DEREK BRUCE LEINWEBER

Publications

Publications Overview

- Editor of 3 international conference proceedings.
- Published 4 book chapters.
- Published 98 articles in refereed journals.
- Published 93 articles as refereed conference proceedings.
- Published 9 articles as conference proceedings.
- Published 15 newspaper articles

Publications Summary: 2002 to present

Publication Type	Number	Journal/Publisher	Impact Factor
Refereed Book Chapters	4	Lect. Notes Phys.	N/A
Editorial Works	3	Nucl. Phys. B (Proc. Supp.)	5.199
Refereed Journal Articles	3	Phys. Rev. Lett.	7.072
(Total: 59)	35	Phys. Rev. D	4.896
	1	J. High Energy Phys. (JHEP)	5.393
	1	Nucl. Phys. B	5.199
	4	Phys. Lett. B	5.043
	1	Prog. Part. Nucl. Phys.	3.989
	3	Phys. Rev. C	3.327
	1	Eur. Phys. J. C	3.251
	1	Phys. Rev. B	3.107
	2	Annals Phys.	3.019
	7	Other	
Refereed Conference Proceedings	44	Nucl. Phys. B (Proc. Supp.)*	0.875
(Total: 71)	5	Nucl. Phys. A*	2.155
	19	Other	
Unrefereed Conference Proceedings	4	World Scientific / Other	
Newspaper Articles	15	The Advertiser	
6-Year Total	155	**6-Year Total Refereed**	133
Career Total	217	**Career Total Refereed**	193

*Refereed conference proceedings in Nuclear Physics are required to contain new previously unpublished material.

Very Well Known Refereed Publications (100+ Citations)

1. **"Asymptotic scaling and infrared behavior of the gluon propagator"**
   D. B. Leinweber, J. I. Skullerud, A. G. Williams and C. Parrinello [UKQCD Collaboration]
   Phys. Rev. D **60**, 094507 (1999) [arXiv:hep-lat/9811027]
2. **"Infinite volume and continuum limits of the Landau-gauge gluon propagator"**
   F. D. R. Bonnet, P. O. Bowman, D. B. Leinweber, A. G. Williams and J. M. Zanotti
   Phys. Rev. D **64**, 034501 (2001) [arXiv:hep-lat/0101013]
3. **"Electromagnetic structure of octet baryons"**
   D. B. Leinweber, R. M. Woloshyn and T. Draper
   Phys. Rev. D **43**, 1659 (1991)

Publications – Submitted to Refereed Journals

2. **"Over-Improved Stout-Link Smearing"**
   P. J. Moran and D. B. Leinweber
   arXiv:0801.1165 [hep-lat]
   ADP-07-19-T659

1. **"Impact of Dynamical Fermions on QCD Vacuum Structure"**
   P. J. Moran and D. B. Leinweber
   arXiv:0801.2016 [hep-lat]
   ADP-08-02-T661

Publications – Books

3. **"LC 2005, Proceedings of the Cairns Topical Workshop on Light-Cone QCD and Non-perturbative Hadron Physics"**
   D. B. Leinweber, L. von Smekal and A. G. Williams
   Nucl. Phys. B (Proc. Supp.) **161** (2006)

2. **"Lattice hadron physics. Proceedings, 2nd Topical Workshop, LHP 2003, Cairns, Australia, July 22-30, 2003"**
   A. C. . Kalloniatis, D. B. . Leinweber and A. G. . Williams
   Nucl. Phys. Proc. Suppl. **128** (2004)

1. **"Lattice Hadron Physics. Proceedings, Workshop, LHP 2001, Cairns, Australia, July 9-18, 2001"**
   A. C. Kalloniatis, D. B. Leinweber, W. Melnitchouk and A. G. Williams
   Nucl. Phys. Proc. Suppl. **109** (2002)

Publications – Refereed Book Chapters

4. **"Quark Propagator from LQCD and its Physical Implications"**
   P. O. Bowman, U. M. Heller, D. B. Leinweber, A. G. Williams and J. B. Zhang
   Lect. Notes Phys. **663**, 17 (2005)

3. **"Baryon spectroscopy in lattice QCD"**
   D. B. Leinweber, W. Melnitchouk, D. G. Richards, A. G. Williams and J. M. Zanotti
   Lect. Notes Phys. **663**, 71 (2005) [arXiv:nucl-th/0406032].

2. **“Hadron Structure and QCD: Effective Field Theory for Lattice Simulations”**
   D. B. Leinweber, A. W. Thomas and R. D. Young
   Lect. Notes Phys. **663**, 113 (2005)

1. **“Hadron properties with FLIC fermions”**
   J. M. Zanotti, D. B. Leinweber, W. Melnitchouk, A. G. Williams and J. B. Zhang
   Lect. Notes Phys. **663**, 199 (2005) [arXiv:hep-lat/0407039].

Publications – Refereed Journals

98. **“Vacuum structure revealed by over-improved stout-link smearing compared with the overlap analysis for quenched QCD”**
    E. M. Ilgenfritz, D. Leinweber, P. Moran, K. Koller, G. Schierholz and V. Weinberg
    Accepted 21 February 2008 for publication in Phys. Rev. D (2008) [arXiv:0801.1725 [hep-lat]]
    ADP-07-20-T660

97. **“Scaling analysis of FLIC fermion actions”**
    W. Kamleh, B. Lasscock, D. B. Leinweber and A. G. Williams
    Phys. Rev. D **77**, 014507 (2008) [arXiv:0709.1531 [hep-lat]]

96. **“Scaling behavior and positivity violation of the gluon propagator in full QCD”**
    P. O. Bowman *et al.*
    Phys. Rev. D **76**, 094505 (2007) [arXiv:hep-lat/0703022]

95. **“Unquenching effects in the quark and gluon propagator”**
    W. Kamleh, P. O. Bowman, D. B. Leinweber, A. G. Williams and J. Zhang
    Phys. Rev. D **76**, 094501 (2007) [arXiv:0705.4129 [hep-lat]]

94. **“Even parity excitations of the nucleon in lattice QCD”**
    B. G. Lasscock, J. N. Hedditch, W. Kamleh, D. B. Leinweber, W. Melnitchouk, A. G. Williams and J. M. Zanotti
    Phys. Rev. D **76**, 054510 (2007) [arXiv:0705.0861 [hep-lat]]

93. **“Pseudoscalar and vector meson form factors from lattice QCD”**
    J. N. Hedditch, W. Kamleh, B. G. Lasscock, D. B. Leinweber, A. G. Williams and J. M. Zanotti
    Phys. Rev. D **75**, 094504 (2007) [arXiv:hep-lat/0703014]

92. **“Chiral extrapolation of nucleon magnetic form factors”**
    P. Wang, D. B. Leinweber, A. W. Thomas and R. D. Young
    Phys. Rev. D **75**, 073012 (2007) [arXiv:hep-ph/0701082]

91. **“Quark-gluon vertex in general kinematics”**
    A. Kizilersu, D. B. Leinweber, J. I. Skullerud and A. G. Williams
    Eur. Phys. J. **C50**, 871-875 (2007) [arXiv:hep-lat/0610078]

90. **“Gluon flux-tube distribution and linear confinement in baryons”**
    F. Bissey, F. G. Cao, A. R. Kitson, A. I. Signal, D. B. Leinweber, B. G. Lasscock and A. G. Williams
    Accepted 1 Novmber 2007 for publication in Phys. Rev. D (2007) [arXiv:hep-lat/0606016]

89. **“Precision electromagnetic structure of octet baryons in the chiral regime”**
    S. Boinepalli, D. B. Leinweber, A. G. Williams, J. M. Zanotti and J. B. Zhang
    Phys. Rev. **D74**, 093005 (2006) [arXiv:hep-lat/0604022]

88. **"Strange electric form factor of the proton"**
D. B. Leinweber *et al.*
Phys. Rev. Lett. **97**, 022001 (2006) [arXiv:hep-lat/0601025]

87. **"Spin glass behavior of the antiferromagnetic Ising model on a scale-free network"**
M. Bartolozzi, T. Surungan, D. B. Leinweber and A. G. Williams
Phys. Rev. B **73**, 224419 (2006) [arXiv:cond-mat/0512488]

86. **"Unified chiral analysis of the vector meson spectrum from lattice QCD"**
W. Armour, C. R. Allton, D. B. Leinweber, A. W. Thomas and R. D. Young
J. Phys. G: Nucl. Part. Phys. **32**, 971-991 (2006) [arXiv:hep-lat/0510078]

85. **"Scaling behavior of quark propagator in full QCD"**
M. B. Parappilly, P. O. Bowman, U. M. Heller, D. B. Leinweber, A. G. Williams and J. B. Zhang
Phys. Rev. D **73**, 054504 (2006) [arXiv:hep-lat/0511007]

84. **"Influence of Local Interactions in the Bak-Sneppen Model and Economic Applications"**
M. Bartolozzi, D. B. Leinweber and A. W. Thomas
Physica A **365**, 499–508 (2006) [arXiv:cond-mat/0503421]

83. **"Nonperturbative renormalization of composite operators with overlap fermions"**
J. B. Zhang *et al.*
Phys. Rev. D **72**, 114509 (2005) [arXiv:hep-lat/0507022]

82. **"1^{-+} exotic meson at light quark masses"**
J. N. Hedditch, W. Kamleh, B. G. Lasscock, D. B. Leinweber, A. G. Williams and J. M. Zanotti
Phys. Rev. D **72**, 114507 (2005) [arXiv:hep-lat/0509106]

81. **"Spin 3/2 pentaquark resonance signature in lattice QCD"**
B. G. Lasscock, D. B. Leinweber, W. Melnitchouk, A. W. Thomas, A. G. Williams, R. D. Young and J. M. Zanotti
Phys. Rev. D **72**, 074507 (2005) [arXiv:hep-lat/0504015]

80. **"Neutron stars and strange stars in the chiral SU(3) quark mean field model"**
P. Wang, S. Lawley, D. B. Leinweber, A. W. Thomas and A. G. Williams
Phys. Rev. C **72**, 045801 (2005) [arXiv:nucl-th/0506014]

79. **"Chiral and continuum extrapolation of partially-quenched lattice results"**
C. R. Allton, W. Armour, D. B. Leinweber, A. W. Thomas and R. D. Young
Phys. Lett. B **628**, 125–130 (2005) [arXiv:hep-lat/0504022]

78. **"Stochastic Opinion Formation in Scale-Free Networks"**
M. Bartolozzi, D. B. Leinweber and A. W. Thomas
Phys. Rev. E **72**, 046113 (2005) [arXiv:physics/0504168]

77. **"Search for the pentaquark resonance signature in lattice QCD"**
B. G. Lasscock, D. B. Leinweber, W. Melnitchouk, A. W. Thomas, A. G. Williams, R. D. Young and J. M. Zanotti
Phys. Rev. D **72**, 014502 (2005) [arXiv:hep-lat/0503008]

76. **"Self-Similar Log-Periodic Structures in Western Stock Markets from 2000"**
M. Bartolozzi, S. Drozdz, D. B. Leinweber, J. Speth and A. W. Thomas
Int. J. of Mod. Phys. C **16**, 1347–1361 (2005) [arXiv:cond-mat/0501513]

75. **“Fat link irrelevant clover overlap quark propagator”**
W. Kamleh, P. O. Bowman, D. B. Leinweber, A. G. Williams and J. Zhang
Phys. Rev. D **71**, 094507 (2005) [arXiv:hep-lat/0412022]

74. **“Precise determination of the strangeness magnetic moment of the nucleon”**
D. B. Leinweber *et al.*
Phys. Rev. Lett. **94**, 212001 (2005) [arXiv:hep-lat/0406002]

73. **“Improved chiral properties of FLIC fermions”**
S. Boinepalli, W. Kamleh, D. B. Leinweber, A. G. Williams and J. M. Zanotti
Phys. Lett. B **616**, 196 (2005) [arXiv:hep-lat/0405026]

72. **“Unquenched quark propagator in Landau gauge”**
P. O. Bowman, U. M. Heller, D. B. Leinweber, M. B. Parappilly, A. G. Williams and J. Zhang
Phys. Rev. D **71**, 054507 (2005) [arXiv:hep-lat/0501019]

71. **“Scaling of FLIC fermions”**
J. M. Zanotti, B. Lasscock, D. B. Leinweber and A. G. Williams
Phys. Rev. D **71**, 034510 (2005) [arXiv:hep-lat/0405015]

70. **“Quark propagator in Landau and Laplacian gauges with overlap fermions”**
J. B. Zhang, P. O. Bowman, R. J. Coad, U. M. Heller, D. B. Leinweber and A. G. Williams
Phys. Rev. D **71**, 014501 (2005) [arXiv:hep-lat/0410045]

69. **“Leading quenching effects in the proton magnetic moment”**
R. D. Young, D. B. Leinweber and A. W. Thomas
Phys. Rev. D **71**, 014001 (2005) [arXiv:hep-lat/0406001]

68. **“Self-Organized Criticality and Stock Market Dynamics: an Empirical Study”**
M. Bartolozzi, D. B. Leinweber and A. W. Thomas
Physica A **350**, 451 (2005) [arXiv:cond-mat/0405257]

67. **“Liquid-gas phase transition in nuclear matter including strangeness”**
P. Wang, D. B. Leinweber, A. W. Thomas and A. G. Williams
Phys. Rev. C **70**, 055204 (2004) [arXiv:nucl-th/0407056]

66. **“Liquid-gas phase transition and Coulomb instability of asymmetric nuclear systems”**
P. Wang, D. B. Leinweber, A. W. Thomas and A. G. Williams
Nucl. Phys. A **748**, 226 (2005) [arXiv:nucl-th/0407057]

65. **“New treatment of the chiral SU(3) quark mean field model”**
P. Wang, D. B. Leinweber, A. W. Thomas and A. G. Williams
Nucl. Phys. A **744**, 273 (2004) [arXiv:nucl-th/0404079]

64. **“Hybrid Monte Carlo with fat link fermion actions”**
W. Kamleh, D. B. Leinweber and A. G. Williams
Phys. Rev. D **70**, 014502 (2004) [arXiv:hep-lat/0403019]

63. **“Limits on the temporal variation of the fine structure constant, quark masses and strong interaction from quasar absorption spectra and atomic clock experiments”**
V. V. Flambaum, D. B. Leinweber, A. W. Thomas and R. D. Young
Phys. Rev. D **69**, 115006 (2004) [arXiv:hep-ph/0402098]

62. **“Unquenched gluon propagator in Landau gauge”**
P. O. Bowman, U. M. Heller, D. B. Leinweber, M. B. Parappilly and A. G. Williams
Phys. Rev. D **70**, 034509 (2004) [arXiv:hep-lat/0402032]

61. **"Topological charge evolution in the Markov-chain of QCD"**
D. B. Leinweber, A. G. Williams, J. b. Zhang and F. X. Lee
Phys. Lett. B **585**, 187 (2004) [arXiv:hep-lat/0312035]

60. **"The Hamiltonian limit of (3+1)D SU(3) lattice gauge theory on anisotropic lattices"**
T. M. R. Byrnes, M. Loan, C. J. Hamer, F. D. R. Bonnet, D. B. Leinweber, A. G. Williams and J. M. Zanotti
Phys. Rev. D **69**, 074509 (2004) [arXiv:hep-lat/0311014]

59. **"Comparison of $|Q| = 1$ and $|Q| = 2$ gauge-field configurations on the lattice four-torus"**
S. O. Bilson-Thompson, D. B. Leinweber, A. G. Williams and G. V. Dunne
Annals Phys. **311**, 267 (2004) [arXiv:hep-lat/0306010]

58. **"Physical nucleon properties from lattice QCD"**
D. B. Leinweber, A. W. Thomas and R. D. Young
Phys. Rev. Lett. **92**, 242002 (2004) [arXiv:hep-lat/0302020]

57. **"Scaling behavior of the overlap quark propagator in Landau gauge"**
J. B. Zhang, P. O. Bowman, D. B. Leinweber, A. G. Williams and F. D. R. Bonnet
Phys. Rev. D **70**, 034505 (2004) [arXiv:hep-lat/0301018]

56. **"Quark Contributions to Baryon Magnetic Moments in Full, Quenched and Partially Quenched QCD"**
D. B. Leinweber
Phys. Rev. D **69**, 014005 (2004) [arXiv:hep-lat/0211017]

55. **"Spin-3/2 Nucleon and Delta Baryons in Lattice QCD"**
J. M. Zanotti, D. B. Leinweber, A. G. Williams, J. B. Zhang, W. Melnitchouk and S. Choe
Phys. Rev. D **68**, 054506 (2003) [arXiv:hep-lat/0304001]

54. **"Nonperturbative Structure of the Quark Gluon Vertex"**
J. I. Skullerud, P. O. Bowman, A. Kizilersu, D. B. Leinweber and A. G. Williams
JHEP **0304**, 047 (2003) [arXiv:hep-ph/0303176]

53. **"Delta Baryon Magnetic Moments from Lattice QCD"**
I. C. Cloet, D. B. Leinweber and A. W. Thomas
Phys. Lett. B **563**, 157 (2003) [arXiv:hep-lat/0302008]

52. **"Convergence of Chiral Effective Field Theory"**
R. D. Young, D. B. Leinweber and A. W. Thomas
Prog. Part. Nucl. Phys. **50** 399-417 (2003) [arXiv:hep-lat/0212031]

51. **"Gluon Propagator on Coarse Lattices in Laplacian Gauges"**
P. O. Bowman, U. M. Heller, D. B. Leinweber and A. G. Williams
Phys. Rev. D **66**, 074505 (2002) [arXiv:hep-lat/0206010]

50. **"Chiral Analysis of Quenched Baryon Masses"**
R. D. Young, D. B. Leinweber, A. W. Thomas and S. V. Wright
Phys. Rev. D **66**, 094507 (2002) [arXiv:hep-lat/0205017]

49. **"Simple Quark Model with Chiral Phenomenology"**
I. C. Cloet, D. B. Leinweber and A. W. Thomas
Phys. Rev. C **65**, 062201 (2002) [arXiv:hep-ph/0203023]

48. **"Highly-Improved Lattice Field-Strength Tensor"**
S. O. Bilson-Thompson, D. B. Leinweber and A. G. Williams
Annals Phys. **304**, 1 (2003) [arXiv:hep-lat/0203008]

47. **"Excited Baryons in Lattice QCD"**
W. Melnitchouk, J. N. Hedditch, D. B. Leinweber, A. G. Williams, J. M. Zanotti and J. B. Zhang [CSSM Lattice collaboration]
Phys. Rev. D **67**, 114506 (2003) [arXiv:hep-lat/0202022]

46. **"Overlap Quark Propagator in Landau Gauge"**
F. D. Bonnet, P. O. Bowman, D. B. Leinweber, A. G. Williams and J. b. Zhang [CSSM Lattice collaboration]
Phys. Rev. D **65**, 114503 (2002) [arXiv:hep-lat/0202003]

45. **"Accelerated Overlap Fermions"**
W. Kamleh, D. H. Adams, D. B. Leinweber and A. G. Williams
Phys. Rev. D **66**, 014501 (2002) [arXiv:hep-lat/0112041]

44. **"Low-Lying Eigenmodes of the Wilson-Dirac Operator and Correlations with Topological Objects"**
D. J. Kusterer, J. Hedditch, W. Kamleh, D. B. Leinweber and A. G. Williams
Nucl. Phys. B **628**, 253 (2002) [arXiv:hep-lat/0111029]

43. **"Numerical Study of Lattice Index Theorem using Improved Cooling and Overlap Fermions"**
J. B. Zhang, S. O. Bilson-Thompson, F. D. Bonnet, D. B. Leinweber, A. G. Williams and J. M. Zanotti
Phys. Rev. D **65**, 074510 (2002) [arXiv:hep-lat/0111060]

42. **"Hadron Masses from Novel Fat-Link Fermion Actions"**
J. M. Zanotti, S. Bilson-Thompson, F. D. R. Bonnet, P. D. Coddington, D. B. Leinweber, A. G. Williams, J. B. Zhang, W. Melnitchouk, and F. X. Lee [CSSM Lattice Collaboration]
Phys. Rev. D **65**, 074507 (2002) [arXiv:hep-lat/0110216]

41. **"Chiral Behaviour of the Rho Meson in Lattice QCD"**
D. B. Leinweber, A. W. Thomas, K. Tsushima and S. V. Wright.
Phys. Rev. **D64**, 094502, 1–8 (2001) [arXiv:hep-lat/0104013]

40. **"Improved Smoothing Algorithms for Lattice Gauge Theory"**
F. D. Bonnet, D. B. Leinweber, A. G. Williams and J. M. Zanotti
Phys. Rev. D **65**, 114510 (2002) [arXiv:hep-lat/0106023]

39. **"Nonperturbative Improvement and Tree-Level Correction of the Quark Propagator"**
J. Skullerud, D. B. Leinweber and A. G. Williams
Phys. Rev. D **64**, 074508 (2001) [arXiv:hep-lat/0102013]

38. **"Infinite Volume and Continuum Limits of the Landau-Gauge Gluon Propagator"**
F. D. Bonnet, P. O. Bowman, D. B. Leinweber, A. G. Williams and J. M. Zanotti
Phys. Rev. **D64**, 034501, 1–10 (2001) [arXiv:hep-lat/0101013]

37. **"Chiral Symmetry and the Intrinsic Structure of the Nucleon"**
D. B. Leinweber, A. W. Thomas and R. D. Young.
Phys. Rev. Lett. **86**, 5011–5014 (2001) [arXiv:hep-ph/0101211]

36. **"General Algorithm for Improved Lattice Actions on Parallel Computing Architectures"**
F. D. Bonnet, D. B. Leinweber and A. G. Williams.
J. of Comp. Phys. **170**, 1–17 (2001) [arXiv:hep-lat/0001017]

35. **"Incorporating Chiral Symmetry and Heavy Quark Theory in Extrapolations of Octet Baryon Charge Radii"**
E. J. Hackett-Jones, D. B. Leinweber and A. W. Thomas.
Phys. Lett. **B494**, 89–99 (2000) [arXiv:hep-lat/0008018]

34. **"Incorporating Chiral Symmetry in Extrapolations of Octet Baryon Magnetic Moments"**
E. J. Hackett-Jones, D. B. Leinweber and A. W. Thomas.
Phys. Lett. **B489**, 143–147 (2000) [arXiv:hep-lat/0004006]

33. **"Infrared Behavior of the Gluon Propagator on a Large Volume Lattice"**
F. D. Bonnet, P. O. Bowman, D. B. Leinweber and A. G. Williams.
Phys. Rev. **D62**, 051501, 1–4 (2000) [arXiv:hep-lat/0002020]

32. **"Lattice QCD Calculations of the Sigma Commutator"**
D. B. Leinweber, A. W. Thomas and S. V. Wright.
Phys. Lett. **B482**, 109–113 (2000) [arXiv:hep-lat/0001007]

31. **"Calibration of Smearing and Cooling Algorithms in SU(3)-Color Gauge Theory"**
F. D. Bonnet, P. Fitzhenry, D. B. Leinweber, M. R. Stanford and A. G. Williams.
Phys. Rev. **D 62**, 094509, 1–12 (2000) [arXiv:hep-lat/0001018]

30. **"Lattice QCD Analysis of the Strangeness Magnetic Moment of the Nucleon"**
D. B. Leinweber and A. W. Thomas.
Phys. Rev. **D62**, 074505, 1–10 (2000) [arXiv:hep-lat/9912052]

29. **"Baryon Masses from Lattice QCD: Beyond the Perturbative Chiral Regime"**
D.B. Leinweber, A.W. Thomas, K. Tsushima and S.V. Wright.
Phys. Rev. **D61**, 074502, 1–10 (2000) [arXiv:hep-lat/9906027]

28. **"Discretization Errors in Landau Gauge on the Lattice"**
F.D. Bonnet, P.O. Bowman, D.B. Leinweber, A.G. Williams and D.G. Richards.
Austral. J. Phys. **52**, 939–948 (1999) [arXiv:hep-lat/9905006]

27. **"Asymptotic Scaling and Infrared Behavior of the Gluon Propagator"**
D.B. Leinweber, J.I. Skullerud, A.G. Williams and C. Parrinello,
[UKQCD Collaboration]
Phys. Rev. **D60**, 094507, 1–17 (1999) [arXiv:hep-lat/9811027]
Erratum *ibid.* **D61**, 079901 (2000).

26. **"Nucleon Magnetic Moments Beyond the Chiral Regime"**
D. B. Leinweber, D. H. Lu, and A. W. Thomas.
Phys. Rev. **D60**, 034014, 1–6 (1999) [arXiv:hep-lat/9810005]

25. **"Valence QCD: Connecting QCD to the Quark Model"**
K.F. Liu, S.J. Dong, T. Draper, D.B. Leinweber, J. Sloan, W. Wilcox, R.M. Woloshyn.
Phys. Rev. **D59**, 112001, 1–26 (1999) [arXiv:hep-ph/9806491]

24. **"Light Hadron Spectroscopy on Coarse Lattices with $\mathcal{O}(a^2)$ Mean-Field Improved Actions"**
F. X. Lee and D. B. Leinweber.
Phys. Rev. **D59**, 074504, 1–10 (1999) [arXiv:hep-lat/9711044]

23. **"Gluon Propagator in the Infrared Region"**
D. B. Leinweber, J. I. Skullerud, A. G. Williams, and C. Parrinello.
Phys. Rev. **D58**, 031501, 1–5 (1998) [arXiv:hep-lat/9803015]

22. **"New QCD Sum Rules for Nucleon Axial Vector Coupling Constants"**
Frank X. Lee, Derek B. Leinweber and Xuemin Jin.
Phys. Rev. **D55**, 4066–4082 (1997) [arXiv:nucl-th/9611011]

21. **"QCD Sum Rules for Skeptics"**
Derek B. Leinweber
Annals Phys. **254**, 328–396 (1997) [arXiv:nucl-th/9510051]

20. **"Background-Field Formalism in Nonperturbative QCD"**
Matthias Burkardt, Xuemin Jin, and Derek B. Leinweber.
Phys. Lett. **B385**, 52–56 (1996) [arXiv:hep-ph/9604450]

19. **"QCD Equalities for Baryon Current Matrix Elements"**
Derek B. Leinweber
Phys. Rev. **D53**, 5115–5124 (1996) [arXiv:hep-ph/9512319]

18. **"New QCD Sum Rules for Nucleons in Nuclear Matter"**
R. J. Furnstahl, Xuemin Jin, and Derek B. Leinweber.
Phys. Lett. **B387**, 253–258 (1996) [arXiv:nucl-th/9511007]

17. **"$\rho - \omega$ Mixing via QCD Sum Rules with Finite Mesonic Widths"**
M.J. Iqbal, Xuemin Jin and Derek B. Leinweber.
Phys. Lett. **B386**, 55–61 (1996) [arXiv:nucl-th/9507026]

16. **"Mesonic Width Effects on the Momentum Dependence of the $\rho - \omega$ Mixing Matrix Element"**
M.J. Iqbal, Xuemin Jin and Derek B. Leinweber.
Phys. Lett. **B367**, 45–49 (1996) [arXiv:nucl-th/9504026]

15. **"Valid QCD Sum Rules for Vector Mesons in Nuclear Matter"**
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13. **"Lattice QCD"**. Kurt Riesselman *et al.*. Contributed visualization of QCD vacuum action-density structure. "Symmetry Magazine, published jointly by Fermilab and the Stanford Linear Accelerator Facility (SLAC)" (2005)

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Publications – Newspaper Articles

16. **"Screaming Magnets"**
    Derek Leinweber
    Could renowned physicist Michael Faraday - as he played around with magnets and coils of wire in his 1831 laboratory - have anticipated the wild screams of Jimi Hendrix's distorted guitar revolutionising the music scene of the '60s?
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 24 November 2007.

15. **"Probably Certain"**
    Derek Leinweber
    Yes, the logic behind the universe is fuzzy. . . Article connects humour writer Douglas Adam's *Infinite Improbability Drive* to the multiple paths a particle explores in quantum mechanics.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 1 July 2007.

14. **"Carbon Fading"**
    Derek Leinweber
    The world needs to drive a wedge into greenhouse emissions. Here are seven ways to clean up.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 19 May 2007.

13. **"Time to Ponder"**
    Derek Leinweber
    We all know it's Einstein's greatest idea. But what actually is it?
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 31 March 2007.

12. **"Wired For Quality"**
    Derek Leinweber
    Sometimes it does take a rocket scientist to figure out how to connect the DVD.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 17 February 2007.

11. **“Cricket in Full Swing”**
    Derek Leinweber
    There’s a third way to make a cricket ball move in the air. It’s called Contrast Swing.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 2 December 2006.

10. **“Turbulent Times”**
    Derek Leinweber
    Have you seen the new 2006 World Cup soccer ball? It’s called the “Teamgeist” and represents a radical departure from classic soccer-ball design.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 10 June 2006.

9. **“Surprise attack”**
    Derek Leinweber
    Explores soccer-ball aerodynamics with an empahsis on “the dip” induced by the turbulent to laminar flow transition at the critical speed.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 27 May 2006.

8. **“Food for thought”**
    Derek Leinweber
    Explains the link between greenhouse gases and the Antarctic ozone hole and their effects on Australia’s multibillion-dollar fishing and wine industries.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 6 May 2006.

7. **“Feelin’ Hot Hot Hot”**
    Derek Leinweber
    Links issues of global warming to recent changes in ocean thermohaline circulation.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 25 March 2006.

6. **“Swinger’s Delight”**
    Derek Leinweber
    Probes the mystery of cricket ball swing with an emphasis on the role of humidity.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 31 December 2005.

5. **“To be or not to be. The weird, ghostly worlds of Einstein’s mind.”**
    Derek Leinweber
    Describes, in an engaging manner, the essential idea of non-locality in quantum mechanics and the challenges to realism that Einstein pondered extensively during the emergence of quantum mechanics.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 24 December 2005.

4. **“Striving for Gold”**
    Derek Leinweber
    Reviews the ancient Alchemist’s dream to turn lead into gold and reveals the manner in which it is done with modern-day nuclear physics.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 8 October 2005.

3. **“Behind the Seams”**
    Derek Leinweber
    Explores the aerodynamics behind cricket ball swing, including reverse swing.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 10 September 2005.

2. **“Need for Speed”**
    Derek Leinweber
    Describes what makes a modern supercomputer super.
    In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 23 July 2005.

1. **“Explosive Origins”**
   Derek Leinweber
   Reveals the origin of the elements of the periodic table. We are made of star dust.
   In the column *Can you Believe it?*, Adelaide Advertiser, Saturday 2 July 2005.

Publications – Web Page Projects

7. **“Visualizations of Quantum Chromodynmics (QCD)”**
   D. B. Leinweber
   http://www.physics.adelaide.edu.au/theory/staff/leinweber/VisualQCD/Nobel/
   Includes animations featured in Prof. Frank Wilczek’s 2004 Nobel Prize Lecture
   May 2003 to present

6. **“Origin of Mass”**
   D. B. Leinweber
   http://www.physics.adelaide.edu.au/theory/staff/leinweber/VisualQCD/OriginMass/
   Approximately 100 page requests per month
   Aug 2001 to present

5. **“Visual QCD Archives”**
   D. B. Leinweber
   http://www.physics.adelaide.edu.au/theory/staff/leinweber/VisualQCD/QCDvacuum/
   Approximately 200 page requests per month
   Sept 1999 to present

4. **“What Can You Do With a Physics Degree?”**
   D. B. Leinweber
   http://www.physics.adelaide.edu.au/aip-sa/PhysicsCareers.html
   Approximately 500 page requests per month
   1997 to present

3. **“Physics Careers”**
   D. B. Leinweber
   http://www.physics.adelaide.edu.au/jobs/Jobs.html
   Approximately 1500 page requests per month
   1997 to present

2. **“Cool Links to Hot Topics in Physics”**
   P. Bowman, D. B. Leinweber, A. W. Thomas
   http://www.physics.adelaide.edu.au/cssm/CoolLinks.html
   Approximately 900 page requests per month
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1. **“Australian Institute of Physics Job Advertisements”**
   D. B. Leinweber, *et al.*
   http://www.physics.adelaide.edu.au/jobs/AusJobs.html
   Approximately 300 page requests per month
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