

Curriculum Vitae

CLAUDE WILLIAM BERNARD

- EDUCATION: A. B., Harvard College, Cambridge, Massachusetts, 1972,
summa cum laude; Phi Beta Kappa (1971).
Ph. D., Harvard University, Cambridge, Massachusetts, 1976.
Thesis Advisor: Steven Weinberg.
- POSITIONS HELD: Research Associate, Columbia University, September 1976–July 1978.
Assistant Professor, UCLA, July 1978–June 1983.
Associate Professor, UCLA, July 1983–June 1986.
Professor, UCLA, July 1986–June 1990 (on leave July 1988–July 1990).
Deputy Director, Institute for Theoretical Physics, Santa Barbara,
July 1988–September 1990.
Professor, Washington University (St. Louis), July 1990–Dec. 2015.
Professor Emeritus, Washington University, January 2016–present.
- HONORS: Class of 2014 “Outstanding Faculty Member Award,”
Washington University (April, 2011)
Kemper Teaching Award (with U. Goodenough and M. Wyssession) for
development of *Epic of Evolution* course (April, 1999)
Fellow of the American Physical Society (elected November, 1998)
Alfred P. Sloan Foundation Fellow, 1980-84.
UCLA Distinguished Teaching Award, 1983.
National Science Foundation Graduate Fellowship, 1972-75.
Sophia Freund Prize (awarded to highest ranking Harvard
College Senior), 1972.
David Robbins Prize (awarded to the outstanding graduating
physics major, Harvard College), 1972.
Harvard Honorary National Scholarship (undergraduate
and graduate), 1968-76.
National Merit Scholarship, 1968-72.
Lyndon B. Johnson Australian Science Scholar, 1968.

SELECTED PROFESSIONAL SERVICE:

- Editorial Board of *Physical Review D* (January, 1993–December, 1995)
- Local Organizing Committee, *Lattice '96* (St. Louis, June, 1996)
- International Advisory Committee, *Lattice 2000* (Bangalore, India, August, 2000)
- International Advisory Committee, *Scottish Universities Summer School on Heavy Flavour Physics* (St. Andrews, Scotland, August, 2001)
- NSF Site Review Panel for CESR-c/CLEO-c (Cornell University, March, 2002)
- International Advisory Committee, *Lattice 2006* (Tucson, Arizona, July, 2006)
- Editorial Board of PMC Physics A, May, 2007–May, 2010.
- International Advisory Committee and a Convener of the Working Group on Goldstone Bosons, *Chiral Dynamics 2009* (Bern, Switzerland, July, 2009)
- Department of Energy Review Panel, Early Career Research Program (December, 2009)
- International Advisory Committee, *Lattice 2010* (Sardinia, Italy, June, 2010)
- International Advisory Board, *Flavor Averaging Group* (June, 2011–)
- Department of Energy Review Panel on *Theoretical Physics at National Laboratories* (July, 2011)
- Organizing Committee, *New Frontiers in Lattice Gauge Theories* (Galileo Institute, Florence, Italy, September, 2012)
- International Advisory Committee, *Chiral Dynamics 2012* (Jefferson National Lab, Aug. 6-10, 2012)
- International Advisory Committee, *Chiral Dynamics 2015* (University of Pisa, Italy, June 29–July 3, 2015)

DEPARTMENTAL AND UNIVERSITY SERVICE SINCE 2000:

- Director of Graduate Studies, Physics Dept. (2012–2014)
- Departmental Planning Committee (2012–2013)
- Graduate Council, School of Arts & Sciences (2012–2014)
- GAANN Fellowship Committee, Physics Dept. (2008–2014)
- Graduate Studies Committee, Physics Dept. (2000–2014)

Ph.D. STUDENTS:

Name	Thesis Title	Degree Date
Kirk Olynyk	<i>Analytical and Numerical Study in Field Theory</i>	Sept., 1983
Terrence Draper	<i>Lattice Evaluation of Strong Corrections to Weak Matrix Elements: $\Delta I = 1/2$ Rule</i>	Sept., 1984
George Hockney	<i>Lattice Algorithms and Direct Calculation of Weak Four-Point Functions</i>	June, 1987
Robert Tsuchida	<i>Evaluation of Physical Constants and Operators in $SU(2)$ and $SU(3)$ Lattice Gauge Theory</i>	June, 1987
James Jennings	<i>Topics in Lattice Gauge Theory: Dirac-Kähler Fermions, Wilson Self-Energy & Lattice Instantons</i>	June, 1987
Daniel Murphy	<i>A Comparison of the XY Model and the Coulomb Gas in Two Dimensions</i>	June, 1988
Aida El-Khadra	<i>Semi-Leptonic Form-Factors on the Lattice</i>	Sept., 1989
James Simone	<i>Lattice Calculation of Nonleptonic Charm Decays</i>	Sept., 1991
Kenton Yee	<i>Lattice Gauge-fixing and Other Topics in Lattice Gauge Theory</i>	June, 1992
James Labrenz	<i>A Lattice Calculation of the Decay Constants of Heavy-Light Pseudoscalars</i>	Sept., 1992
Sadigheh Deldar	<i>String Tensions of the $SU(3)$ Representations</i>	Sept., 1999
Van Savage (C. Bender was primary supervisor)	<i>Analytic and Numerical Methods for Studying PT-Symmetric but Non-Hermitian Quantum Theories</i>	May, 2001
Christopher Aubin (also supervised by M. Ogilvie)	<i>Topics in Lattice Gauge Theory: Staggered Chiral Perturbation Theory and Lattice Gauge Fixing</i>	May, 2004
Jon Bailey	<i>Staggered Baryons</i>	May, 2007
Xining Du	<i>Staggered Chiral Perturbation Theory in the Two-Flavor Case and $SU(2)$ Chiral Analysis of the MILC Data</i>	Sept., 2010
Javad Komijani (C. Bender directed the math research)	<i>Topics in Lattice Gauge Theory and Theoretical Mathematics</i>	August, 2015
Nathan Brown	<i>Lattice Scales from Gradient Flow and Chiral Analysis of the MILC Collaboration's HISQ Ensembles</i>	June, 2018

Publications of Claude Bernard

INSPIRE h index: 74 (citeable), 69 (published)

1. C. Bernard, “Feynman Rules for Gauge Theories at Finite Temperature,” *Phys. Rev. D* **9**, 3312 (1974).
2. C. Bernard and A. Duncan, “Lorentz Covariance and Matthew’s Theorem for Derivative Coupled Field Theories,” *Phys. Rev. D* **11**, 848 (1975).
3. C. Bernard, A. Duncan, J. LoSecco, and S. Weinberg, “Exact Spectral-Function Sum Rules,” *Phys. Rev. D* **12**, 792 (1975).
4. C. Bernard and E. Weinberg, “Interpretation of Pseudoparticles in Physical Gauges,” *Phys. Rev. D* **15**, 3656 (1977).
5. C. Bernard and A. Duncan, “Regulation and Renormalization of Quantum Field Theory in Curved Space-Time,” *Ann. Phys.* **107**, 201 (1977).
6. C. Bernard, N. Christ, A. Guth, and E. Weinberg, “Pseudoparticle Parameters for Arbitrary Gauge Groups,” *Phys. Rev. D* **16**, 2977 (1977).
7. C. Bernard, A. Guth and E. Weinberg, “A Note on the Atiyah-Singer Index Theorem,” *Phys. Rev. D* **17**, 1053 (1978).
8. C. Bernard, “Instanton Interactions at the One-Loop Level,” *Phys. Rev. D* **18**, 2026 (1978).
9. C. Bernard, “Gauge Zero Modes, Instanton Determinants, and QCD Calculations,” *Phys. Rev. D* **19**, 3013 (1979).
10. C. Bernard, “Physical Effects of Instantons,” in *Geometrical and Topological Methods in Gauge Theories* (J.P. Harnad and S. Shnider, eds.), Springer-Verlag, Berlin, 1980.
11. T. Appelquist and C. Bernard, “Strongly Interacting Higgs Bosons,” *Phys. Rev. D* **22**, 200 (1980).
12. T. Appelquist and C. Bernard, “Nonlinear Sigma Model in the Loop Expansion,” *Phys. Rev. D* **23**, 425 (1981).
13. C. Bernard, “Monte Carlo Evaluation of the Effective Gluon Mass,” *Phys. Lett.* **108B**, 432 (1982).
14. C. Bernard, T. Draper, K. Olynyk, and A.M. Rushton, “Lattice QCD Calculation of Some Baryon Magnetic Moments,” *Phys. Rev. Lett.* **49**, 1076 (1982).

15. C. Bernard, T. Draper, and K. Olynyk, “A Systematic Effect in Hadron Mass Calculations” (also known by the title “Hadron Mass Calculations in QCD”), *Phys. Rev. D* **27**, 227 (1983).
16. C. Bernard, “Adjoint Wilson Lines and the Effective Gluon Mass,” *Nucl. Phys.* **B219**, 341 (1983).
17. C. Bernard, T. Draper, K. Olynyk, and A.M. Rushton, “Static Hadron Properties in Lattice QCD,” *Nucl. Phys.* **B220** [FS8], 508 (1983).
18. C. Bernard, B. Lautrup and E. Rabinovici, “Monte Carlo Study of the Breakdown of Translational Invariance in a Liouville Model,” *Phys. Lett.* **134B**, 341 (1984).
19. C. Bernard, A. De Rújula and B. Lautrup, “Sonic Search for Monopoles, Gravitational Waves, and Newtonites,” *Nucl. Phys.* **B242**, 93 (1984).
20. C. Bernard, “Lattice Calculation of Hadronic Weak Matrix Elements: The $\Delta I=1/2$ Rule,” in *Gauge Theory on a Lattice: 1984*, edited by C. Zachos, *et al.* (Argonne National Laboratory, Argonne, IL, 1984), p.85.
21. C. Bernard, T. Draper, A. Soni, and H.D. Politzer, and M.B. Wise, “Application of Chiral Perturbation Theory to $K \rightarrow 2\pi$ Decays,” *Phys. Rev. D* **32**, 2343 (1985).
22. C. Bernard, T. Draper, G. Hockney, and A. Soni, “Lattice Calculation of Weak Matrix Elements: A Progress Report,” in *Advances in Lattice Gauge Theory*, edited by D.W. Duke and J.F. Owens (World Scientific, Singapore, 1985), p.113.
23. C. Bernard, T. Draper, G. Hockney, A.M. Rushton, and A. Soni, “Lattice Calculation of Weak Matrix Elements,” *Phys. Rev. Lett.* **55**, 2770 (1985). (Very similar material appeared in *Proceedings of the 23rd International Conference on High Energy Physics*, edited by S.C. Loken (World Scientific, Singapore, 1986), p.225).
24. C. Bernard, T. Draper, G. Hockney, and A. Soni, “Calculation of Weak Matrix Elements: Some Technical Aspects,” in *Lattice Gauge Theory: A Challenge in Large Scale Computing*, edited by B. Bunk, K.H. Mütter, and K. Schilling (Plenum, New York, 1986).
25. C. Bernard, T. Draper, G. Hockney, and A. Soni, “Recent Results from the University of California Weak Matrix Element Calculation,” in *Lattice Gauge Theory '86*, edited by H. Satz, I. Harritiy, and J. Potvin (Plenum, New York, 1987).
26. C. Bernard, T. Draper, G. Hockney, and A. Soni, “Lattice Calculation of Weak Matrix Elements: A Status Report,” in *Proceedings of the 2nd Moriond Meeting: Electroweak and Unified Theories*, edited by Tran Thanh Van, World Scientific, Singapore, 1987.
27. C. Bernard, T. Draper and A. Soni, “Perturbative Corrections to Four-Fermion Operators on the Lattice,” *Phys. Rev.* **D36** (1987) 3224.

28. C. Bernard, T. Draper, G. Hockney, and A. Soni, “Recent Developments in Weak Matrix Element Calculations,” Nucl. Phys. (Proc. Suppl.) **4** (1988) 483.
29. C. Bernard, T. Draper, G. Hockney, and A. Soni, “Lattice Calculation of Weak Amplitudes of D and B Mesons,” Phys. Rev. D **38** (1988) 3540.
30. C. Bernard, A. El-Khadra, and A. Soni, “Weak Decays on the Lattice: Current Status and Future Prospects,” in *Proceedings of the Ringberg Workshop on Hadronic Matrix Elements and Weak Decays*, April 18-22, 1988.
31. C. Bernard and A. Soni, “Review of Weak Matrix Elements on the Lattice,” Nucl. Phys. **B** (Proc. Suppl.) **9** (1989) 155.
32. C. Bernard, A. El-Khadra and A. Soni, “Lattice Calculation of Meson Form Factors for Semi-Leptonic Decays,” Nucl. Phys. **B** (Proc. Suppl.) **9** (1989) 186.
33. C. Bernard, “Introduction to Weak Matrix Elements on (and off) the Lattice,” in *From Actions to Answers* (Proceedings of the 1989 Theoretical Advanced Study Institute in Elementary Particle Physics), edited by T. DeGrand and D. Toussaint, (World Scientific, Singapore, 1990) pp. 233–292.
34. C. Bernard and A. Soni, “Weak Matrix Elements of Kaons,” Nucl. Phys. **B** (Proc. Suppl.) **17** (1990) 495.
35. C. Bernard, A. El-Khadra and A. Soni, “Semileptonic News,” Nucl. Phys. **B** (Proc. Suppl.) **17** (1990) 499.
36. C. Bernard, J. Simone and A. Soni, “Lattice Study of $D \rightarrow K\pi$,” Nucl. Phys. **B** (Proc. Suppl.) **17** (1990) 504.
37. C. Bernard, D. Murphy, A. Soni, and K. Yee, “Lattice Quark Propagator in Fixed Gauges,” Nucl. Phys. **B** (Proc. Suppl.) **17** (1990) 593.
38. C. Bernard, R. Gupta, G. Kilcup, S. Sharpe, and A. Soni, “Lattice Calculation of Electroweak Amplitudes,” Int. J. Supercomputing Applications **4** (1990) 61.
39. C. Bernard, A. El-Khadra and A. Soni, “Semileptonic Decays on the Lattice: The Exclusive 0^- to 0^- Case,” Phys. Rev. D **43** (1991) 2140.
40. C. Bernard, J. Labrenz & A. Soni, “Decay Constants and Wave Functions of Heavy Mesons,” Nucl. Phys. **B** (Proc. Suppl.) **20** (1991) 488.
41. C. Bernard, A. El-Khadra, and A. Soni, “Semi-leptonic Decays on the Lattice,” Nucl. Phys. **B** (Proc. Suppl.) **20** (1991) 439.
42. C. Bernard, J. Simone and A. Soni, “Lattice Study of Nonleptonic D Decays — A Progress Report,” Nucl. Phys. **B** (Proc. Suppl.) **20** (1991) 434.

43. C. Bernard, A. Soni and K. Yee, “Applications of Gauge-fixed Correlation Functions of Quarks and Gluons,” Nucl. Phys. **B** (Proc. Suppl.) **20** (1991) 410.
44. QCD Teraflop Collaboration (S. Aoki *et al.*), “Physics Goals of the QCD Teraflop Project,” Intl. J. Mod. Phys. **C2** (1991) 829.
45. The MILC Collaboration, (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “Studying Quarks and Gluons on MIMD Parallel Computers,” Int. J. Supercomputing Applications **5** (1991) 61.
46. C. Bernard, A. El-Khadra and A. Soni, “Lattice Study of Semi-Leptonic Decays of Charmed Mesons into Vector Mesons,” Phys. Rev. D **45** (1992) 869.
47. C. Bernard and M. Golterman, “Chiral Perturbation Theory for the Quenched Approximation,” Nucl. Phys. **B** (Proc. Suppl.) **26** (1992) 360.
48. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “QCD Thermodynamics With Two Flavors at $N_t = 6$,” Phys. Rev. D **45** (1992) 3854.
49. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “The Spatial Structure of Screening Propagators in Hot QCD,” Phys. Rev. Lett. **68** (1992) 2125.
50. C. Bernard, C. M. Heard, J. Labrenz, and A. Soni, “Decay Constants of Heavy-Light Pseudoscalars: Results at $\beta = 6.3$,” Nucl. Phys. **B** (Proc. Suppl.) **26** (1992) 384.
51. C. Bernard, A. El-Khadra, and A. Soni, “Lattice Approach to Semi-Leptonic Decays of Charm Mesons,” Nucl. Phys. **B** (Proc. Suppl.) **26** (1992) 204.
52. C. Bernard and M. Golterman, “Chiral Perturbation Theory for the Quenched Approximation of QCD,” Phys. Rev. D **46** (1992) 853 [hep-lat/9204007].
53. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “Finite-size Effects and T_c for $\beta = 5.445$ with Two Staggered Flavors,” Nucl. Phys. B(Proc. Suppl.) **26** (1992) 262.
54. C. Bernard, P. Hsieh, and A. Soni, “Flavor Changing Neutral Current Transitions on the Lattice for Heavy-Light Systems,” Nucl. Phys. **B** (Proc. Suppl.) **26** (1992) 347.
55. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “QCD Thermodynamics with Two Flavors of Quarks,” Nucl. Phys. **B** (Proc. Suppl.) **26** (1992) 305.
56. C. Bernard and A. Soni, “Lattice Approach to Electroweak Matrix Elements,” in *Quantum Fields on the Computer*, M. Creutz, ed., World Scientific, 1992.

57. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “QCD Thermodynamics With Two Flavors of Wilson Quarks at $N_t = 6$,” Phys. Rev. D **46** (1992) 4741.
58. C. Bernard, A. El-Khadra and A. Soni, “Lattice Calculation of the Semi-Leptonic Form Factor at the End-Point for $D \rightarrow K^*$,” Phys. Rev. D **47** (1993) 998.
59. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, M. Ogilvie, R. Sugar, and D. Toussaint), “Quark Structure of Static Correlators in High Temperature QCD,” Proceedings of the Ninth International Conference on Ultra-Relativistic Nucleus Nucleus Collisions, Gatlinburg, 1991, T. Awes, *et al.*, eds., Nucl. Phys. **A544** (1992) 519c.
60. C. Bernard and M. Golterman, “The Quenched Approximation in Health and in Sickness,” Nucl. Phys. **B** (Proc. Suppl.) **30** (1993) 217.
61. C. Bernard, J. Labrenz, and A. Soni, “Quenched Lattice Results for f_B and f_D ,” Nucl. Phys. **B** (Proc. Suppl.) **30** (1993) 465.
62. C. Bernard, C. Parrinello, and A. Soni, “The Gluon Propagator in Momentum Space,” Nucl. Phys. **B** (Proc. Suppl.) **30** (1993) 535.
63. C. Bernard, Y. Shen, and A. Soni, “Calculating the Isgur-Wise Function on the Lattice,” Nucl. Phys. **B** (Proc. Suppl.) **30** (1993), 473.
64. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, R. Sugar, and D. Toussaint), “Finite Size Effects on the QCD Spectrum Revisited,” Nucl. Phys. **B** (Proc. Suppl.) **30** (1993) 369.
65. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, R. Sugar, and D. Toussaint), “Baryon Density Correlations in the Quark Plasma,” Nucl. Phys. **B** (Proc. Suppl.) **30** (1993) 319.
66. C. Bernard and M. Golterman, “Partially Quenched Gauge Theories and an Application to Staggered Fermions,” Phys. Rev. D **49** (1994) 486 [hep-lat/9306005].
67. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, R. Sugar, and D. Toussaint), “Finite-size and Quark Mass Effects on the QCD Spectrum with Two Flavors,” Phys. Rev. D **48** (1993) 4419.
68. C. Bernard, J. Labrenz and A. Soni, “A Lattice Computation of the Decay Constants of B and D Mesons,” Phys. Rev. D **49** (1994) 2536.
69. C. Bernard, C. Parrinello and A. Soni, “A Lattice Study of the Gluon Propagator in Momentum Space,” Phys. Rev. D **49** (1994) 1585.

70. C. Bernard, Y. Shen, and A. Soni, “A Lattice Calculation of the Isgur-Wise Function,” *Phys. Lett.* **B317** (1993) 164.
71. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Krasnitz, R. Sugar, and D. Toussaint), “Baryon Density Correlations in High Temperature Hadronic Matter,” *Phys. Rev. D* **49** (1994) 6051.
72. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Hasenfratz, L. Kärkkäinen, R. Sugar, and D. Toussaint), “Nature of the Thermal Phase Transition with Wilson Quarks,” *Phys. Rev. D* **49** (1994) 3574.
73. C. Bernard, P. Hsieh, and A. Soni, “ $B \rightarrow K^* + \gamma$ and $B_s \rightarrow \phi + \gamma$ on the Lattice,” *Phys. Rev. Lett.* **72** (1994) 1402.
74. C. Bernard, Y. Shen, and A. Soni, “Isgur-Wise Function on the Lattice,” *Nucl. Phys. B* (Proc. Suppl.) **34** (1994) 483.
75. C. Bernard, “Heavy-light and Light-light Weak Matrix Elements on the Lattice” (review) *Nucl. Phys. B* (Proc. Suppl.) **34** (1994) 47.
76. C. Bernard and M. Golterman, “Partially Quenched QCD and Staggered Fermions,” *Nucl. Phys. B* (Proc. Suppl.) **34** (1994) 331.
77. C. Bernard, M. Golterman, J. Labrenz, S. Sharpe, and A. Ukawa, “Pion-pion Scattering in the Quenched Approximation,” *Nucl. Phys. B* (Proc. Suppl.) **34** (1994) 334.
78. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, A. Hasenfratz, L. Kärkkäinen, R. Sugar, and D. Toussaint), “What Is Going On with Wilson Quarks at High Temperature?” *Nucl. Phys. B* (Proc. Suppl.) **34** (1994) 324.
79. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, L. Kärkkäinen, R. Sugar, and D. Toussaint), “Mass Dependence of Finite-Size Effects on the Hadron Spectrum,” *Nucl. Phys. B* (Proc. Suppl.) **34** (1994) 366.
80. The MILC collaboration (C. Bernard, T. Blum, A. De, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, N. Ishizuka, L. Kärkkäinen, J. Labrenz, A. Soni, R. Sugar, and D. Toussaint) “Preliminary Heavy-Light Decay Constants from the MILC Collaboration,” *Nucl. Phys. B* (Proc. Suppl.) **42** (1995), 388.
81. C. Bernard and A. Soni, “Update on B_K with Wilson Fermions,” *Nucl. Phys. B* (Proc. Suppl.) **42** (1995), 391.
82. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, L. Kärkkäinen, A. Kennedy, S. Kim, J. Kogut, R. Renken, K. Rummukainen, D. Sinclair, R.L. Sugar, D. Toussaint, and K. Wang), “QCD Thermodynamics at $N_t = 8$ and 12,” *Nucl. Phys. B* (Proc. Suppl.) **42** (1995), 448.

83. The MILC collaboration (C. Bernard, T. Blum, A. DeGrand, C. DeTar, S. Gottlieb, L. Kärkkäinen, K. Rummukainen, R.L. Sugar and D. Toussaint), “Wilson Thermodynamics at $N_t = 8$,” Nucl. Phys. **B** (Proc. Suppl.) **42** (1995), 451.
84. The MILC collaboration (C. Bernard, T. Blum, A. De, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, N. Ishizuka, L. Kärkkäinen, J. Labrenz, K. Rummukainen, A. Soni, R. Sugar, D. Toussaint, and M. Wingate), “Status and Prospect for Determining f_B , f_{B_s} , f_{B_s}/f_B on the Lattice,” Proceedings of the LISHEP’95 Session C: Heavy Flavor Physics, Edited by F. Caruso, M.E. Pol, A. Santoro and R. Shellard, Editions Frontieres, pp. 399-407.
85. C. Bernard and M. Golterman, “Finite-Volume Two-Pion Energies and Scattering in the Quenched Approximation,” Phys. Rev. D **53** (1996) 476 [hep-lat/9507004].
86. The MILC collaboration (C. Bernard, T. Blum, A. De, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, N. Ishizuka, J. Labrenz, K. Rummukainen, A. Soni, R. Sugar, D. Toussaint, and M. Wingate), “ f_B Quenched and Unquenched,” Nucl. Phys. **B** (Proc. Suppl.) **47** (1996), 459 [hep-lat/9509045].
87. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “The Continuum Limit in the Quenched Approximation,” Nucl. Phys. **B** (Proc. Suppl.) **47** (1996), 345.
88. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, L. Kärkkäinen, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “The $N_t = 6$ Equation of State for Two Flavor QCD,” Nucl. Phys. **B** (Proc. Suppl.) **47** (1996), 503.
89. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Two-Flavor Staggered-Fermion Thermodynamics at $N_t = 12$,” Nucl. Phys. **B** (Proc. Suppl.) **47** (1996), 499.
90. C. Bernard and M. Golterman, “Scattering in the Quenched Approximation,” Nucl. Phys. **B** (Proc. Suppl.) **47** (1996), 553.
91. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, K. Rummukainen, R. Sugar, D. Toussaint) “Two-Flavor Staggered Fermion Thermodynamics at $N(T) = 12$,” Phys. Rev. D **54** (1996) 4585 [hep-lat/9605028].
92. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, A. Soni, R. Sugar, D. Toussaint, and M. Wingate), “Update on f_B ,” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 358.

93. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Assorted Weak Matrix Elements Involving the Bottom Quark,” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 374 [hep-lat/9608088].
94. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Recent MILC Spectrum Results,” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 212 [hep-lat/9608102].
95. C. Bernard, T. Blum, and A. Soni, “SU(3) Flavor Breaking in Hadronic Matrix Elements for $B - \bar{B}$ Oscillations ,” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 382 [hep-lat/9609005].
96. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, L. Karkkainen, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Thermodynamics for Two Flavor QCD,” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 442 [hep-lat/9608026].
97. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, L. Karkkainen, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Finite Temperature Lattice QCD with Clover Fermions,” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 446 [hep-lat/9607085].
98. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, L. Karkkainen, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Exotic Hybrid Mesons with Light Quarks” Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), 228 [hep-lat/9607031].
99. C. Bernard, M. Golterman, M. Ogilvie, and J. Potvin, eds., *Lattice 96: Proceedings of the XIV International Symposium on Lattice Field Theory*, Nucl. Phys. **B** (Proc. Suppl.) **53** (1997), (North Holland, Amsterdam).
100. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Which Chiral Symmetry is Restored in High Temperature QCD?” Phys. Rev. Lett. **78** (1997) 598.
101. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “QCD Thermodynamics with an Improved Lattice Action,” Phys. Rev. D **56** (1997) 5584 [hep-lat/9703003].
102. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, L. Kärkkäinen, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Equation of State for Two Flavor QCD at $N_t = 6$,” Phys. Rev. D **55** (1997) 6861.

103. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Exotic Mesons in Quenched Lattice QCD,” *Phys. Rev. D* **56** (1997) 7039 [hep-lat/9707008].
104. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, A. Soni, R. Sugar, D. Toussaint, and M. Wingate), “Heavy-Light Decay Constants—MILC Results with the Wilson Action,” *Nucl. Phys. B, (Proc. Suppl.)*, **60A** (1998), 106 [hep-lat/9707013].
105. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Light Hadron Spectrum: MILC Results with the Kogut-Susskind and Wilson Actions,” *Nucl. Phys. B, (Proc. Suppl.)*, **60A** (1998), 3 [hep-lat/9707014].
106. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Towards the QCD Spectrum with Dynamical Quarks,” *Nucl. Phys. B, (Proc. Suppl.)*, **60A** (1998), 297.
107. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “MILC Studies of High Temperature QCD — a Progress Report,” *Nucl. Phys. B, (Proc. Suppl.)*, **60A** (1998), 195.
108. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “B Mixing on the Lattice: f_B , f_{B_s} and Related Quantities,” in R. Burnstein, D. Kaplan, and H. Rubin, eds., *Twenty Beautiful Years of Bottom Physics*, AIP Conference Proceedings 424 (1998) pp. 227-234 [hep-ph/9709328].
109. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, B. Jegerlehner, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Critical Behavior at the Chiral Phase Transition,” *Nucl. Phys. B (Proc. Suppl.)* **63** (1998), 400.
110. C. Bernard, “Lattice Calculations of Decay Constants,” in C. Campagnari, ed., *Heavy Flavor Physics*, World Scientific, Singapore, 1999, p. 29. (Review talk presented at the *Seventh International Symposium on Heavy Flavor Physics*, Santa Barbara, July 7-11, 1997 [hep-ph/9709460].)
111. C. Bernard, T. Blum, and A. Soni, “SU(3) Flavor Breaking in Hadronic Matrix Elements for B - \bar{B} Oscillations,” *Phys. Rev. D* **58** (1998) 014501 [hep-lat/9801039].
112. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M.

- Wingate), “Heavy-Light Decay Constants from Wilson and Static Quarks,” Nucl. Phys. **B** (Proc. Suppl.) **63** (1998), 362 [hep-lat/9709142].
113. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Update on the Hadron Spectrum with Two Flavors of Staggered Quarks,” Nucl. Phys. **B** (Proc. Suppl.) **63** (1998), 215 [hep-lat/9710063].
114. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Light Quark Spectrum with Improved Gauge and Fermion Action,” Nucl. Phys. **B** (Proc. Suppl.) **63** (1998), 182.
115. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “B Meson Form Factors from HQET simulations,” Nucl. Phys. **B** (Proc. Suppl.) **63** (1998), 374.
116. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, D. Toussaint, and M. Wingate), “Exotic Hybrid Mesons and Four-Quark States,” Nucl. Phys. **B** (Proc. Suppl.) **63** (1998), 206.
117. The MILC collaboration (C. Bernard, T. Blum, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, and D. Toussaint), “Quenched Hadron Spectroscopy with Improved Staggered Quark Action,” Phys. Rev. D **58** (1998) 014503 [hep-lat/9712010].
118. The MILC collaboration (C. Bernard, T. Blum, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, and D. Toussaint), “Continuum Limit of Lattice QCD with Staggered Quarks in the Quenched Approximation - a Critical Role for the Chiral Extrapolation,” Phys. Rev. Lett. **81** (1998) 3087 [hep-lat/9805004].
119. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, N. Ishizuka, R. Sugar, D. Toussaint and M. Wingate), “Lattice Determination of Heavy-Light Decay Constants,” Phys. Rev. Lett. **81** (1998) 4812 [hep-ph/9806412].
120. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, N. Ishizuka, C. McNeile, R. Sugar, D. Toussaint and M. Wingate), “Heavy-Light Decay Constants: Conclusions from the Wilson Action,” Nucl. Phys. **B** (Proc. Suppl.) **73** (1999) 372 [hep-lat/9809109].
121. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Rummukainen, R. Sugar, and D. Toussaint), “Light Hadron Spectrum with Kogut-Susskind Quarks,” Nucl. Phys. **B** (Proc. Suppl.) **73** (1999) 198 [hep-lat/9810035].

122. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, R. Sugar, and D. Toussaint), “Exotic Meson Spectroscopy from the Clover Action at $\beta = 5.85$ and 6.15 ,” Nucl. Phys. **B** (Proc. Suppl.) **73** (1999) 264 [hep-lat/9809087].
123. C. Bernard, M. Golterman, and C. McNeile, “A Calculation of the Lepage-Mackenzie Scale for the Lattice Axial and Vector Currents,” Phys. Rev. D **59** (1999) 074506 [hep-lat/9808032].
124. The MILC collaboration (C. Bernard, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, K. Rummukainen, R.L. Sugar, and D. Toussaint), “Critical Behavior in $N_t = 4$ Staggered Fermion Thermodynamics,” Phys. Rev. D **61** (2000) 054503 [hep-lat/9908008].
125. C. Bernard and T. DeGrand, “Perturbation Theory for Fat-link Fermion Actions,” Nucl. Phys. **B** (Proc. Suppl.) **83-84** (2000) 845 [hep-lat/9909083].
126. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Orginos, R.L. Sugar, and D. Toussaint), “Semileptonic Decays of Heavy Mesons with the Fat Clover Action,” Nucl. Phys. **B** (Proc. Suppl.) **83-84** (2000) 274 [hep-lat/9909076].
127. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Orginos, R.L. Sugar, and D. Toussaint), “Heavy-Light Decay Constants with Dynamical Gauge Configurations and Wilson or Improved Valence Quark Action,” Nucl. Phys. **B** (Proc. Suppl.) **83-84** (2000) 289 [hep-lat/9909121].
128. The MILC collaboration (C. Bernard, T. Burch, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Orginos, R.L. Sugar, and D. Toussaint), “Scaling tests of the improved Kogut-Susskind quark action,” Phys. Rev. D **61** (Rapid Communications) (2000) 111502 [hep-lat/9912018].
129. The MILC collaboration (C. Bernard, T. Burch, K. Orginos, D. Toussaint, T.A. DeGrand, C.E. DeTar, S. Gottlieb, U.M. Heller, J.E. Hetrick and R.L. Sugar), “The static quark potential in three flavor QCD,” Phys. Rev. D **62** (2000) 034503 [hep-lat/0002028].
130. C. Bernard, “Heavy-Quark Physics on the Lattice” (review), Nucl. Phys. **B** (Proc. Suppl.) **94** (2001), 159 [hep-lat/0011064].
131. The MILC collaboration (C. Bernard, S. Datta, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Orginos, R. Sugar, and D. Toussaint) “ f_B for Various Actions: Approaching the Continuum Limit with Dynamical Fermions,” Nucl. Phys. **B** (Proc. Suppl.) **94** (2001), 346 [hep-lat/0011029].
132. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U. Heller, P. Lacock, K. Orginos, R. Sugar, and D. Toussaint), “Zero Temperature String Breaking

- with Dynamical Staggered Fermions,” Nucl. Phys. **B** (Proc. Suppl.) **94** (2001), 546 [hep-lat/0010066].
133. The MILC collaboration (C. Bernard, T. Burch, T.A. DeGrand, C.E. DeTar, S. Gottlieb, U. Heller, K. Orginos, R. Sugar, and D. Toussaint), “Quark Loop Effects with an Improved Staggered Action,” Nucl. Phys. **B** (Proc. Suppl.) **94** (2001), 237 [hep-lat/0010065].
134. The MILC collaboration (C. Bernard, T. DeGrand, C. DeTar, S. Gottlieb, U. Heller, P. Lacey, K. Orginos, R. Sugar, and D. Toussaint), “Zero Temperature String Breaking in Lattice Quantum Chromodynamics,” Phys. Rev. D **64**, 074509 (2001) [hep-lat/0103012].
135. The MILC collaboration (C. Bernard, T. Burch, T. A. DeGrand, S. Datta, C. DeTar, S. Gottlieb, U. M. Heller, K. Orginos, R. Sugar and D. Toussaint), “The QCD spectrum with three quark flavors,” Phys. Rev. D **64** (2001) 054506 [hep-lat/0104002].
136. C. Bernard and V.M. Savage, “Numerical Simulations of \mathcal{PT} -Symmetric Quantum Field Theories,” Phys. Rev. D **64** (2001) 085010 [hep-lat/0106009].
137. The MILC collaboration (C. Bernard, P. Williams, S. Datta, S. Gottlieb, T. DeGrand, C. DeTar, U. M. Heller, C. McNeile, K. Orginos, R. Sugar and D. Toussaint), “Lattice results for the decay constant of heavy-light vector mesons,” Phys. Rev. D **65** (2001) 014510 [hep-lat/0109015].
138. C. Bernard, “Chiral Logs in the Presence of Staggered Flavor Symmetry Breaking,” Phys. Rev. D **65** (2002) 054031 [hep-lat/0111051].
139. The MILC collaboration (C. Bernard, T. Burch, S. Datta, T. DeGrand, C. DeTar, Steven Gottlieb, U.M. Heller, K. Orginos, R. Sugar, and D. Toussaint) “Heavy-light decay constants with three dynamical flavors,” Nucl. Phys. **B** (Proc. Suppl.) **106-107** (2002), 412 [hep-lat/0110072].
140. The MILC collaboration (C. Bernard, S. Datta, T. DeGrand, C. DeTar, S. Gottlieb, U.M. Heller, J. Hetrick, C. McNeile, K. Orginos, R. Sugar, and D. Toussaint) “Lattice Calculation of Heavy-Light Decay Constants with Two Flavors of Dynamical Quarks,” Phys. Rev. D **66** (2002) 094501 [hep-lat/0206016].
141. C. Bernard and T. DeGrand, “Calculation of Perturbative Scale for Static-light Lattice Currents,” “in preparation” *time has passed this one by, and it probably will not be completed.*
142. The MILC collaboration (C. Bernard, T. Burch, S. Datta, T. A. DeGrand, C. DeTar, S. Gottlieb, U. M. Heller, K. Orginos, R. Sugar and D. Toussaint), “Thermodynamics with 2+1 and 3 Flavors of Improved Staggered Quarks,” Nucl. Phys. **A702** (2002), 140 [hep-lat/0110030].

143. The MILC collaboration (C. Bernard, T. Burch, S. Datta, T. A. DeGrand, C. DeTar, S. Gottlieb, U. M. Heller, K. Orginos, R. Sugar and D. Toussaint), “Thermodynamics with 3 and 2+1 Flavors of Improved Staggered Quarks,” Nucl. Phys. **B** (Proc. Suppl.) **106-107** (2002), 429 [hep-lat/0110067].
144. C. Bernard, N. Christ, S. Gottlieb, K. Jansen, R. Kenway, T. Lippert, M. Lüscher, P. Mackenzie, F. Niedermayer, S. Sharpe, R. Tripiccione, A. Ukawa, and H. Wittig, “Panel Discussion on the Cost of Dynamical Quark Simulations,” Nucl. Phys. **B** (Proc. Suppl.) **106-107** (2002), 199.
145. The MILC collaboration (C. Bernard, T. Burch, T. DeGrand, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Osborn, R. Sugar and D. Toussaint), “Light hadron properties with improved staggered quarks,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003)257, [hep-lat/0208041].
146. The MILC collaboration (C. Aubin, C. Bernard, C. DeTar, Steven Gottlieb, Urs M. Heller, K. Orginos, R. Sugar and D. Toussaint), “Chiral logs with staggered fermions,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003), 233 [hep-lat/0209066].
147. The MILC collaboration (C. Bernard, T. Burch, T. DeGrand, C. DeTar, Steven Gottlieb, E.B. Gregory, A. Hasenfratz, U.M. Heller, J. Hetrick, J. Osborn, R. Sugar, and D. Toussaint), “Topological susceptibility with the improved Asqtad action,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003), 991 [hep-lat/0209050].
148. The MILC collaboration (C. Bernard, T. Burch, C. DeTar, Ziwen Fu, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Osborn, R. Sugar, and D. Toussaint), “Static hybrid quarkonium potential with improved staggered quarks,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003) [hep-lat/0209051].
149. The MILC collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Osborn, R. Sugar, and D. Toussaint), “High temperature QCD with three flavors of improved staggered quarks,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003), 523 [hep-lat/0209079].
150. C. Bernard, S. Hashimoto, D.B. Leinweber, G.P. Lepage, E. Pallante, S.R. Sharpe (chair) and Hartmut Wittig, “Panel discussion on chiral extrapolation of physical observables,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003), 170 [hep-lat/0209086].
151. The MILC collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Osborn, R. Sugar, and D. Toussaint), “Exotic hybrid mesons from improved Kogut-Susskind fermions,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003), 260 [hep-lat/0209097].
152. The MILC collaboration (C. Bernard, T. Burch, S. Datta, C. DeTar, Steven Gottlieb, E. Gregory, U.M. Heller, R. Sugar, and D. Toussaint), “Heavy-light meson decay constants with $N_f=3$,” Nucl. Phys. **B** (Proc. Suppl.) **119** (2003), 613 [hep-lat/0209163].

153. The MILC collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Osborn, R. Sugar, and D. Toussaint), “Lattice calculation of 1^{-+} hybrid mesons with improved Kogut-Susskind fermions,” *Phys. Rev. D* **68** (2003) 074505 [hep-lat/0301024].
154. The MILC collaboration (C. Bernard, T. Burch, T. DeGrand, C. DeTar, Steven Gottlieb, E.B. Gregory, A. Hasenfratz, U.M. Heller, J. Hetrick, J. Osborn, R. Sugar, and D. Toussaint), “A comparison of improved cooling and hypercubic smearing for topology on dynamical Asqtad lattices,” *Nucl. Phys. B* (Proc. Suppl.) **119** (2003), 769.
155. The HPQCD, UKQCD, MILC, and Fermilab Collaborations (C. T. H. Davies, E. Follana, A. Gray, G. P. Lepage, Q. Mason, M. Nobes, J. Shigemitsu, H. D. Trottier, M. Wingate, C. Aubin, C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E. B. Gregory, U. M. Heller, J. E. Hetrick, J. Osborn, R. Sugar, D. Toussaint, M. Di Pierro, A. El-Khadra, A. S. Kronfeld, P. B. Mackenzie, D. Menscher, and J. Simone), “High-Precision Lattice QCD Confronts Experiment,” *Phys. Rev. Lett.* **92** (2004) 022001 [hep-lat/0304004].
156. C. Aubin and C. Bernard, “Pion and Kaon Masses in Staggered Chiral Perturbation Theory,” *Phys. Rev. D* **68** (2003) 034014 [hep-lat/0304014].
157. C. Aubin and C. Bernard, “Pseudoscalar Decay Constants in Staggered Chiral Perturbation Theory,” *Phys. Rev. D* **68** (2003) 074011 [hep-lat/0306026].
158. The MILC Collaboration (C. Bernard, T. DeGrand, C. DeTar, Steven Gottlieb, E. Gregory, A. Hart, A. Hasenfratz, Urs Heller, J. Hetrick, J. Osborn, R. Sugar and D. Toussaint), “Topological susceptibility with the improved Asqtad action,” *Phys. Rev. D* **68** (2003) 114501 [hep-lat/0308019].
159. C. Aubin and C. Bernard, “Staggered Chiral Perturbation Theory,” *Nucl. Phys. B* (Proc. Suppl.) **129-130** (2004), 182 [hep-lat/0308036].
160. The MILC Collaboration (C. Bernard, C. DeTar, Steven Gottlieb, E. Gregory, Urs Heller, C. McNeile, J. Osborn, R. Sugar and D. Toussaint), “Quark Loop Effects in Semileptonic Form Factors for Heavy-Light Mesons,” *Nucl. Phys. B* (Proc. Suppl.) **129-130** (2004), 364 [hep-lat/0309055].
161. The MILC Collaboration (C. Aubin, C. Bernard, C. DeTar, Steven Gottlieb, E.B. Gregory, Urs M. Heller, J.E. Hetrick, J. Osborn, R. Sugar and D. Toussaint), “Pion and kaon physics with improved staggered quarks,” *Nucl. Phys. B* (Proc. Suppl.) **129-130** (2004), 227 [hep-lat/0309088].
162. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, Urs M. Heller, J. Osborn, R. Sugar and D. Toussaint), “Excited states in staggered meson propagators,” *Nucl. Phys. B* (Proc. Suppl.) **129-130** (2004), 230 [hep-lat/0309117].

163. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, Urs M. Heller, J.E. Hetrick, R. Sugar and D. Toussaint), “The phase diagram of high temperature QCD with three flavors of improved staggered quarks,” Nucl. Phys. **B** (Proc. Suppl.) **129-130** (2004), 626 [hep-lat/0309118].
164. The MILC Collaboration (C. Aubin, C. Bernard, C. DeTar, Steven Gottlieb, E.B. Gregory, Urs M. Heller, J.E. Hetrick, J. Osborn, R. Sugar and D. Toussaint), “Light hadrons with improved staggered quarks: approaching the continuum limit,” Phys. Rev. D **70**, 094505 (2004) [arXiv:hep-lat/0402030].
165. C. Bernard and V.M. Savage, “PT-Symmetric quantum field theories and the Langevin equation,” Czech.J.Phys.54:109-118,2004 (presented at *International Workshop on Pseudo-Hermitian Hamiltonians in Quantum Physics*, Prague, Czech Republic, 16-17 Jun 2003).
166. HPQCD, MILC, and UKQCD collaborations (C. Aubin, C. Bernard, C. Davies, C. DeTar, S. Gottlieb, A. Gray, E. Gregory, J. Hein, U. Heller, J. Hetrick, G. Lepage, Q. Mason, J. Osborn, R. Sugar, D. Toussaint), “First determination of the strange and light quark masses from full lattice QCD,” Phys. Rev. D **70**, 031504 (2004) (Rapid Communications) [hep-lat/0405022].
167. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Osborn, R. Sugar, D. Toussaint), “QCD Thermodynamics with Three Flavors of Improved Staggered Quarks,” Phys. Rev. D **71**, 034504 (2005) [hep-lat/0405029].
168. The MILC Collaboration (C. Aubin, C. Bernard, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J.E. Hetrick, J. Osborn, R. Sugar, D. Toussaint), “Light pseudoscalar decay constants, quark masses, and low energy constants from three-flavor lattice QCD,” Phys. Rev. D **70**, 114501 (2004) [hep-lat/0407028].
169. The Fermilab Lattice, MILC, and HPQCD Collaborations (C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, A. El-Khadra, Steven Gottlieb, E. B. Gregory, U. M. Heller, J. Hetrick, A. S. Kronfeld, P. B. Mackenzie, D. Menscher, M. Nobes, M. Okamoto, M. B. Oktay, J. Osborn, J. Simone, R. Sugar, D. Toussaint, H. D. Trottier) “Semileptonic decays of D mesons in three-flavor lattice QCD,” Phys. Rev. Lett. **94**, 011601 (2005) [hep-ph/0408306].
170. C. Aubin and C. Bernard, “Staggered chiral perturbation theory with heavy-light mesons,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 491 [hep-lat/0409027].
171. The MILC Collaboration (C. Aubin, C. Bernard, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J.E. Hetrick, J. Osborn, R.L. Sugar, D. Toussaint), “Results for light pseudoscalars from three-flavor simulations,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 231 [hep-lat/0409041].
172. The MILC Collaboration (C. Aubin, C. Bernard, Brian Billeter, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J.E. Hetrick, J. Osborn, R.L. Sugar, D. Toussaint),

- “Topological susceptibility with three flavors of staggered quarks,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 600 [hep-lat/0409051].
173. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, E.B. Gregory, U.M. Heller, J.E. Hetrick, J. Osborn, R.L. Sugar, D. Toussaint), “Three Flavor QCD at High Temperatures,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 538 [hep-lat/0409097].
174. The MILC collaboration (C. Bernard, T. Burch, S. Datta, C. DeTar, Steven Gottlieb, E. Gregory, U.M. Heller, R. Sugar, and D. Toussaint), “Heavy-light decay constants using clover valence quarks and three flavors of dynamical improved staggered quarks,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 449 [hep-lat/0410014].
175. The Fermilab Lattice, MILC, and HPQCD Collaborations (M. Okamoto, C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Hetrick, A.S. Kronfeld, P.B. Mackenzie, D.P. Menscher, M. Nobes, M.B. Oktay, J. Osborn, J.N. Simone, R. Sugar, D. Toussaint, H.D. Trottier), “Semileptonic $D \rightarrow \pi/K$ and $B \rightarrow \pi/D$ decays in 2+1 flavor lattice QCD,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 461 [hep-lat/0409116].
176. The Fermilab Lattice, MILC, and HPQCD Collaborations (J.N. Simone, C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, Steven Gottlieb, E.B. Gregory, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, P.B. Mackenzie, D.P. Menscher, M. Nobes, M. Okamoto, M.B. Oktay, J. Osborn, R.L. Sugar, D. Toussaint, H.D. Trottier), “Leptonic decay constants f_{D_s} and f_D in three flavor lattice QCD,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 443 [hep-lat/0410030].
177. The MILC Collaboration (C. Aubin, C. Bernard, Ph. de Forcrand, Steven Gottlieb, E.B. Gregory, Urs M. Heller, J.E. Hetrick, O. Jahn, J. Osborn, R. Sugar, and D. Toussaint), “The scaling dimension of low lying Dirac eigenmodes and of the topological charge density,” Nucl. Phys. **B** (Proc. Suppl.) **140** (2005) 626 [hep-lat/0410024].
178. C. Bernard, “Order of the Chiral and Continuum Limits in Staggered Chiral Perturbation Theory,” Phys. Rev. D **71**, 094020 (2005) [hep-lat/0412030].
179. O. Bär, C. Bernard, G. Rupak and N. Shoresh, “Chiral Perturbation Theory for Staggered Sea Quarks and Ginsparg-Wilson Valence Quarks,” Phys. Rev. D **72**, 054502 (2005) [hep-lat/0503009].
180. C. Bernard, S. Hashimoto and P. Mackenzie, “Lattice QCD and Systematic Errors,” in *The Discovery Potential of a Super B Factory* (J. Hewett and D. Hitlin, eds.), SLAC-R-709 (Dec., 2004), hep-ph/0503261.
181. The MILC Collaboration (C. Aubin, C. Bernard, C. DeTar, Steven Gottlieb, E.B. Gregory, Urs M. Heller, J.E. Hetrick, L. Levkova, F. Maresca, J. Osborn, D. Renner, R.L. Sugar and D. Toussaint). “Properties of light quarks from lattice QCD simulations,” Journal of Physics: Conference Series **16** (2005) 160 (*SciDAC 2005*, San Francisco, June 26-30, 2005).

182. The Fermilab Lattice, MILC, and HPQCD Collaborations (C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, E.D. Freeland, Steven Gottlieb, E.B. Gregory, U.M. Heller, J.E. Hetrick, A.X. El-Khadra, A.S. Kronfeld, L. Levkova, P.B. Mackenzie, F. Maresca, D. Menscher, M. Nobes, M. Okamoto, D. Renner, J.N. Simone, R.L. Sugar, D. Toussaint, H.D. Trottier), “Charmed meson decay constants in three flavor lattice QCD,” *Phys. Rev. Lett.* **95**, 122002 (2005) [hep-lat/0506030].
183. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, U. M. Heller, J. E. Hetrick, L. Levkova, F. Maresca, D. B. Renner, R. Sugar, D. Toussaint), “The Equation of State for QCD with 2+1 Flavors of Quarks,” *PoS LAT2005*, 156, (2005), hep-lat/0509053.
184. The MILC Collaboration (C. Bernard, C. DeTar, Steven Gottlieb, U.M. Heller, J.E. Hetrick, L. Levkova, F. Maresca, J. Osborn, D. Renner, R. Sugar, D. Toussaint), “Update on pi and K Physics,” *PoS LAT2005*, 025, (2005), hep-lat/0509137.
185. The Fermilab Lattice, MILC, and HPQCD Collaborations (A.S. Kronfeld, I.F. Allison, C. Aubin, C. Bernard, C.T.H. Davies, C. DeTar, M. Di Pierro, E.D. Freeland, Steven Gottlieb, A. Gray, E. Gregory, U.M. Heller, J.E. Hetrick, A.X. El-Khadra, L. Levkova, P.B. Mackenzie, F. Maresca, D. Menscher, M. Nobes, M. Okamoto, M.B. Oktay, J. Osborn, D. Renner, J.N. Simone, R. Sugar, D. Toussaint, H.D. Trottier) “Predictive Lattice QCD,” *PoS LAT2005*, 206 (2006) and *Int. J. Mod. Phys. A* **21**, 713 (2006) [arXiv:hep-lat/0509169].
186. The MILC Collaboration (C. Bernard, C. DeTar, Steven Gottlieb, U.M. Heller, J.E. Hetrick, L. Levkova, F. Maresca, D. Renner, R. Sugar, D. Toussaint), “The locality of the fourth root of staggered fermion determinant in the interacting case,” *PoS LAT2005*, 114, (2005), hep-lat/0509176.
187. Jon A. Bailey and C. Bernard, “Staggered Lattice Artifacts in 3-Flavor Heavy Baryon Chiral Perturbation Theory,” *PoS LAT2005*, 047, (2005), hep-lat/0510006.
188. C. Bernard, Ph. de Forcrand, Steven Gottlieb, U.M. Heller, J.E. Hetrick, O. Jahn, L. Levkova, F. Maresca, D.B. Renner, R. Sugar, D. Toussaint, “More evidence of localization in the low-lying Dirac spectrum,” *PoS LAT2005*, 299, (2005), hep-lat/0510025.
189. The Fermilab Lattice, MILC, and HPQCD Collaborations (P.B. Mackenzie, C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, Steven Gottlieb, E. Gregory, U.M. Heller, J.E. Hetrick, A.X. El-Khadra, A.S. Kronfeld, L. Levkova, F. Maresca, D. Menscher, M. Nobes, M. Okamoto, M.B. Oktay, J. Osborn, D. Renner, J.N. Simone, R. Sugar, D. Toussaint, H.D. Trottier) “B and D meson semileptonic decays in three flavor lattice QCD,” *PoS LAT2005*, 207, (2005).
190. C. Aubin and C. Bernard, “Staggered Chiral Perturbation Theory for Heavy-Light Mesons,” *Phys. Rev. D* **73**, 014515 (2006) [hep-lat/0510088].

191. C. Bernard, “Staggered Chiral Perturbation Theory and the Fourth-Root Trick,” *Phys. Rev. D* **73**, 114503 (2006) [hep-lat/0603011].
192. C. Bernard, M. Golterman, Y. Shamir and S. Sharpe, “Comment on ‘Chiral anomalies and rooted staggered fermions’,” *Phys. Lett.* **649B**, 235 (2007) [hep-lat/0603027].
193. C. Bernard, M. Golterman, and Y. Shamir, “Observations on staggered fermions at non-zero lattice spacing,” *Phys. Rev. D* **73**, 114511 (2006) [hep-lat/0604017].
194. The MILC Collaboration (C. Bernard, C. DeTar, Steven Gottlieb, U.M. Heller, J.E. Hetrick, L. Levkova, F. Maresca, J. Osborn, D. Renner, R. Sugar, D. Toussaint), “Update on the physics of light pseudoscalar mesons,” *PoS LAT2006*, 163, (2006), hep-lat/0609053.
195. C. Bernard, M. Golterman, and Y. Shamir, “Regularizing QCD with staggered fermions and the fourth root trick,” *PoS LAT2006*, 205, (2006), hep-lat/0610003.
196. C. Bernard, C. DeTar, Ziwen Fu, and S. Prelovsek, “Taste breaking effects in scalar meson correlators,” *PoS LAT2006*, 173, (2006) , hep-lat/0610031.
197. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, U.M. Heller, J.E. Hetrick, L. Levkova, D. Renner, R. Sugar, D. Toussaint), “The QCD equation of state with asqtad staggered fermions,” *PoS LAT2006*, 139, (2006), hep-lat/0610017.
198. The MILC Collaboration (C. Bernard, C. DeTar, Steven Gottlieb, U.M. Heller, J.E. Hetrick, L. Levkova, J. Osborn, D. Renner, R. Sugar, D. Toussaint), “Low energy constants from the MILC Collaboration,” in *Chiral Dynamics 2006*, proceedings of the fifth International Workshop on Chiral Dynamics, Theory and Experiment (M. Ahmed, H. Gao, B. Holstein, and H. Weller, eds.), World Scientific (2007) p. 275 [arXiv:hep-lat/0611024].
199. The MILC Collaboration (C. Bernard, T. Burch, C. DeTar, Steven Gottlieb, L. Levkova, U.M. Heller, J.E. Hetrick, R. Sugar, D. Toussaint) “QCD equation of state with 2+1 flavors of improved staggered quarks,” *Phys. Rev. D* **75**, 094505 (2007) [arXiv:hep-lat/0611031].
200. C. Aubin and C. Bernard, “Heavy-Light Semileptonic Decays in Staggered Chiral Perturbation Theory,” *Phys. Rev. D* **76**, 014002 (2007), arXiv:0704.0795[hep-lat].
201. C. Bernard, C. DeTar, Z. Fu, S. Prelovsek, “Scalar Meson Spectroscopy with Lattice Staggered Fermions,” *Phys. Rev. D* **76**, 094504 (2007), arXiv:0707.2402[hep-lat],
202. C. Bernard, M. Golterman and Y. Shamir, “Effective field theories for rooted staggered fermions,” *PoS LAT2007*, 263, (2007), arXiv:0709.2180[hep-lat].
203. The MILC Collaboration [C. Bernard, C. DeTar, S. Gottlieb, U. Heller, J. Hetrick, L. Levkova, J. Osborn, D. Renner, R. Sugar, D. Toussaint], “Status of the MILC light pseudoscalar meson project,” *PoS LAT2007*, 090, (2007), arXiv:0710.1118 [hep-lat].

204. The MILC Collaboration [C. Bernard, B. Billeter, C. DeTar, S. Gottlieb, U. Heller, J. Hetrick, L. Levkova, J. Osborn, D. Renner, R. Sugar, D. Toussaint], “The 2+1 flavor topological susceptibility from the asqtad action at 0.06 fm,” PoS **LAT2007**, 310, (2007), arXiv:0710.3124 [hep-lat].
205. The MILC Collaboration [C. Bernard, C. Davies, C. DeTar, S. Gottlieb, U. Heller, J. Hetrick, L. Levkova, J. Osborn, D. Renner, R. Sugar, D. Toussaint], “Baryon masses with improved staggered quarks,” PoS **LAT2007**, 137, (2007), arXiv:0711.0021 [hep-lat].
206. The MILC Collaboration [C. Bernard, C. DeTar, S. Gottlieb, U. Heller, J. Hetrick, L. Levkova, R. Sugar, D. Toussaint], “QCD thermodynamics with 2+1 flavors at nonzero chemical potential,” Phys. Rev. D **77**, 014503 (2008) [arXiv:0710.1330].
207. The MILC Collaboration [C. Bernard, T. Burch, C. DeTar, S. Gottlieb, U. Heller, J. Hetrick, L. Levkova, R. Sugar, D. Toussaint], “The equation of state with nonzero chemical potential for 2+1 flavors,” PoS **LAT2007**, 190, (2007), arXiv:0710.2520 [hep-lat].
208. The MILC Collaboration [C. Bernard, C. DeTar, Z. Fu, S. Gottlieb, U. Heller, J. Hetrick, L. Levkova, S. Prelovsek, R. Sugar, D. Toussaint], “Recent lattice results with light quarks at zero and nonzero temperature,” J. Phys. Conf. Ser. **69** (2007) 012029.
209. C. Bernard, M. Golterman, Y. Shamir and S. Sharpe “ ’t Hooft vertices, partial quenching, and rooted staggered QCD,” Phys. Rev. D **77**, 114504 (2008) [arXiv:0711.0696 [hep-lat]].
210. C. Bernard, M. Golterman, and Y. Shamir, “Effective field theories for QCD with rooted staggered fermions,” Phys. Rev. D **77**, 074505 (2008) [arXiv:0712.2560].
211. The Fermilab Lattice and MILC Collaborations [C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, D. Renner, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water] “The decay constants f_B and f_{D^*} from three-flavor lattice QCD,” PoS **LAT2007**, 370, (2007).
212. C. Bernard, M. Golterman, Y. Shamir, and S.R. Sharpe, “Reply to: ‘Comment on: “ ’t Hooft vertices, partial quenching, and rooted staggered QCD,” ’ ” Phys. Rev. D **78**, 078502 (2008) [arXiv:0808.2056].
213. The Fermilab Lattice and MILC Collaborations [C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M. Okamoto, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “The $B \rightarrow D^* \ell \nu$ form factor at zero recoil from three-flavor lattice QCD: A model independent determination of $|V_{cb}|$,” Phys. Rev. D **79**, 014506 (2009) [arXiv:0808.2519].

214. The MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, C. DeTar, W. Freeman, S. Gottlieb, U. Heller, J. Hetrick, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint], “QCD equation of state at nonzero chemical potential,” PoS **LAT2008**, 171 (2009).
215. The MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, T. Burch, C. DeTar, W. Freeman, S. Gottlieb, U. Heller, J. Hetrick, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint], “Electromagnetic splittings of hadrons from improved staggered quarks in full QCD,” PoS **LAT2008**, 127 (2009) [arXiv:0812.4486].
216. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, W. Freeman, S. Gottlieb, U. Heller, J. Hetrick, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint], “HISQ action in dynamical simulations,” PoS **LAT2008**, 033 (2009) [arXiv:0903.0874].
217. The Fermilab Lattice and MILC Collaborations [J. Bailey, C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M. Okamoto, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “The $B \rightarrow \pi \ell \nu$ semileptonic form factor from three-flavor lattice QCD: A model-independent determination of $|V_{ub}|$,” Phys. Rev. D **79**, 054507 (2009) [arXiv:0811.3640].
218. The Fermilab Lattice and MILC Collaborations [J. Bailey, C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “B and D meson decay constants,” PoS **LAT2008**, 278 (2009) [arXiv:0904.1895].
219. A. Bazavov, C. Bernard, C. DeTar, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, R. Sugar, D. Toussaint, R.S. Van de Water, “Nonperturbative QCD simulations with 2+1 flavors of improved staggered quarks,” Rev. Mod. Phys. **82**, 1349-1417 (2010) [arXiv:0903.3598].
220. The Fermilab Lattice and MILC Collaborations [C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M. Okamoto, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water] “Visualization of semileptonic form factors from lattice QCD,” Phys. Rev. D **80**, 034026 (2009) [arXiv:0906.2498].
221. The MILC Collaboration, [A. Bazavov, C. Bernard, C. DeTar, X. Du, W. Freeman, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “MILC results for light pseudoscalars,” PoS **CD09** (2009) 007 [arXiv:0910.2966].
222. The MILC Collaboration, [A. Bazavov, C. Bernard, C. DeTar, X. Du, W. Freeman, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, R.

- Sugar, D. Toussaint, R.S. Van de Water] “SU(2) chiral fits to light pseudoscalar masses and decay constants,” PoS(LAT2009), 077 (2009) [arXiv:0911.0472].
223. The MILC Collaboration, [A. Bazavov, C. Bernard, C. DeTar, X. Du, W. Freeman, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Results from MILC’s SU(3) chiral perturbation theory analysis,” PoS(LAT2009), 079 (2009) [arXiv:0910.3618].
224. The MILC Collaboration, [A. Bazavov, C. Bernard, C. DeTar, W. Freeman, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Progress on four flavor QCD with the HISQ action,” PoS(LAT2009), 123 (2009) [arXiv:0911.0869].
225. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “The Ds and D+ Leptonic Decay Constants from Lattice QCD,” PoS(LAT2009), 249 (2009) [arXiv:0912.5221].
226. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, M. Di Pierro, A.X. El-Khadra, E.D. Freeland, W. Freeman, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “Progress on charm semileptonic form factors from 2+1 flavor lattice QCD,” PoS(LAT2009), 250 (2009) [arXiv:0912.0214].
227. The Fermilab Lattice and MILC Collaborations [C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “Tuning Fermilab Heavy Quarks in 2+1 Flavor Lattice QCD with Application to Hyperfine Splittings,” Phys. Rev. D **83**, 034503 (2011) [arXiv:1003.1937].
228. The MILC collaboration [A. Bazavov, C. Bernard, B. Billeter, C. DeTar, S. Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M. Oktay, J. Osborn, R.L. Sugar, D. Toussaint, R.S. Van de Water], “Topological susceptibility with the asqtad action,” Phys. Rev. D **81**, 114501 (2010) [arXiv:1003.5695].
229. The MILC collaboration [A. Bazavov, C. Bernard, C. DeTar, W. Freeman, S. Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M. Oktay, J. Osborn, R.L. Sugar, D. Toussaint, R.S. Van de Water], “Scaling studies of QCD with the dynamical HISQ action,” Phys. Rev. D **82**, 074501 (2010) [arXiv:1004.0342].
230. C. Bernard and M. Golterman, “Transfer Matrix for Partially Quenched QCD,” PoS(LAT2010), 252 (2010) [arXiv:1011.0184].

231. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint and R.S. Van de Water], “ $B \rightarrow D^* \ell \nu$ at zero recoil: an update,” PoS(**LAT2010**), 311 (2010) [arXiv:1011.2166].
232. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint and R.S. Van de Water], “Semileptonic decays of K and D mesons in 2+1 flavor QCD,” PoS(**LAT2010**), 306 (2010) [arXiv:1011.2423].
233. C. Bernard and E. Freeland, “Electromagnetic Corrections in Staggered Chiral Perturbation Theory,” PoS(**LAT2010**), 084 (2010) [arXiv:1011.3994]
234. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, X. Du, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Results for light pseudoscalar mesons,” PoS(**LAT2010**), 074 (2010) [arXiv:1012.0868].
235. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Simulations with dynamical HISQ quarks,” PoS(**LAT2010**), 320 (2010) [arXiv:1012.1265].
236. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, X. Du, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Staggered chiral perturbation theory in the two-flavor case and SU(2) analysis of the MILC data,” PoS(**LAT2010**), 083 (2010) [arXiv:1011.1792].
237. The MILC Collaboration [A. Torok, S. Basak, A. Bazavov, C. Bernard, C. DeTar, E. Freeland, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M.B. Oktay, J. Osborn, Guochun Shi, R. Sugar, D. Toussaint, R.S. Van de Water] “Electromagnetic splitting of charged and neutral mesons,” PoS(**LAT2010**), 127 (2010).
238. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint and R.S. Van de Water], “The decay constants $f(D/s)$, $f(D^+)$, $f(B/s)$ and $f(B)$ from lattice QCD,” PoS(**LAT2010**), 317 (2010).
239. The Fermilab Lattice and MILC Collaborations [J. Bailey, C. Bernard, C.M. Bouchard, A.X. El-Khadra, E.D. Freeland, E. Gámiz, A.S. Kronfeld, J. Laiho, and R.S. Van de Water], “B Mixing in the Standard Model and Beyond: Lattice QCD,” Proceedings of the

19th Particles and Nuclei International Conference (PANIC11), Cambridge, MA, July 2011 [arXiv:1111.2968].

240. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Kim, J. Laiho, L. Levkova, M. Lightman, M. Oktay, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Properties of light pseudoscalars from lattice QCD with HISQ ensembles,” PoS(LAT2011), 107 (2012) [arXiv:1111.4314].

241. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E. Neil, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint and R.S. Van de Water], “ B - and D -meson decay constants from three-flavor lattice QCD,” Phys. Rev. D **85**, 114506 (2012) [arXiv:1112.3051].

242. The Fermilab Lattice and MILC Collaborations [E. Neil, J. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint and R.S. Van de Water], “ B - and D -meson decay constants from 2+1 improved staggered simulations,” PoS(LAT2011), 320 (2012), [arXiv:1112.3978].

243. The Fermilab Lattice and MILC Collaborations [C.M. Bouchard, E.D. Freeland, C. Bernard, A.X. El-Khadra, E. Gámiz, A.S. Kronfeld, J. Laiho, R.S. Van de Water], “Neutral B mixing from 2 + 1 flavor lattice-QCD: the Standard Model and beyond,” PoS(LAT2011), 274 (2012) [arXiv:1112.5642].

244. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, Y. Meurice, E. Neil, M.B. Oktay, S. Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “ $B_s \rightarrow D_s/B \rightarrow D$ Semileptonic Form-Factor Ratios and Their Application to $\text{BR}(B_s^0 \rightarrow \mu^+ \mu^-)$,” Phys. Rev. D **85**, 114502 (2012) [arXiv:1202.6346].

245. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans and E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water] “Neutral B -meson mixing from three-flavor lattice QCD: Determination of the SU(3)-breaking ratio ξ ,” Phys. Rev. D **86** (2012) 034503 [arXiv:1205.7013].

246. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, Y.

- Meurice, E. Neil, M.B. Oktay, S. Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Refining new-physics searches in $B \rightarrow D\tau\nu$ decay with lattice QCD,” Phys. Rev. Lett. **109** (2012) 071802 [arXiv:1206.4992]. (Selected as a “Physical Review Letters Editors’ Suggestion.”)
247. C. Bernard, “Staggered chiral perturbation theory for neutral B mixing,” PoS(LAT2012), 201 (2012) [arXiv:1211.0237].
248. J. Komijani and C. Bernard, “Staggered chiral perturbation theory for all-staggered heavy-light mesons,” PoS(LAT2012), 199 (2012) [arXiv:1211.0785].
249. The MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, C. DeTar, E. Freeland, W. Freeman, J. Foley, S. Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M. Oktay, J. Osborn, R.L. Sugar, A. Torok, D. Toussaint, R.S. Van de Water, R. Zhou], “Status of the MILC calculation of electromagnetic contributions to pseudoscalar masses,” PoS(LAT2012), 137 (2012) [arXiv:1210.8157].
250. The Fermilab Lattice and MILC Collaborations [E. Gamiz, J.A. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E. D. Freeland, Steven Gottlieb, U.M. Heller, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M.B. Oktay, Si-Wei Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Kaon semileptonic decay form factors with HISQ valence quarks,” PoS(LAT2012), 113 (2012) [arXiv:1211.0751].
251. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gamiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, M. Lightman, P.B. Mackenzie, E.T. Neil, M. Oktay, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Pseudoscalar meson physics with four dynamical quarks,” PoS(LAT2012), 159 (2012) [arXiv:1210.8431].
252. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gamiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, M. Lightman, P.B. Mackenzie, E.T. Neil, M. Oktay, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Two-point correlator fits on HISQ ensembles,” PoS(LAT2012), 158 (2012) [arXiv:1212.0613].
253. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Kim, J. Komijani, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water] “Lattice QCD ensembles with four flavors of highly improved staggered quarks,” Phys. Rev. D **87**, 054505 (2013) [arXiv:1212.4768].
254. The Fermilab Lattice and MILC Collaborations [J.A. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E. D. Freeland, E. Gámiz, Steven

- Gottlieb, U.M. Heller, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M.B. Oktay, Si-Wei Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Kaon semileptonic vector form factor and determination of $|V_{us}|$ using staggered fermions,” Phys. Rev. D **87**, 073012 (2013) [arXiv:1212.4993].
255. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, J. Foley, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou] “Towards a QCD equation of state with 2+1+1 flavors using the HISQ action,” PoS(LAT2012), 071 (2012).
256. The Fermilab Lattice and MILC Collaborations [E.D. Freeland, C.M. Bouchard, C. Bernard, A.X. El-Khadra, E. Gámiz, A.S. Kronfeld, J. Laiho, R.S. Van de Water], “Neutral B mixing from 2 + 1 flavor lattice-QCD,” PoS(LAT2012), 124 (2012) [arXiv:1212.5470].
257. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, J. Foley, W. Freeman, Steven Gottlieb, Urs M. Heller, J.E. Hetrick, J. Kim, J. Laiho, L. Levkova, M. Lightman, J. Osborn, S. Qiu, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou] “Leptonic decay-constant ratio f_{K^+}/f_{π^+} from lattice QCD with physical light quarks,” Phys. Rev. Lett. **110** (2013) 172003 [arXiv:1301.5855].
258. The MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, C. DeTar, E. Freeland, W. Freeman, J. Foley, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, M. Oktay, J. Osborn, R.L. Sugar, A. Torok, D. Toussaint, R.S. Van de Water, R. Zhou], “Electromagnetic contributions to pseudoscalar masses,” PoS(CD12), 030 (2012) [arXiv:1301.7137].
259. C. Bernard, “Neutral B mixing in staggered chiral perturbation theory,” Phys. Rev. D **87**, 114503 (2013) [arXiv:1303.0435].
260. C. Bernard and M. Golterman, “On the foundations of partially quenched chiral perturbation theory,” Phys. Rev. D **88**, 014004 (2013) [arXiv:1304.1948].
261. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gamiz, Steven Gottlieb, U.M. Heller, J. Kim, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M. Oktay, S. Qiu, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “The D_s , D^+ , B_s , and B^+ decay constants from 2 + 1 flavor lattice QCD,” PoS(LATTICE 2013), 394 (2014) [arXiv:1403.6796].
262. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gamiz, Steven Gottlieb, U.M. Heller, J. Kim, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M. Oktay, S. Qiu, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Charmed and strange pseudoscalar meson decay constants from HISQ simulations,” PoS(LATTICE 2013), 405 (2014), [arXiv:1312.0149].

263. C. Bernard and J. Komijani, “Chiral Perturbation Theory for All-Staggered Heavy-Light Mesons,” *Phys. Rev. D* **88**, 094017 (2013) [arXiv:1309.4533].
264. S. Aoki, Y. Aoki, C. Bernard, T. Blum, G. Colangelo, M. Della Morte, S. Durr, A. X. El Khadra, H. Fukaya, R. Horsley, T. Kaneko, A. Juttner, J. Laiho, L. Lellouch, H. Leutwyler, V. Lubicz, E. Lunghi, S. Necco, T. Onogi, C. Pena, C. T. Sachrajda, S. R. Sharpe, S. Simula, R. Sommer, R. S. Van de Water, A. Vladikas, U. Wenger, H. Wittig [FLAG Collaboration], “Review of lattice results concerning low energy particle physics,” *European Physics Journal C* **74**, 2890 (2014) [arXiv:1310.8555].
265. J. N. Butler, Z. Ligeti, J. L. Ritchie, V. Cirigliano, S. Kettell, R. Briere, A. A. Petrov and A. Schwartz *et al.*, “Report of the Quark Flavor Physics Working Group,” arXiv:1311.1076 [hep-ex].
266. The MILC Collaboration [A. Bazavov, C. Bernard, N. Brown, C. DeTar, J. Foley, Steven Gottlieb, U. M. Heller, J. E. Hetrick, J. Laiho, L. Levkova, M. Oktay, R. L. Sugar, D. Toussaint, R. S. Van de Water, R. Zhou], “Symanzik flow on HISQ ensembles,” *PoS(LATTICE 2013)*, 269 (2014), arXiv:1311.1474.
267. The Fermilab Lattice and MILC Collaborations [D. Du, J.A. Bailey, A. Bazavov, C. Bernard, A.X. El-Khadra, S. Gottlieb, R.D. Jain, A.S. Kronfeld, J. Laiho, Y. Liu, P.B. Mackenzie, Y. Meurice, R.S. Van de Water, R. Zhou], “ $B \rightarrow \pi \ell \nu$ and $B \rightarrow \pi \ell^+ \ell^-$ semileptonic form factors from unquenched lattice QCD,” *PoS(LATTICE 2013)*, 383 (2014), arXiv:1311.6552.
268. The Fermilab Lattice and MILC Collaborations [C.C. Chang, C. Bernard, C.M. Bouchard, A.X. El-Khadra, E.D. Freeland, E. Gamiz, A.S. Kronfeld, J. Laiho, R.S. van de Water], “Matrix Elements for D - and B -Mixing from 2+1 Flavor Lattice QCD,” *PoS(LATTICE 2013)*, 477 (2014) arXiv:1311.6820.
269. The Fermilab Lattice and MILC Collaborations [E. Gámiz, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, S. Gottlieb, U.M. Heller, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M.B. Oktay, S.-W. Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “K semileptonic form factor with HISQ fermions at the physical point,” *PoS(LATTICE 2013)*, 395 (2014), arXiv:1311.7264.
270. C. Bernard, J. Bijnens, and E. Gámiz, “Semileptonic kaon decay in staggered chiral perturbation theory,” *Phys. Rev. D* **89**, 054510 (2014) [arXiv:1311.7511 [hep-lat]].
271. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, J. Kim, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M.B. Oktay, S.-W. Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Determination of $|V_{us}|$ from a lattice-QCD calculation of the $K \rightarrow \pi \ell \nu$ semileptonic form factor with

physical quark masses,” Phys. Rev. Lett. **112**, 112001 (2014) [arXiv:1312.1228 [hep-ph]]. (Selected as a “Physical Review Letters Editors’ Suggestion.”)

272. The Fermilab Lattice and MILC Collaborations [Y. Liu, R. Zhou, J.A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, R.D. Jain, J. Kim, A.S. Kronfeld, J. Laiho L. Levkova, P.B. Mackenzie, Y. Meurice, D. Mohler, E.T. Neil, M.B. Oktay, S-W. Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “Heavy-meson semileptonic decays for the Standard Model and beyond,” PoS(LATTICE 2013), 386 (2014), arXiv:1312.3197.

273. The MILC Collaboration [A. Bazavov, C. Bernard, C. DeTar, J. Foley, S. Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, J. Osborn, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Update on the 2+1+1 flavor QCD equation of state with HISQ,” PoS(LATTICE 2013), 154 (2014), arXiv:1312.5011.

274. The Fermilab Lattice and MILC Collaborations [J. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, S. Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, S.-W. Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Update of $|V_{cb}|$ from the $\bar{B} \rightarrow D^* \ell \bar{\nu}$ form factor at zero recoil with three-flavor lattice QCD,” Phys. Rev. D **89** (2014) 114504 [arXiv:1403.0635].

275. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Kim, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Charmed and light pseudoscalar meson decay constants from four-flavor lattice QCD with physical light quarks,” Phys. Rev. D **90** (2014) 074509 [arXiv:1407.3772]

276. The MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, C. DeTar, E. Freeland, J. Foley, Steven Gottlieb, U.M. Heller, J. Komijani, J. Laiho, L. Levkova, J. Osborn, R.L. Sugar, A. Torok, D. Toussaint, R.S. Van de Water, R. Zhou], “Finite-volume effects and the electromagnetic contributions to kaon and pion masses,” PoS(LATTICE 2014), 116 (2015) [arXiv:1409.7139].

277. The MILC Collaboration [A. Bazavov, C. Bernard, N. Brown, C. DeTar, J. Foley, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Komijani, J. Laiho, L. Levkova, M. Oktay, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Gradient Flow Analysis on MILC HISQ Ensembles,” PoS(LATTICE 2014), 090 (2015) [arXiv:1411.0068].

278. The Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Kim, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Charmed and light

pseudoscalar meson decay constants from HISQ simulations,” PoS(LATTICE 2014), 382 (2015) [arXiv:1411.2667].

279. The Fermilab Lattice and MILC Collaborations [J.A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, L. Levkova, Yuzhi Liu, P.B. Mackenzie, Y. Meurice, E.T. Neil, S. Qui, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “ $B \rightarrow \pi \ell \nu$ semileptonic form factors from unquenched lattice QCD and determination of $|V_{ub}|$,” PoS(LATTICE 2014), 385 (2015) [arXiv:1411.6038].

280. The Fermilab Lattice and MILC Collaborations [C.C. Chang, C. Bernard, C.M. Bouchard, A.X. El-Khadra, E.D. Freeland, E. Gámiz, A.K. Kronfeld, J. Laiho, R.S. Van de Water], “Update on a short-distance D^0 -meson mixing calculation with $N_f = 2 + 1$ flavors,” PoS(LATTICE 2014), 384 (2015) [arXiv:1411.6086].

280. The Fermilab Lattice and MILC Collaborations [C.M. Bouchard, E.D. Freeland, C. Bernard, C.C. Chang, A.X. El-Khadra, M.E. Gámiz, A.S. Kronfeld, J. Laiho, R.S. Van de Water], “Neutral B-meson mixing parameters in and beyond the SM with 2+1 flavor lattice QCD,” PoS(LATTICE 2014), 378 (2015) [arXiv:1412.5097].

281. MILC Collaboration [A. Bazavov, C. Bernard, N. Brown, C. DeTar, J. Foley, S. Gottlieb, U.M. Heller, J. Komijani, J. Laiho, L. Levkova, R.L. Sugar, D. Toussaint, R.S. Van de Water], “Gradient flow and scale setting on MILC HISQ ensembles,” Phys. Rev. D **93**, no. 9, 094510 (2016) doi:10.1103/PhysRevD.93.094510 [arXiv:1503.02769 [hep-lat]].

282. The Fermilab Lattice and MILC Collaborations [J.A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, S. Qui, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “The $B \rightarrow D \ell \nu$ form factors at nonzero recoil and $|V_{cb}|$ from 2 + 1-flavor lattice QCD,” Phys. Rev. D **92**, 034506 (2015) [arXiv:1503.07237].

283. The Fermilab Lattice and MILC Collaborations [J.A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, Y. Liu, P.B. Mackenzie, Y. Meurice, E.T. Neil, S. Qui, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “ $|V_{ub}|$ from $B \rightarrow \pi \ell \nu$ decays and (2+1)-flavor lattice QCD,” Phys. Rev. D **92**, 014024 (2015) [arXiv:1503.07839].

284. The Fermilab Lattice and MILC Collaborations [J.A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, L. Levkova, Y. Liu, E. Lunghi, P.B. Mackenzie, Y. Meurice, E.T. Neil, S. Qui, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “ $B \rightarrow \pi \ell \ell$ form factors for new-physics searches from lattice QCD,” Phys. Rev. Lett. **115**, 152002 (2015) [arXiv:1507.01618].

285. The Fermilab Lattice and MILC Collaborations [J.A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, D. Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, R.D. Jain, J. Komijami, A.S. Kronfeld, J. Laiho, L. Levkova, Y. Liu, E. Lunghi, P.B. Mackenzie, Y. Meurice, E.T. Neil, S. Qui, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “ $B \rightarrow Kl^{+l^{-}}$ decay form factors from three-flavor lattice QCD,” *Phys. Rev. D* **93**, no. 2, 025026 (2016) [arXiv:1509.06235].
285. C. Bernard, “Effective Field Theories and Lattice QCD,” *PoS* **CD15**, 004 (2016) [arXiv:1510.02180].
286. Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. Bouchard, N. Brown, C. DeTar, D. Du, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, L. Levkova, P.B. Mackenzie, C. Monahan, T. Primer, Heechang Na, E.T. Neil, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and R. Zhou], “Decay constants f_B and f_{B_s} from HISQ simulations,” arXiv:1511.02294, *PoS(LATTICE 2015)*, 331 (2016).
287. Fermilab Lattice and MILC Collaborations [T. Primer, C. Bernard, C. DeTar, A.X. El-Khadra, E. Gámiz, J. Komijani, A.S. Kronfeld, J.N. Simone, D. Toussaint, R.S. Van de Water], “ D -meson semileptonic form factors at zero momentum transfer in $(2+1+1)$ -flavor lattice QCD,” arXiv:1511.04000, *PoS(LATTICE 2015)*, 338 (2016).
288. MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, C. DeTar, E. Freeland, J. Foley, Steven Gottlieb, U.M. Heller, J. Laiho, L. Levkova, J. Osborn, R.L. Sugar, A. Torok, D. Toussaint, R.S. Van de Water, R. Zhou], “Electromagnetic effects on the light pseudoscalar mesons and determination of m_u/m_d ,” *PoS(LATTICE 2015)*, 259 (2016) [arXiv:1606.01228].
289. Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C.M. Bouchard, C.C. Chang, C. DeTar, D. Du, A.X. El-Khadra, E.D. Freeland, E. Gamiz, S. Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “ $B_{(s)}^0$ -mixing matrix elements from lattice QCD for the Standard Model and beyond,” *Phys. Rev. D* **93**, no. 11, 113016 (2016) doi:10.1103/PhysRevD.93.113016 [arXiv:1602.03560].
290. FLAG Collaboration [S. Aoki, Y. Aoki, D. Becirevic, C. Bernard, T. Blum, G. Colangelo, M. Della Morte, P. Dimopoulos, S. Dürr, H. Fukaya, M. Golterman, Steven Gottlieb, S. Hashimoto, U. M. Heller, R. Horsley, A. Jüttner, T. Kaneko, L. Lellouch, H. Leutwyler, C.-J. D. Lin, V. Lubicz, E. Lunghi, R. Mawhinney, T. Onogi, C. Pena, C. T. Sachrajda, S. R. Sharpe, S. Simula, R. Sommer, A. Vladikas, U. Wenger, H. Wittig], “Review of lattice results concerning low-energy particle physics,” *Eur. Phys. J. C* **77**, no. 2, 112 (2017) doi:10.1140/epjc/s10052-016-4509-7 [arXiv:1607.00299 [hep-lat]].
291. C. Bernard and D. Toussaint, “Non-equilibration of topological charge and its effects,” arXiv:1611.04522, *PoS(LATTICE 2016)*, 189 (2017).

292. Fermilab Lattice and MILC Collaborations [E. Gámiz, A. Bazavov, C. Bernard, C. DeTar, D. Du, A.X. El-Khadra, E. D. Freeland, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, T. Primer, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou] “Kaon semileptonic decays with $N_f = 2+1+1$ HISQ fermions and physical light-quark masses,” arXiv:1611.04118, PoS(**LATTICE 2016**), 286 (2017).
293. Fermilab Lattice and MILC Collaborations [T. Primer, A. Bazavov, C. Bernard, C. DeTar, D. Du, A.X. El-Khadra, E. D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou] “D meson semileptonic form factors with HISQ valence and sea quarks,” PoS(**LATTICE 2016**), 305 (2017).
294. Fermilab Lattice, MILC and TUMQCD Collaborations [J. Komijani, A. Bazavov, C. Bernard, N. Brambilla, N. Brown, C. DeTar, D. Du, A.X. El-Khadra, E. D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, C. Monahan, H. Na, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, A. Vairo, R.S. Van de Water, R. Zhou] “Decay constants f_B and f_{B_s} and quark masses m_b and m_c from HISQ simulations,” PoS(**LATTICE 2016**), 294 (2017).
295. C. Bernard, J. Bijnens, E. Gámiz, and J. Relefors, “Twisted finite-volume corrections to K_{l3} decays with partially-quenched and rooted-staggered quarks,” J. High Energ. Phys. 2017, 120 (2017), doi:10.1007/JHEP03(2017)120 [arXiv:1702.03416 [hep-lat]],
296. Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C.M. Bouchard, C.C. Chang, C. DeTar, D. Du, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, R. Zhou], “Short-distance matrix elements for D^0 -meson mixing for $N_f = 2 + 1$,” aev. D **97**, 034513 (2018) [arXiv:1706.04622].
297. C. Bernard and D. Toussaint (the MILC Collaboration), “Effects of non-equilibrated topological charge distributions on pseudoscalar meson masses and decay constants,” Phys. Rev. D **97**, no. 7, 074502 (2018) doi:10.1103/PhysRevD.97.074502 [arXiv:1707.05430 [hep-lat]].
298. Fermilab Lattice and MILC Collaborations [Z. Gelzer, C. Bernard, C. DeTar, A.X. El-Khadra, E. Gámiz, Steven Gottlieb, A.S. Kronfeld, Y. Liu, Y. Meurice, J.N. Simone, D. Toussaint, R.S. Van de Water, R. Zhou], “Semileptonic B-meson decays to light pseudoscalar mesons on the HISQ ensembles,” EPJ Web Conf. 175 (**LATTICE 2017**) 13024 (2018) [arXiv:1710.09442].
299. Fermilab Lattice and MILC Collaborations [Yuzhi Liu, Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Z. Gelzer, Steven Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, Y.

Meurice, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, Ran Zhou], “ $B_s \rightarrow K\ell\nu$ form factors with 2+1 flavors,” EPJ Web Conf. 175 (**LATTICE 2017**) 13008 (2018) [arXiv:1711.08085].

300. Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, N. Brown, C. DeTar, A.X. El-Khadra, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water], “ B - and D -meson leptonic decay constants from four-flavor lattice QCD,” Phys. Rev. D **98**, 074512 (2018) doi:10.1103/PhysRevD.98.074512 [arXiv:1712.09262].

301. Fermilab Lattice, MILC and TUMQCD Collaborations [A. Bazavov, C. Bernard, N. Brambilla, N. Brown, C. DeTar, A.X. El-Khadra, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, A. Vairo, R.S. Van de Water], “Up-, down-, strange-, charm-, and bottom-quark masses from four-flavor lattice QCD,” Phys. Rev. D **98**, no. 5, 054517 (2018) doi:10.1103/PhysRevD.98.054517 [arXiv:1802.04248].

302. MILC Collaboration [S. Basak, A. Bazavov, C. Bernard, C. DeTar, E. Freeland, Steven Gottlieb, U.M. Heller, J. Laiho, L. Levkova, J. Osborn, R.L. Sugar, A. Torok, D. Toussaint, R.S. Van de Water, R. Zhou], “Lattice computation of the electromagnetic contributions to kaon and pion masses,” Phys. Rev. D **99**, no. 3, 034503 (2019) doi:10.1103/PhysRevD.99.034503 [arXiv:1807.05556].

303. Fermilab Lattice, and MILC Collaborations [A. Bazavov, C. Bernard, C. DeTar, D. Du, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, T. Primer, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, Ran Zhou], “ $|V_{us}|$ from $K_{\ell 3}$ decay and four-flavor lattice QCD,” Phys. Rev. D **99**, no. 11, 114509 (2019) [arXiv:1809.02827].

304. Fermilab Lattice, MILC and TUMQCD Collaborations [A. Bazavov, C. Bernard, N. Brambilla, N. Brown, C. DeTar, A.X. El-Khadra, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S. Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, A. Vairo, R.S. Van de Water], “ B - and D -meson leptonic decay constants and quark masses from four-flavor lattice QCD,” 13th Conference on Intersections of Particle and Nuclear Physics), CIPANP2018-DeTar [arXiv:1810.00250]

305. Fermilab Lattice and MILC Collaborations [A. Bazavov, C. Bernard, C. DeTar, D. Du, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Z. Gelzer, Steven Gottlieb, U.M. Heller, A.S. Kronfeld, J. Laiho, Yuzhi Liu, P.B. Mackenzie, Y. Meurice, E.T. Neil, J.N. Simone, D. Toussaint, R.S. Van de Water, Ran Zhou], “ $B_s \rightarrow K\ell\nu$ decay from lattice QCD,” Phys. Rev. D **100**, no.3, 034501 (2019) doi:10.1103/PhysRevD.100.034501 [arXiv:1901.02561].

306. Fermilab Lattice and MILC Collaborations [Ruizi Li, A. Bazavov, C. Bernard, C. DeTar, D. Du, A.X. El-Khadra, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, A.S.

Kronfeld, J. Laiho, P.B. Mackenzie, E.T. Ne/gravil, T. Primer, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, Ran Zhou], “ D meson semileptonic form factors and $q^2 = 0$,” PoS(LATTICE 2018), 269 (2019) [arXiv:1901.08989].

307. A. Bazavov, C. Bernard, C. DeTar, A.X. El-Khadra, E. Gámiz, Steven Gottlieb, A.V. Grebe, U.M. Heller, W.I. Jay, A.S. Kronfeld, Y. Lin, “Update on the gradient flow scale on the 2+1+1 HISQ ensembles,” presented at *Lattice 2023*, Fermi National Accelerator Laboratory, July 31-Aug. 4, 2023, to be published [arXiv:2401.06522].