Rev. D22, 2010 (1980)
w/P. Rossi

54. A proposal for Monte Carlo simulations of fermionic systems.
Nucl. Phys. B19 (FS2), 369 (1981)
w/F. Fucito, E. Marinari, G. Parisi

55. SU(2) string tension, glueball mass and interquark potential by Monte Carlo computations.
Nucl. Phys. B180 (FS2), 469 (1981)
w/G. Bhanot

56. Multi-spin coding: A very efficient technique for Monte Carlo simulations of spin systems.
J. of Computational Phys. 41, 203 (1981)
w/L. Jacobs

57. Monte Carlo computations for lattice gauge theories with finite gauge groups.
in **"Current Topics in Elementary Particle Physics"**, p. 241,
K.H. Mutter and K. Schilling, eds., Plenum Publ. NY (1981)

58. The transition from strong coupling to weak coupling in the SU(2) lattice gauge theory.
Phys. Letts. 101B, 173 (1981)
w/C.B. Lang, P. Salomonson, B.S. Skagerstam

59. Teorie di gauge e meccanica statistica.
Proc. of the Acad. of Sci., Turin, Italy 1981.

60. The phase structure of a non-Abelian gauge Higgs field system.
Phys. Letts. 104B, 294 (1981)
w/C.B. Lang, M. Virasoro

61. Tests of the multi-spin-coding technique in Monte Carlo simulations of statistical systems.
Comp. Phys. Comm. 23, 337 (1981)
w/R. Zorn, H.J. Herrmann

62. Monte Carlo simulation of the massive Schwinger model.
Nucl. Phys. B190 (FS3), 734 (1981)
w/E. Marinari, G. Parisi

63. Soliton.
Encyclopedia of Science and Technology, 5th Ed., p. 622.,
McGraw-Hill Book Co., NY (1981)

64. Monte Carlo simulations of lattice models with finite subgroups of SU(3) as gauge groups.
Phys. Rev. D24, 3319 (1981)
w/G. Bhanot

65. Computer estimates of meson masses in SU(2) lattice gauge theory.
Phys. Rev. Letts. 47, 1795 (1981)
w/E. Marinari, G. Parisi

66. Spectroscopy in a lattice gauge theory.
        Phys. Letts. <u>108B</u>, 314 (1982)
        w/H. Hamber, E. Marinari, G. Parisi

67. On the definitions of the gauge theory coupling in lattice and continuum QCD – Implications of change in the lattice action.
        Phys. Rev. <u>D26</u>, 2028 (1982)
        w/C.B. Lang, P. Salomonson, B.S. Skagerstam

68. A fast algorithm for Monte Carlo simulations of 4-d lattice gauge theories with finite groups.
        Computer Phys. Communications <u>25</u>, 275 (1982)
        w/G. Bhanot, C.B. Lang

69. Lattice gauge theories and Monte Carlo simulations.
        in **"Non-Perturbative Aspects of Quantum Field Theory,"**
        <u>Proc. of the XIIth Int'l. G.I.F.T. Seminar</u>, (Sant Feliu de
        Guixols, 1-5 June 1981) J. Julve and M. Ramon-Medrano, eds.,
        pp. 107-178, World Scientific Pub. Co., Singapore (1982)

70. Monte Carlo estimates of the SU(2) mass gap.
        Annals of Phys. <u>142</u>, 185 (1982)
        w/B. Berg, A. Billoire

70.a Addendum, ibid. <u>146</u>, 470 (1983).

71. Monte Carlo computations of the hadronic mass spectrum.
        Proc. 19th Orbis Scientiae Meeting, Coral Gables,
        Flordia, Jan. 18-21, 1982

72. Quantum Chromodynamics: The gauge theory of strong interactions.
        Scientific American Magazine <u>248</u>, 54-65 (1983)

73. Potential and restoration of rotational symmetry in SU(2) lattice gauge theory.
        Phys. Lett. <u>115B</u>, 137 (1982)
        w/C.B. Lang

74. Lattice gauge theories.
        Journal de Physique, Suppl. 12, 43, C3.723 (1982)

75. Why QCD lattice theory is important to spin physics.
        Proc. High Energy Spin Symposium, BNL (1982),
        G.M. Bunce, ed., AIP, NY (1983)

76. Numerical simulations of quantum chromodynamics.
        Phys. Lett. <u>124B</u>, 99 (1983)
        w/H.W. Hamber, E. Marinari, C. Parisi

77. Monte Carlo calculations in lattice gauge theories.
        in **"Monte Carlo Methods in Statistical Physics"**,
        K. Binder, ed., Springer-Verlag, NY (1983)

78. Introductory lectures in **"Lattice Gauge Theories and Monte Carlo Simulations,"** C. Rebbi ed.,
        World Scientific Publishing Co., Singapore (1983)

79. Monte Carlo computations in lattice gauge theories.
   Phys. Rep. <u>95</u>, 201 (1983)
   w/M. Creutz and L. Jacobs

80. Considerations on the numerical analysis of QCD.
   Nucl. Phys. <u>B225</u>, 475 (1983)
   w/H. Hamber, E. Marinari, G. Parisi

81. Lattice calculations in gauge theory.
   <u>**Proc. 21st "Ettore Majorana"**</u>, <u>**Int. School of Subnuclear**</u>
   <u>**Physics**</u>, Erice (1983)

82. A highly optimized vectorized code for Monte Carlo simulations of SU(3) lattice gauge theories.
   Computer Phys. Comm. <u>32</u>, 1 (1984)
   w/D. Barkai and K.J.M. Moriarty

83. Numerical calculations in quantum field theories.
   Acta Physica Austriaca, Suppl. XXVI, 309 (1984)

84. Quark-antiquark charge distributions and confinement.
   Phys. Lett. <u>143B</u>, 222 (1984)
   w/K. Barad and M. Ogilvie

85. The force between static quarks.
   Phys. Rev. <u>D30</u>, 1293 (1984)
   w/D. Barkai and K.J.M. Moriarty

86. QCD sum rules, the spontaneous breakdown of chiral symmetry and short distance behavior in lattice gauge theories.
   Nucl. Phys. <u>B247</u>, 360 (1984)
   w/N.S. Craigie and E. Katznelson

87. Finite temperature QCD in the presence of dynamical quarks.
   Nucl. Phys. <u>B248</u>, 615 (1984)
   w/F. Fucito and S. Solomon

88. The chiral symmetry restoration transition in the presence of dynamical quarks.
   Phys. Rev. <u>D31</u>, 1460 (1985)
   w/F. Fucito and S. Solomon

89. Force between static charges and universality in lattice QCD.
   Phys. Rev. <u>D30</u>, 2201 (1984)
   w/D. Barkai and K.J.M. Moriarty

90. Introductory chapters and preface for the book **"Solitons and Particle Physics."**
   World Scientific Pub. Co., Singapore (1984),
   C. Rebbi and G. Soliani, eds., (pps. 1-53 and v-vi)

91. Quantum chromodynamics on a lattice.
   Comments on Nucl. & Particle Phys. <u>14</u>, 121 (1985)

92. A modified conjugate gradient solver for very large systems.
   Computer Phys. Comm. <u>36</u>, 1 (1985)
   w/D. Barkai and K.J.M. Moriarty

93. Numerical calculations in quantum field theory.
        Proc. Amalfi Meeting, in press

94. Hadron masses in quenched quantum chromodynamics.
        Phys. Lett. <u>156B</u>, 385 (1985)
        w/D. Barkai and K.J.M. Moriarty

95. Lattice gauge calculations in particle theory.
        Computer Phys. Comm. <u>36</u>, 241 (1985)
        w/D. Barkai and K.J.M. Moriarty

96. Monopoles and Dirac Sheets in compact U(1) lattice gauge theory.
        Phys. Lett. <u>162B</u>, 171 (1985)
        w/V. Grösch, K. Jansen, J. Jersak, C.B. Lang, and T. Neuhaus

97. Cromodinamica quantistica.
        Dizionario della Scienze Fisica Treccani
        (Italian Encylopedia), 1985

98. Quantum field theory and supercomputers.
        Comp. Physics Comm. <u>40</u>, 181 (1986)
        w/K.J.M. Moriarty

99. The hadronic spectrum with dynamical fermions.
        Phys. Lett. <u>172B</u>, 235 (1986)
        w/F. Fucito, K.J.M. Moriarty and S. Solomon

100. QCD calculations on the lattice.
        <u>**Proc. Few and Many Quark Systems**</u>, San Miniato, Italy
        March 1985

101. Quark-antiquark charge distributions.
        Ann. of Phys. <u>168</u>, 284 (1986)
        w/K. Barad and M. Ogilvie

102. Large scale calculations for hadron spectroscopy.
        Journal of Stat. Physics <u>43</u>, 1117 (1986)

103. Monte Carlo calculations in lattice gauge theories.
        in **"Statistical and Particle Physics, Commons Problems and**
        Techniques", K.C. Bowler and A.M. McKane, eds., <u>1983 Proc. 26th Scottish</u>
        <u>Universities Summer School in Physics</u>, pp. 408-487 SUSSP, Edinburgh (1984)
        w/K.C. Bowler

104. Monte Carlo calculations of the spin-dependent potentials for heavy-quark spectroscopy.
        Phys. Rev. Lett. <u>57</u>, 44 (1986)
        w/M. Campostini, K. Moriarty

105. A vectorized code for the Monte Carlo computation of spin-dependent static potentials in QCD.
        Computer Phys. Comm. <u>42</u>, 174 (1986)
        w/M. Campostrini, K. Moriarty

106. Monte Carlo determination of the spin-dependent potentials - in **"Lattice Gauge Theories '86"**- <u>Proc. 1986 BNL Conf.</u>, pp. 323-329, H. Satz, I. Harrity and J. Potvin eds. - Plenum NY (1987)
w/M. Campostini, K. Moriarty

107. Applications development on the ETA-10.
Computer Phys. Comm. <u>46</u>, 13 (1987)
w/B. Barkai, M. Campostrini, K. Moriarty

108. Chiral invariant regularization of fermions on the lattice.
Phys. Lett. <u>186B</u>, 200 (1987)

109. Spin splittings of heavy quark bound states from lattice QCD.
Phys. Rev. <u>D36</u>, 3450 (1987)
w/ M. Campostrini, K. Moriarty

110. Toward a pseudofermion calculation of the hadronic mass spectrum.
"Lattice Gauge Theories '86" - <u>Proc. 1986 BNL Conf.</u>,
pp. 309-322, Plenum NY (1987), H. Satz, I. Harrity and J. Potvin, eds.
w/ M. Campostrini, K. Moriarty, J. Potvin

111. Dynamical quark effects on the hadron spectrum and Q-$\bar{Q}$ potential in lattice quantum chromodynamics.
Phys. Lett. <u>193B</u>, 78 (1987)
w/ M. Campostrini, K. Moriarty, J. Potvin and C. Rebbi

112. Even and odd critical exponents of lattice QED.
Phys. Rev. <u>D35</u>, 2510 (1987)
with C. Lang

113. A vectorized code for the pseudofermion simulation of QCD with dynamical quarks.
Comput. Phys. Comm. <u>50</u>, 395 (1988)
w/M. Campostrini, K. Moriarty, J. Potvin

114. Dynamical quark effects on the hadron spectrum and $Q - \bar{Q}$ potential in lattice quantum chromodynamics.
Phys. Lett. <u>193B</u>, 78 (1987)
w/ M. Campostrini, K. Moriarty, J. Potvin and C. Rebbi

115. The multigrid method for fermions calculations in quantum chromodynamics - in **"Multigrid methods"**.
<u>Proceedings of the Third Cooper Mountain Conference on Multigrid</u>
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