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Non-Refereed Articles

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- [220] B.A. Berg, *Exact S-Matrix of the Massive Thirring Model*, Preprint, Freie Universität Berlin (1977).
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- [223] B.A. Berg and P. Hoefflich, *Two Exercises about Neutrino Departure Times at CERN*, arXiv:1110.2814, 2011.

Presentations

Corresponding publications of the references are identified by the numbers in brackets [].

Invited Papers (Refereed) at Conferences and Symposia

- 1979 Kaiserslautern (Germany): Field Theoretical Methods in Particle Physics [147].
- 1979 Les Houches (France): Complex Analysis, Microlocal Calculus and Relativistic Quantum Theory [143].
- 1980 Les Houches (France): Common Trends in Particle and Condensed Matter Physics [148].
- 1981 Lisbon (Portugal): EPS International Conference on High Energy Physics [149].
- 1982 Florence (Italy): 6th Johns Hopkins Workshop [150].
- 1982 Paris (France): 21st International Conference on High Energy Physics [151].
- 1983 Cargèse (France): Summer Institute “Progress in Gauge Theory” (three lectures [144]).
- 1983 Ahrenshoop (Germany): International Symposium on the Theory of Elementary Particles [152].
- 1985 Tallahassee (USA), International Conference: Advances in Lattice Gauge Theory [154].
- 1985 Jaca (Spain): XVI International Seminar on Theoretical Physics (three lectures [155]).

- 1987 Uppsala (Sweden): EPS International Conference on High Energy Physics [157].
- 1988 Schladming (Austria): Internationale Wochen für Kernphysik (three lectures [159]).
- 1988 Munich (Germany): 24th International Conference on High Energy Physics [160].
- 1988 Fermilab (USA): VI. International Symposium on Lattice Field Theory [161].
- 1989 Capri (Italy): VII. International Symposium on Lattice Field Theory [162].
- 1990 Tallahassee (USA): VIII. International Symposium on Lattice Field Theory [163, 164].
- 1992 Forschungszentrum Jülich (Germany): International Workshop Dynamics of First Order Phase Transitions [166, 167].
- 1992 Wendisch-Rietz (Germany): International Symposium on the Theory of Elementary Particles [170].
- 1992 Amsterdam (Netherlands): X. International Symposium on Lattice Field Theory [171].
- 1993 Dallas, TX (USA): XI. International Symposium on Lattice Field Theory [173].
- 1994 Athens, GA (USA): Computer Simulations Studies in Condensed Matter Physics VII [174].
- 1996 Lyon (France): CECAM Statistical Physics Workshop (similar as [177]).
- 1996 Bielefeld (Germany): Conference on Multi-Scale Phenomena and Their Simulation [177].
- 1997 Zentrum für Interdisziplinäre Forschung, Bielefeld (Germany): International Workshop on Algorithms for Large Scale Simulations on Parallel Computers (two lectures similar to [216]).
- 1997 Wuppertal (Germany): Workshop on Field Theoretic Tools for Polymer and Particle Physics [145].
- 1997 Edinburgh (United Kingdom): XV. International Symposium on Lattice Field Theory [178].
- 1998 Toronto (Canada): Fields Institute Workshop on Monte Carlo Methods [216].
- 1999 Pisa (Italy): XVII. International Symposium on Lattice Field Theory [181].
- 2000 Vienna (Austria): Confinement Workshop at the Erwin Schrödinger Institute (talk similar as [181]).
- 2000 Hong Kong (China): Monte Carlo and Quasi Monte Carlo (MCQMC) at the Hong Kong Baptiste University [183].
- 2001 Okazaki (Japan): Computational Science and Engineering at the Okazaki Institute for Molecular Science [188].

- 2001 Berlin (Germany): XVIII. International Symposium on Lattice Field Theory [189].
- 2002 Taipei (Taiwan): International Symposium on Statistical Physics [191].
- 2003 Hayama (Japan): Eight’s International Symposium on Simulation Science (talk similar as [190]).
- 2002 Tsukuba (Japan): XXI. International Symposium on Lattice Field Theory [197].
- 2004 Singapore: Markov Chain Monte Carlo: Innovations and Applications in Statistics, Physics, and Bioinformatics [142].
- 2005 Orlando (USA): SIAM Conference on on Computational Science & Engineering, Speaker at Mini Symposium (talk similar to [146]).
- 2005 Lyon (France): CECAM Workshop Rugged Free Energy Energy Landscapes: Common Computational Approaches in Spin Glasses, Structural Glasses and Biological Macromolecules [146].
- 2006 Tucson (USA): XXIV. International Symposium on Lattice Field Theory [204].
- 2006 Hakuba (Japan): Annual General Member Meeting for the Scientific Research in Priority Areas Water and Biomolecules (talk as [146]).
- 2007 Tallahassee (USA): Quantitative Computational Biophysics Workshop [217].
- 2007 Athens, Ga (USA): Computer Simulations Studies in Condensed Matter Physics XX [212].
- 2007 Regensburg (Germany): XXV. International Symposium on Lattice Field Theory [207].
- 2009 Beijing (China): XXVII. International Symposium on Lattice Field Theory [210].
- 2010 Villasimius, Sardinia (Italy): XXVIII. International Symposium on Lattice Field Theory [213].
- 2011 Squaw Valley, CA: XXIX. International Symposium on Lattice Field Theory [215].

Refereed Papers at Conferences and Symposia

- 1977 Banff (Canada): Banff Summer Institute “Particles and Fields” [220].
- 1992 Berlin (Germany): 18th International Conference on Statistical Physics (STAT-PHYS) (talk similar to [168]).
- 1998 Athens, GA (USA): Computer Simulations Studies in Condensed Matter Physics XI [179].
- 1998 Evanston (USA): Quantum Communication, Measurement and Computing (QCM 98) [180].
- 2000 Fermilab (USA): Advanced Computing and Analysis Techniques [187].

- Poster presentation, 2004 Fermilab (USA): XXII. International Symposium on Lattice Field Theory [201].
- 2007 Forschungszentrum Jülich (Germany): From Computational Biophysics to Systems Biology [206].
- 2011 Athens, GA (USA): Computer Simulations Studies in Condensed Matter Physics XIV [214].

Invited Plenary Presentations at Conferences and Symposia

This section refers to conferences and symposia which featured many parallel sessions. Many of the other invited papers and presentations were plenary in the sense that they were only plenary sessions.

- 1984 Bielefeld (Germany): Deutsche Physikalische Gesellschaft (DPG) Frühjahrstagung Elementarteilchenphysik (plenary talk on lattice gauge theory).
- 1984 Heidelberg (Germany): PANIC Particles and Nuclei – Tenth International Conference (plenary talk on lattice gauge theory [153]).
- 1986 Brookhaven (USA): IV. International Symposium on Lattice Field Theory (plenary talk [156]).
- 1987 Seillac (France): V. International Symposium on Lattice Field Theory (plenary talk [158]).
- 1992 Prague (Czechoslovakia): Physics Computing 92 [168, 169].
- 1993 Mainz (Germany): DPG Frühjahrstagung Mathematische Physik (plenary talk on multicanonical simulations).
- 2001 Aachen (Germany): Conference on Computational Physics 2001 (plenary talk [190]).
- 2003 Los Alamos Nat. Lab. (USA): The Metropolis Method in Physical Sciences, Celebrating the 50th Anniversary of the Metropolis Algorithm (plenary talk [196]).

Invited Presentations at Conferences and Symposia

- 1978 Niels-Bohr Institute, Copenhagen (Denmark): Meeting on Field Theory.
- 1982 CEA, Saclay (France): Workshop on lattice gauge theories.
- 1982 Rutherford (England): Weekend meeting on lattice gauge theories.
- 1983 Budapest (Hungary): Recent Developments in Lattice Gauge Theory.
- 1984 Aspen (USA): Workshop on Lattice Gauge Theory.
- 1984 CERN (Switzerland): II. International Symposium on Lattice Field Theory.
- 1998 European Center for Theoretical Studies in Nuclear Physics and Related Areas, Trento (Italy): Summer School Lattice Gauge Theory for Beginners. *Introduction to Markov Chain Monte Carlo Simulations*, five lectures.

- 1994 Pittsburgh (USA): APS March Meeting [176].
- 1995 Vienna (Austria): 5th International Workshop on Lattice Field Theory and Statistical Physics.
- 2004 Leipzig (Germany): 14th International Workshop on Lattice Field Theory and Statistical Physics. *Model A Dynamics and the Deconfining Phase Transition*.
- 2005 Naturwissenschaftliches Zentrum Leipzig (Germany): Workshop Protein Folding and Substrate Specificity: Computational and Experimental Approaches. *Novel Markov-Chain Monte Carlo Methods for Simulations of Biomolecules*. International.
- 2008 Telluride, Co (USA): Algorithmic Development on Enhanced Sampling [222].
- 2008 Leipzig (Germany): 18th International Workshop on Lattice Field Theory and Statistical Physics. *Thermalization of $SU(3)$ Gauge Theory after a Deconfining Quench*.
- 2009 Dresden (Germany): ENRAGE International Workshop at the Max Planck Institute Dresden. *Simulations on a Double-Layered Torus*.
- 2011 Seattle (USA): First Multidisciplinary Science Forum (MSF) of US Japan Society for the Promotion of Science Alumni Association. *Doubts about Discovering New Physics at LHC*.

Non-Refereed Presentations at Conferences and Symposia

- 2005 Los Angeles, APS March Meeting. *Heatbath Efficiency with Metropolis-Type Updating*.
- 2011 Dallas, APS March Meeting. *Discussion of Opportunities in Computational Physics*. Contributed Talk with Mark Pederson, DOE.
- 2012 Atlanta, APS April Meeting. *Vector Boson Mass Generation Without New Particles*.

Invited Lectures (since 1985)

1. *Monte Carlo Simulation of Discrete Quantum Gravity*, Seminar given at the Physics Department, Columbia University, New York, March 1985.
2. *Glueball Spectrum from Lattice Gauge Theory*, Seminar given at the Brookhaven National Lab Theory Group, March 1985.
3. *Glueball Spectrum from Lattice Gauge Theory*, Seminar given at the Physics Department, Stony Brook, March 1985.
4. *Monte Carlo Simulation of Discrete Quantum Gravity*, Seminar given at the Physics Department, Princeton University, March 1985.
5. *Glueball Spectrum from Lattice Gauge Theory*, Seminar given at the Princeton Institute for Advanced Study, March 1985.
6. *Monte Carlo Simulation of Discrete Quantum Gravity*, Seminar given at the Physics Department, Columbia University, New York, March 1985.

7. *Glueball Spectrum from Lattice Gauge Theory*, Seminar given at the Physics Department, Cornell University, March 1985.
8. *Monte Carlo Simulation of Discrete Quantum Gravity*, Seminar given at the Supercomputer Computations Research Institute, FSU, Tallahassee, April 1986.
9. *Finite Size Scaling and Lattice Gauge Theory*, Seminar given at the CERN Theory Division, May 1986.
10. *Finite Size Scaling and Lattice Gauge Theory*, Colloquium given at the Physics Department, Wuppertal University, Germany, May 1986.
11. *Finite Size Scaling and Lattice Gauge Theory*, Seminar given at the Physics Department, Bielefeld University, Germany, June 1986.
12. *Lattice Random Surfaces Lattice Gauge Theory*, Seminar given at the Physics Department, University of Cagliari, Italy, June 1986.
13. *Lattice Random Surfaces Lattice Gauge Theory*, Seminar given at the Supercomputer Computations Research Institute, FSU, Tallahassee, September 1986.
14. *Finite Size Scaling and Lattice Gauge Theory*, Colloquium given at the FSU Physics Department, Tallahassee, October 1986.
15. *The $m(A_1^{++})/m(E^{++})$ Mass Ratio from Lattice Gauge Theory*, Seminar given at the CERN Theory Division, June 1987.
16. *Finite Size Scaling and the Deconfining Phase Transition*, Seminar given at the CNRS Luminy, France, June 1987.
17. *Analytical Estimate of the $SU(2)$ Deconfining Phase Transition*, Seminar given at the Max Planck Institut, Munich, May 1988.
18. *On the Order of the Deconfining Phase Transition*, Seminar given at the Supercomputer Computations Research Institute, FSU, Tallahassee, February 1989.
19. *Correlation Length and Order of the Deconfining Phase Transition*, Seminar given at the Fermilab Theory Group, June 1989.
20. *Correlation Length and Order of the Deconfining Phase Transition*, Seminar given at the High Energy Group, Louisiana State University, Baton Rouge, August 1989.
21. *Correlation Length and Order of the Deconfining Phase Transition*, Seminar given at the Institute for Physics, Mainz University, September 1989.
22. *Ten Years of Lattice Gauge Theory*, Seminar given at the Physics Department, Münster University, Germany, February 1991.
23. *Ten Years of Lattice Gauge Theory*, Seminar given at the Physics Department, Technical University Munich, Germany, February 1991.
24. *Finite Size Scaling and Spectral Density Studies*, Seminar given at the Physics Department, Wuppertal University, Germany, March 1991.

25. *Local Realistic Theories without Bell's Inequality*, Seminar given at the Physics Department, Bielefeld University, May 1991.
26. *Local Realistic Theories without Bell's Inequality*, Seminar given at the FSU Physics Department, Tallahassee, September 1991.
27. *The Multicanonical Ensemble: A New Approach to Monte Carlo Simulations*, Seminar given at the Physics Department, Embry-Riddle Aeronautical University, Daytona Beach, January 1992.
28. *The Multicanonical Ensemble: A New Approach to Monte Carlo Simulations*, Seminar given at the Supercomputer Computations Research Institute, FSU, Tallahassee, February 1992.
29. *Multicanonical Simulations*, Seminar given at the Institute for Physics, Mainz University, May 1992.
30. *Multicanonical Simulations*, Seminar given at the Physics Department, Humboldt University Berlin, May 1992.
31. *Multicanonical Simulations*, Seminar given at the Physics Department, Technical University Munich, May 1992.
32. *Multicanonical Simulations*, Seminar given at the Physics Department, Technical University Vienna, June 1992.
33. *Asymptotic Freedom and Quantum Gravity*, Seminar given at the Physics Department, Technical University Vienna, June 1992.
34. *Multicanonical Simulations*, Seminar given at the Physics Department, Graz University, Austria, June 1992.
35. *Multicanonical Simulations*, Seminar given at the Physics Department, Jagellonian University, Krakow Poland, November 1992.
36. *Computers and Monte Carlo Simulations*, Colloquium given at the Wissenschaftskolleg Berlin, February 1993.
37. *Asymptotic Freedom and Quantum Gravity*, Seminar given at the Physics Department, Leipzig University, March 1993.
38. *Asymptotic Freedom and Quantum Gravity*, Seminar given at the Fachbereich Physik, Freie Universität Berlin, March 1993.
39. *Multicanonical Spin Glass Simulations*, Seminar given at the Physics Department, Friedrich Schiller University, Jena, June 1993.
40. *Multicanonical Spin Glass Simulations*, Seminar given at the Institute for Physics, Mainz University, May 1994.
41. *Multicanonical Spin Glass Simulations*, Seminar given at the Physics Department, Heidelberg University, June 1994.

42. *Multicanonical Spin Glass Simulations*, Seminar given at the Physics Department, Technical University Vienna, July 1994.
43. *Computers and Monte Carlo Simulations*, Colloquium given at the FSU Physics Department, Tallahassee, September 1994.
44. *Is there Quantum Gravity in Two Dimensions?*, Seminar given at the Physics Department, Humboldt University Berlin, June 1995.
45. *Is there Quantum Gravity in Two Dimensions?*, Seminar given at the CERN Theory Division, July 1995.
46. *Introduction to Monte Carlo Simulations and Their Statistical Analysis*, Lectures given at the Technical University Vienna, June 1996.
47. *Random Cost Method and Neural Networks*, Seminar given at the Technical University Vienna, June 1996.
48. *Signal Confidence Limits from Neural Network Data Analysis*, Seminar given for the Fermilab D0 All-Jets Group, October 1996.
49. *Monte Carlo Simulations with Unconventional Weight Factors*, Seminar given at the Physics Department, Freie Universität Berlin, June 1997.
50. *Monte Carlo Simulations with Unconventional Weight Factors*, Seminar given at the Physics Department, Rheinisch-Westfälische Hochschule Aachen, June 1997.
51. *Phenomenological Approach to Quantum Measurement*. Seminar given at the FSU Physics Department, April 1998.
52. *Phenomenological Approach to Quantum Measurement*. Seminar given at the Physics Department, Michigan Technological University, Houghton, May 1998.
53. *Phenomenological Approach to Quantum Measurement*. Seminar given at the Department of Physics, Leipzig University, June 10, 1998.
54. *Phenomenological Approach to Quantum Measurement*. Seminar given at the Max Planck Institute for Nuclear Physics, Heidelberg, June 19, 1998.
55. *Bell's Inequality and Quantum Measurement for a Pedagogical Example*, Seminar given at the Physics Undergraduate Summer Research Program of FSU, August 4, 1998.
56. *Lattice QED and Random Matrix Theory*. Seminar given at CEA, Saclay, June, 1999.
57. *Lattice QED and Random Matrix Theory*. Seminar given at the Department of Physics, Vienna University, Austria, May 2000.
58. *Lattice QED and Random Matrix Theory*. Seminar given at the Department of Physics, Wuppertal University, Germany, June 2000.
59. *Multicanonical Monte Carlo Simulations*. Colloquium given at the von Neumann Institute for Computing (NIC), Forschungszentrum Jülich, Germany, June 2000.
60. *Clopper-Pearson Bounds for HEP Data Cuts* [187]. Talk given at the D0 group seminar, October 2000.

61. *Configuration Space for Random Walk Dynamics*. Talk given at the Mathematics Department of the National University of Singapore, November 2000.
62. *Generalized Ensemble Simulations of Peptides*. Seminar given at the Conrad Zuse Institute for Information Technology, Freie Universität Berlin, Germany, May 2001.
63. *Multi-Overlap Simulation of the Edwards-Anderson Spin Glass Model*. Seminar given at the von Neumann Institute for Computing (NIC), Forschungszentrum Jülich, Germany, June 2001.
64. *Generalized Ensemble Simulations*. Seminar given at the Institute for Molecular Studies, Okazaki National Labs, Japan, April 2002.
65. *Generalized Ensemble Simulations*. Seminar given at Department of Physics, Chung Cheng University, Taitung, Taiwan, June 2002.
66. *Generalized Ensemble Simulations*. Seminar given at Academia Sinica, Taipei, Taiwan, June 2002.
67. *Generalized Ensemble Simulations*. Seminar given at Department of Physics, Tokyo University, Japan, May 2002.
68. *Generalized Ensemble Simulations*. Seminar given at Department of Physics, Keio University, Yokohama, Japan, May 2002.
69. *Generalized Ensemble Simulations*. Seminar given at the Faculty of Science, International University, Bremen, Germany, July 2002.
70. *Metropolis Simulations for Rugged Dynamical Variables*. Seminar given at the Institute of Physics, Johannes-Gutenberg University, Mainz, September 2002.
71. *Markov Chain Monte Carlo Simulation*. Seminar given at the Faculty of Science, International University, Bremen, Germany, May 2003.
72. *Rugged Metropolis Sampling for Peptides*. Seminar given in 2003 at the Department of Physics, Leipzig University, Germany.
73. *Rugged Metropolis Sampling for Peptides*. Seminar given in 2003 at the Institute for Mathematical Sciences, National University of Singapore.
74. *Tutorial Lecture on Markov Chain Monte Carlo Simulations*. Colloquium given at the Department of Physics, Leipzig University, December 16, 2004.
75. *Markov-Chain Monte Carlo Methods for Simulations of Biomolecules*. Seminar, FSU, Physical Chemistry, April 18, 2005.
76. *The Computer Revolution and Computer Simulations*. Leibniz Lecture at the occasion of being awarded the 21. Leibniz Professorship of Leipzig University, May 11, 2005.
77. *Markov-Chain Monte Carlo Methods for Simulations of Biomolecules*. Invited Seminar, John von Neumann Institute of Computing, Forschungszentrum Jülich, August 9, 2005.
78. *Two Tutorial Lecture on Markov Chain Monte Carlo Simulations*, Physics Department, Nagoya University, July, 2006.

79. Greater Boston Area Theoretical Chemistry Lecture Series (Boston College, Boston University, Harvard and MIT): A. *A Tutorial Lecture on Markov Chain Monte Carlo Simulations and Their Statistical Analysis*, B. *Computer Simulations of Generalized Ensembles*. MIT, November 29, 2006.
80. *Critical Exponents of $U(1)$ Lattice Gauge Theory at Finite Temperature*. Joint Seminar of the Institute of Physics, Humboldt University Berlin (Germany) and DESY Zeuthen (Germany), December 19, 2006.
81. *Residual Entropy of Ice from Multicanonical Simulations*. Colloquium given in 2007 at the John von Neumann Institute for Computing (NIC), Forschungszentrum Jülich.
82. *Residual Entropy of Ice from Multicanonical Simulations*. Colloquium given at the Department of Physics, Leipzig University, August 2007.
83. *Residual Entropy of Ice from Multicanonical Simulations*. Colloquium given at the Physics Department Michigan Technological University, Houghton, October 2007.
84. *Physics with Markov Chain Monte Carlo Simulations*. Seminar given at the School of Computational Science (SCS), FSU February 29, 2008.
85. *Finite Volume Kolmogorov-Johnson-Mehl-Avrami Theory*. Seminar given at the Institute for Physics, Mainz University, June 11, 2008.
86. *Finite Volume Kolmogorov-Johnson-Mehl-Avrami Theory*. Seminar, Department of Physics, Leipzig University, June 19, 2008.
87. *Deconfining Phase Transition with Cold Boundaries*. Joint Seminar of Humboldt University Berlin, Institut für Physik and DESY, Zeuthen, May 11, 2009.
88. *Computer Simulations of Generalized Ensembles*. Colloquium given at Fachbereich Physik, Mainz University, May 5, 2009.
89. *Finite Volume Kolmogorov-Johnson-Mehl-Avrami Theory*. Seminar given at CEA, Saclay, June 8, 2009.
90. *Elementary Kinetics of Phase Conversion in Finite Volumes*. Colloquium given at the Physics Department, Michigan Technological University, Houghton, September 3, 2009.
91. *Non-perturbative W mass*. Seminar given at the Department of Physics, Leipzig University, June 10, 2010.
92. *From Data to Probability Densities without Histograms*. Seminar given at the Department of Physics, Leipzig University, December 17, 2010.
93. *Markov Chain Monte Carlo Techniques for Physics (Mainly a Tutorial Lecture)*, Colloquium given at the University of Iowa, Physics Department, November 14, 2011.
94. *Will We Discover New Fundamental Particles at the Large Hadron Collider?*, Seminar given at the University of Iowa, Physics Department, November 15, 2011.