Publications

Andreas S. Kronfeld, Scientist II
Theoretical Physics Department, Fermilab

Refereed Papers

64. Physics at the e^+e^- linear collider, FERMILAB-PUB-15/132-T, arXiv:1504.01726 [hep-ph]; with G. Moortgat-Pick, H. Baer, M. Battaglia, G. Belanger, K. Fujii, J. Kalinowski, S. Heinemeyer, Y. Kiyo, K. Olive, F. Simon, P. Uwer, D. Wackeroth, P.M. Zerwas; A. Arbey, M. Asano, P. Bechtle, A. Bharucha, J. Brau, F. Brummer, S.Y. Choi, A. Denner, K. Desch, S. Dittmaier, U. Ellwanger, C. Englert, A. Freitas, I. Ginzburg, S. Godfrey, N. Greiner, C. Grojean, M. Grünewald, J. Heisig, A. Höcker, S. Kanemura, K. Kawagoe, R. Kogler, M. Krawczyk, J. Kroseberg, S. Liebler, J. List, F. Mahmoudi, Y. Mambrini, S. Matsumoto, J. Mnich, K. Mönig, M.M. Mühlleitner, R. Pöschl, W. Porod, S. Porto, K. Rolbiecki, M. Schmitt, P. Serpico, M. Stanitzki, O. Stål, T. Stefaniak, D. Stöckinger, G. Weiglein, G.W. Wilson, L. Zeune, F. Moortgat, and S. Xella.

63. $|V_{ub}|$ from $B \to \pi\ell\nu$ decays and (2+1)-flavor lattice QCD, FERMILAB-PUB-15/108-T, arXiv:1503.07839 [hep-lat]; with Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, J. Laiho, L. Levkova, Yuzhi Liu, P.B. Mackenzie, Y. Meurice, E.T. Neil, Si-Wei Qiu, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

62. The $B \to D\ell\nu$ form factors at nonzero recoil and $|V_{cb}|$ from $2+1$-flavor lattice QCD, FERMILAB-PUB-15/107-T, arXiv:1503.07237 [hep-lat]; with Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Komijani, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, Si-Wei Qiu, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

61. Charmed and light pseudoscalar meson decay constants with four flavors of HISQ quarks, *Phys. Rev. D* **90**, 074509 (2014); with 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, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, and R. Zhou.

60. QCD and strongly coupled gauge theories: challenges and perspectives, *Eur. Phys. J. C* **74** 2981 (2014); edited by N. Brambilla, S. Eidelman, P. Foka, S. Gardner, A.S. Kronfeld; with M.G. Alford, R. Alkofer, M. Butenschoen, T.D. Cohen, J. Erdmenger, L. Fabbietti, M. Faber, J.L. Goity, B. Ketzer, H.W. Lin, Felipe J. Llanes-Estrada, H.B. Meyer, P. Pakhlov, E. Pallante, M.I. Polikarpov, H. Sazdjian, A. Schmitt, W.M. Snow, A. Vairo, R. Vogt, A. Vuorinen, H. Wittig, P. Arnold, P. Christakoglou, P. Di Nezza, Z. Fodor, X. Garcia i Tormo, R. Höllwieser, M.A. Janik, A. Kalweit, D. Keane, E. Kiritsis, A. Mischke, R. Mizuk, G. Odyniec, K. Papadodimas, A. Pich, R. Pittau, J.-W. Qiu, G. Ricciardi, C.A. Salgado, K. Schwenzer, N.G. Stefanis, G.M. von Hippel, and V.I. Zakharov.

59. Update of $|V_{cb}|$ from the $\bar{B} \to D^*\ell\bar{\nu}$ form factor at zero recoil with three-flavor lattice QCD, *Phys. Rev. D* **89**, 114504 (2014); with Jon A. Bailey, A. Bazavov, C. Bernard, C. M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, Si-Wei Qiu, J. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

58. Determination of $|V_{us}|$ from a lattice-QCD calculation of the $K \to \pi \ell \nu$ semileptonic form factor with physical quark masses, *Phys. Rev. Lett.* **112**, 112001 (2014); with 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, 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, and Ran Zhou.

57. Kaon semileptonic vector form factor and determination of $|V_{us}|$ using staggered fermions, *Phys. Rev. D* **87**, 073012 (2013); with A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, Jongjeong Kim, 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, and Ran Zhou.

56. Refining new-physics searches in $B \to D\tau\nu$ decay with lattice QCD, *Phys. Rev. Lett.* **109**, 071802 (2012); with Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, Jongjeong Kim, J. Laiho, L. Levkova, P.B. Mackenzie, Y. Meurice, E. T. Neil, M.B. Oktay, Si-Wei Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

55. Neutral B-meson mixing from three-flavor lattice QCD: Determination of the SU(3)-breaking ratio ξ, *Phys. Rev. D* **86**, 034503 (2012); with A. Bazavov, C. Bernard, C.M. Bouchard, 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, R. Jain, 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.

54. $B_s \to D_s/B \to D$ semileptonic form-factor ratios and their application to $\mathrm{BR}(B_s \to \mu^+\mu^-)$, *Phys. Rev. D* **85**, 114502 (2012); with Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, Jongjeong Kim, J. Laiho, L. Levkova, P.B. Mackenzie, Y. Meurice, E. Neil, M.B. Oktay, Si-Wei Qiu, J.N. Simone, R. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

53. B- and D-meson decay constants from three-flavor lattice QCD, *Phys. Rev. D* **85**, 114506 (2012); with A. Bazavov, C. Bernard, C. M. Bouchard, 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, R. Jain, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

52. Staggered fermions, zero modes, and flavor-singlet mesons, *Phys. Rev. D* **84**, 054504 (2011); Gordon C. Donald, Christine T.H. Davies, and Eduardo Follana.

51. Tuning Fermilab heavy quarks in 2+1 flavor lattice QCD with application to hyperfine splittings, *Phys. Rev. D* **83**, 034503 (2011); with 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, J. Laiho, L. Levkova, P.B. Mackenzie, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

50. Quarkonium mass splittings in three-flavor lattice QCD, *Phys. Rev. D* **81**, 034508 (2010); with T. Burch, C. DeTar, M. Di Pierro, A.X. El-Khadra, E.D. Freeland, Steven Gottlieb, L. Levkova, P.B. Mackenzie, and J.N. Simone.

49. Visualization of semileptonic form factors from lattice QCD, *Phys. Rev. D* **80**, 034026 (2009); with 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, J. Laiho, L. Levkova, P.B. Mackenzie, M. Okamoto, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

48. The $B \to \pi l \nu$ semileptonic form factor from three-flavor lattice QCD: A model independent determination of $|V_{ub}|$, *Phys. Rev. D* **79**, 054507 (2009); with J. Bailey, 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, J. Laiho, L. Levkova, P.B. Mackenzie, M. Okamoto, J. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

47. The $B \to D^* l \nu$ form factor at zero recoil from three-flavor lattice QCD: A model independent determination of $|V_{cb}|$, *Phys. Rev. D* **79**, 014506 (2009); with 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, J. Laiho, L. Levkova, P.B. Mackenzie, M. Okamoto, J. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

46. New lattice action for heavy quarks, *Phys. Rev. D* **78**, 014504 (2008); with Mehmet B. Oktay.

45. Accumulating evidence for nonstandard leptonic decays of D_s mesons, *Phys. Rev. Lett.* **100**, 241802 (2008); with Bogdan A. Dobrescu.

44. Charmed-meson decay constants in three-flavor lattice QCD, *Phys. Rev. Lett.* **95**, 122002 (2005); with C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, E.D. Freeland, Steven Gottlieb, U.M. Heller, J.E. Hetrick, A.X. El-Khadra, L. Levkova, P.B. Mackenzie, D. Menscher, F. Maresca, M. Nobes, M. Okamoto, D. Renner, J. Simone, R. Sugar, D. Toussaint, and H.D. Trottier.

43. Mass of the B_c meson in three-flavor lattice QCD, *Phys. Rev. Lett.* **94**, 172001 (2005); with I.F. Allison, C.T.H. Davies, A. Gray, P.B. Mackenzie, and J.N. Simone.

42. Semileptonic decays of D mesons in three-flavor lattice QCD, *Phys. Rev. Lett.* **94**, 011601 (2005); with C. Aubin, C. Bernard, C. DeTar, M. Di Pierro, A. El-Khadra, Steven Gottlieb, E.B. Gregory, U.M. Heller, J. Hetrick, P.B. Mackenzie, D. Menscher, M. Nobes, M. Okamoto, M.B. Oktay, J. Osborn, J. Simone, R. Sugar, D. Toussaint, H.D. Trottier.

41. High precision lattice QCD confronts experiment, *Phys. Rev. Lett.* **92**, 022001 (2004); with 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, P.B. Mackenzie, D. Menscher, and J. Simone.

40. Perturbative calculation of $O(a)$ improvement coefficients, *Phys. Rev. D* **67**, 014503 (2003); with Junpei Harada, Shoji Hashimoto, and Tetsuya Onogi.

39. Remark on the theoretical uncertainty in B^0-$\bar{B}^0$ mixing, *Phys. Lett. B* **543**, 59 (2002); with Sinéad M. Ryan.

38. Application of HQET to lattice QCD III: radiative corrections for heavy-heavy currents, *Phys. Rev. D* **65**, 094514 (2002); with Junpei Harada, Shoji Hashimoto, and Tetsuya Onogi.

37. Application of HQET to lattice QCD II: radiative corrections for heavy-light currents, *Phys. Rev. D* **65**, 094513 (2002); with Junpei Harada, Shoji Hashimoto, Ken-Ichi Ishikawa, Tetsuya Onogi, and Norikazu Yamada.

36. Lattice calculation of the zero-recoil form factor of $\bar{B} \to D^* l \bar{\nu}$: toward a model independent determination of $|V_{cb}|$, *Phys. Rev. D* **66**, 014503 (2002); with Shoji Hashimoto, Paul B. Mackenzie, Sinéad M. Ryan, and James N. Simone.

35. $O(a)$ improved quark action on anisotropic lattices and perturbative renormalization of heavy-light currents, *Phys. Rev. D* **64**, 074501 (2001); with Junpei Harada, Hideo Matsufuru, Noriaki Nakajima, and Tetsuya Onogi.

34. The semileptonic decays $B \to \pi l \nu$ and $D \to \pi l \nu$ from lattice QCD, *Phys. Rev. D* **64**, 014502 (2001); with Aida X. El-Khadra, Paul B. Mackenzie, Sinéad M. Ryan, and James N. Simone.

33. Computation of $\bar{\Lambda}$ and λ_1 with lattice QCD, *Phys. Lett. B* **490**, 228 (2000); with James N. Simone.

32. Application of HQET to lattice QCD I: power corrections, *Phys. Rev. D* **62**, 014505 (2000).

31. Lattice QCD calculation of $\bar{B} \to Dl\nu$ decay form factors at zero recoil, *Phys. Rev. D* **61**, 014502 (2000); with Shoji Hashimoto, Aida X. El-Khadra, Paul B. Mackenzie, Sinéad M. Ryan, and James N. Simone.

30. Perturbative pole mass in QCD, *Phys. Rev. D* **58**, 051501 (1998).

29. Self energy of massive lattice fermions, *Phys. Rev. D* **58**, 034505 (1998); with Bartholomeus P.G. Mertens and Aida X. El-Khadra.

28. *B* and *D* meson decay constants in lattice QCD, *Phys. Rev. D* **58**, 014506 (1998); with Aida X. El-Khadra, Paul B. Mackenzie, Sinéad M. Ryan, and James N. Simone.

27. The light quark masses from lattice gauge theory, *Phys. Rev. Lett.* **79**, 1622 (1997); with Brian J. Gough, George M. Hockney, Aida X. El-Khadra, Paul B. Mackenzie, Bart P. Mertens, Tetsuya Onogi, and James N. Simone.

26. Massive fermions in lattice gauge theory, *Phys. Rev. D* **55**, 3933 (1997); with Aida X. El-Khadra and Paul B. Mackenzie.

25. SU(N) gauge theories with C-periodic boundary conditions II: small volume dynamics, *Nucl. Phys. B* **401**, 190 (1993); with U.-J. Wiese.

24. Continuum gauge fields from lattice gauge fields, *Nucl. Phys. B* **404**, 839 (1993); with M. Göckeler, G. Schierholz, and U.-J. Wiese.

23. A determination of the strong coupling constant from the charmonium spectrum, *Phys. Rev. Lett.* **69**, 729 (1992); with Aida X. El-Khadra, George Hockney, and Paul B. Mackenzie.

22. Nucleon Compton scattering in perturbative QCD, *Phys. Rev. D* **44**, 3445 (1991); with B. Nižić.

21. SU(N) gauge theories with C-periodic boundary conditions I: topological structure, *Nucl. Phys. B* **357**, 512 (1991); with U.-J. Wiese.

20. Critical signal-to-noise ratio and glueball mass calculations, *Nucl. Phys. B* **345**, 709 (1990); with F. Brandstaeter and G. Schierholz.

19. Fourier acceleration III: updating field configurations, *Phys. Rev. D* **41**, 1953 (1990); with C.T.H. Davies, G.G. Batrouni, G.R. Katz, G.P. Lepage, K.G. Wilson, P. Rossi, and B. Svetitsky.

18. Can the topological susceptibility be calculated from SU(N) lattice gauge theories? *Phys. Lett. B* **233**, 192 (1989); with M. Göckeler, M.L. Laursen, G. Schierholz, and U.-J. Wiese.

17. A vectorized code for the computation of the topological charge in SU(2) lattice gauge theory, *Comput. Phys. Commun.* **54**, 109 (1989); with M.L. Laursen, G. Schierholz, C. Schleiermacher, and U.-J. Wiese.

16. The θ-vacuum in SU(2) lattice gauge theory, *Nucl. Phys. B* **305 [FS23]**, 661 (1988); with M.L. Laursen, G. Schierholz, C. Schleiermacher, and U.-J. Wiese.

15. The SU(3) topological susceptibility as a probe of scaling, *Phys. Lett. B* **209**, 315 (1988); with M. Göckeler, M.L. Laursen, G. Schierholz, and U.-J. Wiese.

14. Scaling behavior and volume dependence of the SU(2) topological susceptibility, *Nucl. Phys. B* **305 [FS23]**, 109 (1988); with M. Kremer, M.L. Laursen, G. Schierholz, C. Schleiermacher, and U.-J. Wiese.

13. An efficient method for the computation of glueball masses using the inverse of the covariant Dirac operator as a correlator, *Comput. Phys. Commun.* **52**, 1 (1988); with K.J.M. Moriarty and G. Schierholz.

12. Fourier acceleration II: matrix inversion and the quark propagator, *Phys. Rev. D* **37**, 1589 (1988); with G. Katz, C. Davies, G. Batrouni, P. Lepage, P. Rossi, B. Svetitsky, and K. Wilson.

11. Fourier acceleration I: Landau gauge fixing, *Phys. Rev. D* **37**, 1581 (1988); with C.T.H. Davies, G.G. Batrouni, G.R. Katz, G.P. Lepage, K.G. Wilson, P. Rossi, and B. Svetitsky.

10. Monopole condensation and color confinement, *Phys. Lett. B* **198**, 516 (1987); with M.L. Laursen, G. Schierholz, and U.-J. Wiese.

9. Topology and dynamics of the confinement mechanism, *Nucl. Phys. B* **293**, 461 (1987); with G. Schierholz and U.-J. Wiese.

8. Topology in SU(3) lattice gauge theory: first calculation of the topological susceptibility, *Nucl. Phys. B* **292**, 349 (1987); with M. Göckeler, M.L. Laursen, G. Schierholz, and U.-J. Wiese.

7. High statistics computation of the topological susceptibility of SU(2) gauge theory, *Nucl. Phys. B* **292**, 330 (1987); with M.L. Laursen, G. Schierholz, and U.-J. Wiese.

6. Another higher order Langevin algorithm for QCD, *Phys. Lett. B* **172**, 93 (1986).

5. Lattice and perturbative QCD analysis of exclusive processes, *Phys. Rev. D* **33**, 227 (1986); with Steven Gottlieb.

4. Experimental predictions of lattice and perturbative quantum chromodynamics, *Phys. Rev. Lett.* **55**, 2531 (1985); with Steven Gottlieb.

3. Langevin simulations of lattice field theories, *Phys. Rev. D* **32**, 2736 (1985); with G.G. Batrouni, G.R. Katz, G.P. Lepage, B. Svetitsky, and K.G. Wilson.

2. Phenomenology on the lattice: composite operators in lattice gauge theory, *Phys. Rev. D* **31**, 2939 (1985); with Douglas M. Photiadis.

1. Flavor changing decays of the Z^0, *Phys. Rev. D* **27**, 570 (1983); with M. Clements, C. Footman, S. Narasimhan, and D. Photiadis.

Review Papers

In journals and books

6. Lattice gauge theory and the origin of mass, in *100 Years of Subatomic Physics*, pp. 493–518, edited by Ernest Henley and Stephen Ellis (World Scientific, Singapore, 2013).

5. Twenty-first century lattice gauge theory: Results from the QCD Lagrangian, *Annu. Rev. Nucl. Part. Sci.* **62**, 265 (2012).

4. Resource letter QCD-1: Quantum chromodynamics, *Am. J. Phys.* **78**, 1081 (2010); with Chris Quigg.

3. Uses of effective field theories in lattice QCD, in *At the Frontier of Particle Physics: Handbook of QCD*, Vol. IV, Chapter 39, edited by M. Shifman (World Scientific, Singapore, 2002).

2. Progress in quantum chromodynamics with lattice gauge theory, *Annu. Rev. Nucl. Part. Sci.* **43**, 793 (1993); with Paul B. Mackenzie.

1. Dynamics of Langevin simulations, *Prog. Theor. Phys. Suppl.* **111**, 293 (1993).

Invited plenary review talks

13. Theoretical Perspective of Charm Physics, FERMILAB-CONF-13/566-T, arXiv:1312.2930 [hep-ph].

12. Kenneth Geddes Wilson, *PoS* **LATTICE 2013**, 504 (2014).

11. Quantum chromodynamics with advanced computing, *J. Phys. Conf. Ser.* **125**, 012067 (2008).

10. Lattice gauge theory with staggered fermions: how, where, and why (not), *PoS* **LATTICE 2007**, 016 (2007).

9. Heavy quarks and lattice QCD, in *Lattice 2003*, edited by S. Aoki, S. Hashimoto, N. Ishizuka, K. Kanaya, and Y. Kuramashi, *Nucl. Phys. B (Proc. Suppl.)* **129**, 46 (2004).

8. Progress in lattice QCD, in *XXIInd Physics in Collision*, edited by D. Su and P. Burchat (SLAC, Menlo Park, CA, 2003).

7. Lattice QCD and the unitarity triangle, in *Heavy Flavor Physics 9*, edited by A. Ryd and F. C. Porter (AIP, Melville, NY, 2002).

6. Lattice QCD calculations of leptonic and semileptonic decays, in *Heavy Quarks at Fixed Target*, edited by H.W.K. Cheung and J.N. Butler (AIP, New York, 1999).

5. Lattice QCD and the Standard Model, in *Theory of Elementary Particles*, edited by D. Lüst and G. Weigt, *Nucl. Phys. B (Proc. Suppl.)* **49**, 269 (1996). Also in *Particle Theory and Phenomenology*, proceedings of the XVIInd International Kazimierz Meeting on Particle Physics, edited by K.E. Lassila *et al.*

4. Lattice QCD and the Standard Model, in *Perspectives in Particle Physics '94*, proceedings of the Seventh Adriatic Meeting on Particle Physics, edited by D. Klabučar, I. Picek, and D. Tadić (World Scientific, Singapore, 1995).

3. Status of glueball mass calculations in lattice gauge theory, in *Hadron '89*, edited by F. Binon, J.-M. Frère, and J.-P. Peigneux, (Editions Frontières, Gif-sur-Yvette, 1990).

2. Spectrum of the pure glue theory, in *Lattice '88*, edited by A.S. Kronfeld and P.B. Mackenzie, *Nucl. Phys. B (Proc. Suppl.)* **9**, 227 (1989); with Pierre van Baal.

1. Topological aspects of lattice gauge theory, in *Field Theory on the Lattice*, edited by A. Billoire, R. Lacaze, A. Morel, O. Napoly, and J. Zinn-Justin; *Nucl. Phys. B (Proc. Suppl.)* **4**, 329 (1988).

Advanced schools

2. Twenty-five years of lattice gauge theory: Consequences of the QCD Lagrangian, FERMILAB-CONF-10/226-T, arXiv:1007.1444 [hep-ph], proceedings of the 25th Lake Louise Winter Institute, Lake Louise, Alberta, Canada (15–20 February 2010).

1. Lattice QCD, in *Perspectives in the Standard Model*, edited by R.K. Ellis, C.T. Hill, and J.D. Lykken (World Scientific, Singapore, 1992).

Popular Works

3. Book Review of *The Lightness of Being: Mass, Ether, and the Unification of Forces*, by Frank Wilczek (Basic Books, New York, 2008); *Physics Today* **62**.4, 61 (April 2009).

2. The weight of the world is quantum chromodynamics, *Science* **322**, 1198 (2008).

1. QCD: Results from lattice quantum chromodynamics, *SciDAC Rev.* **2**, 14 (2006).

Books Edited

4. *Project X: Accelerator Reference Design, Physics Opportunites, Broader Impacts*, FERMILAB-TM-2557, arXiv:1306.5022 [physics.acc-ph], arXiv:1306.5009 [hep-ex], arXiv:1306.5024 [physics.acc-ph]; edited with Stuart D. Henderson, Stephen D. Holmes, and Robert S. Tschirhart (Fermilab, Batavia, Illinois, 2013).

3. *Lattice 2006*, Proceedings of the XXIVth International Symposium on Lattice Field Theory, 23–28 July 2006, Tucson, AZ, USA, published in *PoS* **LAT2006**; edited with T. Blum, M. Creutz, C. DeTar, F. Karsch, C. Morningstar, D. Richards, J. Shigemitsu, and D. Toussaint.

2. *Lattice 2004*, Proceedings of the XXIInd International Symposium on Lattice Field Theory, 21–26 June 2004, Fermilab, Batavia, IL, USA, published in *Nucl. Phys. B (Proc. Suppl.)* **140**; edited with G. Bodwin, E. Eichten, D. Holmgren, A. El-Khadra, P. Mackenzie, M. Okamoto, J. Simone, and D. Sinclair.

1. *Lattice '88*, Proceedings of the VIIIth International Symposium on Lattice Field Theory, 22–25 September 1988, Fermilab, Batavia, IL, USA, published in *Nucl. Phys. B (Proc. Suppl.)* **9**; edited with P.B. Mackenzie.

Collaborative Surveys

8. The Physics of the *B* Factories, *Eur. Phys. J. C* **74**, 3026 (2014); with A.J. Bevan, B. Golob, T. Mannel, S. Prell, and B.D. Yabsley; K. Abe, H. Aihara, F. Anulli, N. Arnaud, T. Aushev, M. Beneke, J. Beringer, F. Bianchi, I.I. Bigi, M. Bona, N. Brambilla, J. Brodzicka, P. Chang, M.J. Charles, C.H.

Cheng, H.-Y. Cheng, R. Chistov, P. Colangelo, J.P. Coleman, A. Drutskoy, V.P. Druzhinin, S. Eidelman, G. Eigen, A. M. Eisner, R. Faccini, K.T. Flood, P. Gambino, A. Gaz, W. Gradl, H. Hayashii, T. Higuchi, W.D. Hulsbergen, T. Hurth, T. Iijima, R. Itoh, P.D. Jackson, R. Kass, Y.G. Kolomensky, E. Kou, P. Križan, S. Kumano, Y. J. Kwon, T. E. Latham, D.W.G.S. Leith, V. Lüth, F. Martinez-Vidal, B. T. Meadows, R. Mussa, M. Nakao, S. Nishida, J. Ocariz, S.L. Olsen, P. Pakhlov, G. Pakhlova, A. Palano, A. Pich, S. Playfer, A. Poluektov, F. C. Porter, S.H. Robertson, J.M. Roney, A. Roodman, Y. Sakai, C. Schwanda, A.J. Schwartz, R. Seidl, S.J. Sekula, M. Steinhauser, K. Sumisawa, E.S. Swanson, F. Tackmann, K. Trabelsi, S. Uehara, S. Uno, R.S. Van der Water, G. Vasseur, W. Verkerke, R. Waldi, M. Z. Wang, F. F. Wilson, J. Zupan, A. Zupanc; I. Adachi, J. Albert, S. Banerjee, E. Ben-Haim, P. Biassoni, R. N. Cahn, C. Cartaro, J. Chauveau, C. Chen, C.C. Chiang, R. Cowan, J. Dalseno, M. Davier, C.T.H. Davies, J. C. Dingfelder, B. Echenard, D. Epifanov, B.G. Fulsom, A.M. Gabareen, J.W. Gary, R. Godang, M. T. Graham, A. Hafner, B. Hamilton, T. Hartmann, K. Hayasaka, C. Hearty, Y. Iwasaki, A. Khodjamirian, A. Kusaka, A. Kuzmin, G. D. Lafferty, A. Lazzaro, J. Li, D. Lindemann, O. Long, A. Lusiani, G. Marchiori, M. Martinelli, K. Miyabayashi, R. Mizuk, G.B. Mohanty, D. R. Muller, H. Nakazawa, P. Ongmongkolkul, S. Pacetti, F. Palombo, T.K. Pedlar, L.E. Piilonen, A. Pilloni, V. Poireau, K. Prothmann, T. Pulliam, M. Rama, B. N. Ratcliff, P. Roudeau, S. Schrenk, T. Schroeder, K. R. Schubert, C.P. Shen, B. Shwartz, A. Soffer, E. P. Solodov, A. Somov, M. Starič, S. Stracka, A. V. Telnov, K. Yu. Todyshev, T. Tsuboyama, T. Uglov, A. Vinokurova, J.J. Walsh, Y. Watanabe, E. Won, G. Wormser, D. H. Wright, S. Ye, C.C. Zhang, and the BaBar and Belle Collaborations.

7. Report of the Quark Flavor Physics Working Group [Snowmass 2013], FERMILAB-CONF-13/664-T, arXiv:1311.1076 [hep-ex]; with J.N. Butler, Z. Ligeti, J.L. Ritchie, V. Cirigliano, S. Kettell, R. Briere, A.A. Petrov, A. Schwartz, T. Skwarnicki, J. Zupan, N. Christ, S.R. Sharpe, R.S. Van de Water, W. Altmannshofer, N. Arkani-Hamed, M. Artuso, D.M. Asner, C. Bernard, A.J. Bevan, M. Blanke, G. Bonvicini, T.E. Browder, D.A. Bryman, P. Campana, R. Cenci, D. Cline, J. Comfort, D. Cronin-Hennessy, A. Datta, S. Dobbs, M. Duraisamy, A.X. El-Khadra, J.E. Fast, R. Forty, K.T. Flood, T. Gershon, Y. Grossman, B. Hamilton, C.T. Hill, R.J. Hill, D.G. Hitlin, D.E. Jaffe, A. Jawahery, C.P. Jessop, A.L. Kagan, D.M. Kaplan, M. Kohl, P. Krizan, K. Lee, L.S. Littenberg, D.B. MacFarlane, P.B. Mackenzie, B.T. Meadows, J. Olsen, M. Papucci, Z. Parsa, G. Paz, G. Perez, L.E. Piilonen, K. Pitts, M.V. Purohit, B. Quinn, B.N. Ratcliff, D.A. Roberts, J.L. Rosner, P. Rubin, J. Seeman, K.K. Seth, B. Schmidt, A. Schopper, M.D. Sokoloff, A. Soni, K. Stenson, S. Stone, R. Sundrum, R. Tschirhart, A. Vainshtein, Y.W. Wah, G. Wilkinson, M.B. Wise, E. Worcester, J. Xu, and T. Yamanaka.

6. Report of the Snowmass 2013 Computing Frontier working group on Lattice Field Theory— Lattice field theory for the Energy and Intensity Frontiers: Scientific goals and computing needs, FERMILAB-CONF-13/483-T, arXiv:1310.6087 [hep-lat]; with T. Blum, R.S. Van de Water, D. Holmgren, R. Brower, S. Catterall, N. Christ, J. Kuti, P. Mackenzie, E.T. Neil, S.R. Sharpe, and R. Sugar.

5. Fundamental Physics at the Intensity Frontier, FERMILAB-CONF-12/879-PPD, arXiv:1205.2671 [hep-ex], edited by J.L.Hewett and H.Weerts; with 465 co-authors.

4. Workshop on Precision Measurements of α_s, FERMILAB-CONF-11/611-T, arXiv:1110.0016 [hep-ph]; with S. Bethke, A.H. Hoang, S. Kluth, J. Schieck, I.W. Stewart, S. Aoki, M. Beneke, J. Blümlein, N. Brambilla, S. Brodsky, S. Descotes-Genon, J. Erler, S. Forte, T. Gehrmann, C. Glasman, M. Golterman, S. Hashimoto, J. Kühn, G.P. Lepage, A. Martin, V. Mateu, S. Menke, Y. Nomura, C. Pahl, F. Petriello, A. Pich, K. Rabbertz, G. Salam, H. Schulz, R. Sommer, M. Steinhauser, B. Webber, C.-P. Yuan, G. Zanderighi.

3. Flavor physics in the quark sector, *Phys. Rept.* **494**, 197 (2010); with M. Antonelli, D.M. Asner, D. Bauer, T. Becher, M. Beneke, A.J. Bevan, M. Blanke, C. Bloise, M. Bona, A. Bondar, C. Bozzi, J. Brod, N. Cabibbo, A. Carbone, G. Cavoto, V. Cirigliano, M. Ciuchini, J.P. Coleman, D.P. Cronin-Hennessy, J.P. Dalseno, C.H. Davies, F. Di Lodovico, J. Dingfelder, Z. Dolezal, S. Donati, W. Dungel, U. Egede, R. Faccini, T. Feldmann, F. Ferroni, J.M. Flynn, E. Franco, M. Fujikawa, I.K. Furic, P. Gambino, E. Gardi, T.J. Gershon, S. Giagu, E. Golowich, T. Goto, C. Greub, C. Grojean, D. Guadagnoli, U.A. Haisch, R.F. Harr, A.H. Hoang, G. Isidori, D.E. Jaffe, A. Jüttner, S. Jäger, A. Khodjamirian, P. Koppenburg, R.V. Kowalewski, P. Krokovny, J. Laiho, G. Lanfranchi, T.E. Latham, J. Libby, A. Limosani, D. Lopes Pegna, C.D. Lu, V. Lubicz, E. Lunghi, V.G. Lüth, K. Maltman, W.J. Marciano, E.C. Martin, G. Martinelli, F. Martinez-Vidal, A. Masiero, V. Mateu, F. Mescia, G. Mohanty, M. Moulson, M. Neubert, H. Neufeld, S. Nishida, N. Offen, M. Palutan, P. Paradisi, Z. Parsa, E. Passemar, M. Patel, B.D. Pecjak, A.A. Petrov, A. Pich, M. Pierini, B. Plaster, A. Powell, S. Prell, J. Rademaker, M. Rescigno, S. Ricciardi, P. Robbe, E. Rodrigues, M. Rotondo, R. Sacco, C.J. Schilling, O. Schneider, E.E. Scholz, B.A. Schumm, C. Schwanda, A.J. Schwartz, B. Sciascia, J. Serrano, J. Shigemitsu, I.J. Shipsey, A. Sibidanov, L. Silvestrini, F. Simonetto, S. Simula, C. Smith, A. Soni, L. Sonnenschein, V. Sordini, M. Sozzi, T. Spadaro, P. Spradlin, A. Stocchi, N. Tantalo, C. Tarantino, A.V. Telnov, D. Tonelli, I.S. Towner, K. Trabelsi, P. Urquijo, R.S. Van de Water, R.J. Van Kooten, J. Virto, G. Volpi, R. Wanke, S. Westhoff, G. Wilkinson, M. Wingate, Y. Xie, and J. Zupan.

2. Heavy quarkonium physics, FERMILAB-FN-0779, hep-ph/0412158; with N. Brambilla, M. Krämer, R. Mussa, A. Vairo, G. Bali, G.T. Bodwin, E. Braaten, E. Eichten, S. Eidelman, S. Godfrey, A. Hoang, M. Jamin, D. Kharzeev, M.P. Lombardo, C. Lourenco, A.B. Meyer, V. Papadimitriou, C. Patrignani, M. Rosati, M.A. Sanchis-Lozano, H. Satz, J. Soto, D.Z. Besson, D. Bettoni, A. Bohrer, S. Boogert, C.-H. Chang, P. Cooper, P. Crochet, S. Datta, C. Davies, A. Deandrea, R. Faustov, T. Ferguson, R. Galik, F. Harris, O. Iouchtchenko, O. Kaczmarek, F. Karsch, M. Kienzle, V.V. Kiselev, S.R. Klein, P. Kroll, Y.-P. Kuang, V. Laporta, Jungil Lee, A. Leibovich, J.P. Ma, P. Mackenzie, L. Maiani, M.L. Mangano, A. Meyer, X.H. Mo, C. Morningstar, A. Nairz, J. Napolitano, S. Olsen, A. Penin, P. Petreczky, F. Piccinini, A. Pineda, A.D. Polosa, L. Ramello, R. Rapp, J.-M. Richard, V. Riquer, S. Ricciardi, E. Robutti, O. Schneider, E. Scomparin, J. Simone, T. Skwarnicki, G. Stancari, I.W. Stewart, Y. Sumino, T. Teubner, J. Tseng, R. Vogt, P. Wang, B. Yabsley, C.Z. Yuan, F. Zantow, Z.G. Zhao, and A. Zieminski.

1. The CKM matrix and the unitarity triangle, FERMILAB-CONF-02/422, hep-ph/0304132; CERN Yellow Report of the Workshop on the CKM Unitarity Triangle (February 13–16, 2002, CERN, Geneva); with M. Battaglia, A.J. Buras, P. Gambino, A. Stocchi (coordinators) *et al.*

Facility Studies

12. Physics with a high intensity proton source at Fermilab: Project X Golden Book, FERMILAB-FN-0904, with J. Appel, D. Asner, I. Bigi, D. Bryman, A. Buras, M. Carena, R. Carosi, D. Christian, J. Conrad, M. Diwan, C. Dukes, E. Eichten, D. Finley, P. Fisher, B. Fleming, S. Geer, A. de Gouvêa, K. Gollwitzer, D. Harris, D. Hertzog, C.T. Hill, S. Holmes, G. Isidori, D.E. Jaffe, B. Kayser, E. Kearns, Y.-K. Kim, K. Lande, K. Lesko, L. Littenberg, B. Lundberg, J. Lykken, M. Mangano, D. McGinnis, M. Messier, J. Miller, S. Mishra, W. Molzon, P. Oddone, V. Papadimitriou, S.J. Parke, K. Peters, R. Petti, K. Pitts, S. Pordes, C. Quigg, T. Phillips, R. Rameika, B.L. Roberts, J. Rosner, A. Schwartz, N. Saoulidou, J. Siegrist, G. Stancari, R. Tayloe, R. Tschirhart, T. Yamanaka, and P. Yamin.

11. ILC reference design report, volume 4: Detectors, arXiv:0712.2356 [physics.ins-det]; with the ILC Collaboration (T. Behnke *et al.*).

10. ILC reference design report, volume 2: Physics at the ILC, arXiv:0709.1893 [hep-ph]; with the ILC Collaboration (G. Aarons *et al.*).

9. ILC reference design report, volume 1: Executive summary, arXiv:0712.1950 [physics.acc-ph]; with the ILC Collaboration (J. Brau *et al.*).

8. *B* Physics at the Tevatron: Run II and beyond, FERMILAB-PUB-01/197, hep-ph/0201071; with K. Anikeev *et al.* Proceedings of the workshop of the same name, organized by R. Jesik, A.S. Kronfeld, R. Kutschke, Z. Ligeti, M. Paulini, and A.B. Wicklund.

7. Physics at a 10^{36} asymmetric *B* factory, in *Proceedings of the APS/DPF/DPB Summer Study on the Future of Particle Physics (Snowmass 2001)*, edited by N. Graf, eConf **C010630**, E214 (2001); with P. Burchat, G. Dubois-Felsmann, G. Eigen, M. Giorgi, D. Hitlin, J. Izen, N. Katayama, P. Kim, R. Kutschke, J. Lee, D. Leith, X-C. Lou, M. Piccolo, S. Petrak, I. Peruzzi, B. Ratcliff, S. Robertson, A. Roodman, R. Schindler, J. Seeman, I. Shipsey, A. Soffer, M. Sokoloff, M. Sullivan, W. Wisniewski, H. Yamamoto, S. Yang, and C. Young.

6. Linear collider physics, FERMILAB-FN-701, hep-ex/0107044; with Paul F. Derwent, Bogdan A. Dobrescu, Heather E. Logan, Konstantin T. Matchev, Adam Para, David L. Rainwater, Sławomir Tkaczyk, and William C. Wester III.

5. Linear collider physics resource book for Snowmass 2001, FERMILAB-PUB-01/058-E; Part 1: Introduction (hep-ex/0106055), Part 2: Higgs and supersymmetry (hep-ex/0106056), Part 3: Studies of exotic and Standard Model physics (hep-ex/0106057), Part 4: Theoretical, accelerator, and experimental options (hep-ex/0106058); with J. Bagger *et al.* [American Linear Collider Working Group].

4. The case for a 500 GeV e^+e^- linear collider, FERMILAB-PUB-00/152, hep-ex/0007022; with J. Bagger *et al.* [American Linear Collider Working Group].

3. Semileptonic and leptonic decays of *B* hadrons, in the Proceedings of the 1993 Snowmass Workshop on *B* Physics at Hadron Accelerators, edited by P. McBride and C.S. Mishra; with K. Kinoshita, J. Amundson, C. Dib, G.W.S. Hou, V. Jain, P. Lebrun, R.J. Oakes, and J. Taron.

2. Beauty and the beast: What lattice QCD can do for *B* physics, in the Proceedings of the 1993 Snowmass Workshop on *B* Physics at Hadron Accelerators, edited by P. McBride and C.S. Mishra.

1. Physics goals of the QCD Teraflop Project, *Int. J. Mod. Phys.* **C2**, 829 (1991); with S. Aoki, R. Shrock, B. Berg, K. Bitar, R. Edwards, U.M. Heller, A. Kennedy, S. Sanielevici, C.W. Bernard, M. Ogilvie, D. Petcher, G. Bhanot, P. Rossi, R. Brower, J. Potvin, C. Rebbi, F.R. Brown, N.H. Christ, R. Mawhinney, C.E. DeTar, T. Draper, K.F. Liu, Steven Gottlieb, H. Hamber, G. Kilcup, J. Shigemitsu, John B. Kogut, I.-H. Lee, J.W. Negele, S. Ohta, J.C. Sexton, E.V. Shuryak, D.K. Sinclair, A. Soni, W. Wilcox [QCD Teraflop Collaboration].

Proposed Experiments

2. ORKA: Measurement of the $K^+ \to \pi^+ \nu \bar{\nu}$ decay at Fermilab, FERMILAB-PROPOSAL-1021, with Joseph Comfort, Douglas Bryman, Luca Doria, Toshio Numao, Aleksey Sher, Dimitry Vavilov, David Jaffe, Steve Kettell, Laurie Littenberg, Elizabeth Worcester, Leo Bellantoni, Brendan Casey, David Christian, D.A. Jensen, Jonathan Lewis, Sergei Striganov, Robert Tschirhart, Herman White, Peter Wilson, Kevin Pitts, Corrado Gatto, Roberto Carosi, Yuri Kudenko, Oleg Mineev, Artur Shaykhiev,

Akram Artikov, Julian Budagov, Yuri Davydov, Vladimir Glagolev, Ahmed Hussein, Alexis A. Aguilar-Arévalo, Jürgen Engelfried, Jack Ritchie, Shaomin Chen, Mingming Ding, and Zhe Wang.

1. Measurement of the $K^+ \to \pi^+ \nu\bar{\nu}$ decay at Fermilab, FERMILAB-PROPOSAL-0996, with Joseph Comfort, Douglas Bryman, Luca Doria, Jaap Doornbos, Toshio Numao, Aleksey Sher, Dimitry Vavilov, David Jaffe, Steve Kettell, Laurie Littenberg, Zhe Wang, Leo Bellantoni, David Christian, D.A. Jensen, Mike Syphers, Sergei Striganov, Robert Tschirhart, Herman White, Yuri Kudenko, Oleg Mineev, Artur Shaykhiev, Roberto Carosi, Ahmed Hussein, Jürgen Engelfried, Jack Ritchie, Shaomin Chen, and Mingming Ding.

Unpublished Reports

2. Chiral fermions coupled to lattice gauge fields, FERMILAB-PUB-95/073-T, hep-lat/9504007.

1. Longitudinal growth rates and tune shifts for CESR II, CBN-81-22 (1981); with R. Siemann.

Ph. D. Dissertation

Phenomenology in lattice gauge theory, Cornell University (May 1985, UMI-85-16965).

Conference Proceedings

My contributions

24. Heavy-meson semileptonic decays for the Standard Model and beyond, *PoS* **LATTICE 2013**, 386 (2014); with Yuzhi Liu, Ran Zhou, Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, R.D. Jain, Jongjeong Kim, J. Laiho, L. Levkova, P.B. Mackenzie, Y. Meurice, D. Mohler, E.T. Neil, M.B. Oktay, Si-Wei Qiu, J.N. Simone, R. Sugar, D. Toussaint, and R. S. Van de Water.

23. $B \to D^* l \nu$ at zero recoil: an update, *PoS* **Lattice 2010**, 311 (2010); with Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

22. The f_{D_s} puzzle, in *Proceedings of the XXIX Physics in Collision*, edited by K. Kawagoe and Y. Yamazaki (Universal Academic Press, Tokyo).

21. B_q^0-$\bar{B}_q^0$ mixing and matching with Fermilab heavy quarks, *PoS* **LATTICE 2009**, 245 (2009); with R.T. Evans, E. Gámiz, and A.X. El-Khadra.

20. Non-standard physics in leptonic and semileptonic decays of charmed mesons, *PoS* **LATTICE 2008**, 282 (2008).

19. An improved action for heavy quarks, *PoS* **LAT2006**, 159 (2006); with Mehmet B. Oktay.

18. Predictions with lattice QCD, *J. Phys. Conf. Ser.* **46**, 147 (2006).

17. Predictions from lattice QCD, *PoS* **LAT2005**, 206 (2005); *Int. J. Mod. Phys.* **A21**, 713 (2006); with I.F. Allison, C. Aubin, C. Bernard, C.T.H. Davies, C. DeTar, M. Di Pierro, E.D. Freeland, Steven Gottlieb, A. Gray, E. Gregor, 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, and H.D. Trottier.

16. $\mathscr{F}(1)$ for $B \to D^* l \nu$ from lattice QCD, in *Proceedings of the First International Conference on Flavor Physics and CP Violation*, **eConf** C020516, edited by Rudolf G. C. Oldeman; with Paul B. Mackenzie, James N. Simone, Shoji Hashimoto, and Sinéad M. Ryan.

15. B and D mesons in lattice QCD, in *ICHEP 2000: Proceedings*, edited by C. S. Lim and T. Yamanaka (World Scientific, Singapore, 2001).

14. Perturbative and nonperturbative corrections to $B \to D^{(*)} l \nu$, in *Lattice '99*, edited by M. Campostrini *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **83**, 307 (2000).

13. Renormalization of currents for massive fermions, in *Lattice '98*, edited by T. DeGrand, C. Detar, R. Sugar, and D. Toussaint, *Nucl. Phys. B (Proc. Suppl.)* **73**, 387 (1999); with Shoji Hashimoto.

12. Three electroweak results from lattice QCD, in *'98 Electroweak Interactions and Unified Theories*, edited by J. Trân Thanh Vân (Editions Frontières, Paris, 1998).

11. The charmed quark's mass, in *Lattice '97*, edited by C.T.H. Davies *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **63**, 311 (1998).

10. Binding energies in nonrelativistic field theories, in *Lattice '96*, edited by C. Bernard, M. Golterman, M. Ogilvie, and J. Potvin, *Nucl. Phys. B (Proc. Suppl.)* **53**, 401 (1997).

9. Desperately seeking chiral fermions, in *Lattice '95*, edited by T.D. Kieu, B.H.J. McKellar, and A.J. Guttmann, *Nucl. Phys. B (Proc. Suppl.)* **47**, 587 (1996).

8. Improved currents for heavy quarks, in *Lattice '94*, edited by F. Karsch, J. Engels, E. Laermann, and B. Petersson, *Nucl. Phys. B (Proc. Suppl.)* **42**, 415 (1995).

7. Renormalization of massive lattice fermions, in *Lattice '93*, edited by T. Draper, S. Gottlieb, A. Soni, and D. Toussaint, *Nucl. Phys. B (Proc. Suppl.)* **34**, 495 (1994); with B.P. Mertens.

6. QCD results for nucleon Compton scattering, in *The Fermilab Meeting: DPF '92*, edited by C.H. Albright, P.H. Kasper, R. Raja, and J. Yoh (World Scientific, Singapore, 1993); with B. Nižić.

5. The charmed quark on the lattice, in *Lattice '92*, edited by P. van Baal and J. Smit, *Nucl. Phys. B (Proc. Suppl.)* **30**, 445 (1993).

4. Lattice calculations of glueball properties, in *Intersections between Particle and Nuclear Physics*, edited by W.T.H. van Oers, (AIP, New York, 1992).

3. SU(N) gauge theories with C-periodic boundary conditions, in *Lattice '90*, edited by U.M. Heller, A.D. Kennedy, and S. Sanielevici, *Nucl. Phys. B (Proc. Suppl.)* **20**, 20 (1991).

2. Improved methods for computing masses from numerical simulations, in *Lattice '89*, edited by N. Cabibbo *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **17**, 313 (1990).

1. Langevin simulations of QCD: including fermions, in *Lattice Gauge Theory—a Challenge to Large Scale Computing*, edited by B. Bunk, K.-H. Mütter, and K. Schilling (Plenum, New York, 1986).

Collaborators' contributions (with my co-authorship)

73. Leptonic B- and D-meson decay constants with 2+1 flavors of asqtad fermions, FERMILAB-CONF-14/521-T, arXiv:1501.01991 [hep-lat]; with E.T. Neil, J.N. Simone, and R.S. Van de Water.

72. Neutral B-meson mixing parameters in and beyond the SM with 2+1 flavor lattice QCD, FERMILAB-CONF-14/520-T, arXiv:1412.5097 [hep-lat]; with C.M. Bouchard, E.D. Freeland, C.W. Bernard, C.C. Chang, A.X. El-Khadra, M.E. Gámiz, J. Laiho, and R.S. Van de Water.

71. Update on a short-distance D^0-meson mixing calculation with $N_f = 2+1$ flavors, FERMILAB-CONF-14/519-T, arXiv:1411.6086 [hep-lat]; with C.C. Chang, C. Bernard, C.M. Bouchard, A.X. El-Khadra, E.D. Freeland, E. Gámiz, J. Laiho, and R.S. Van de Water.

70. $B \to \pi \ell \nu$ semileptonic form factors from unquenched lattice QCD and determination of $|V_{ub}|$, FERMILAB-CONF-14/518-T, arXiv:1411.6038 [hep-lat]; with Jon A. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J. Laiho, L. Levkova, Yuzhi Liu, P.B. Mackenzie, Y. Meurice, E.T. Neil, S. Qiu, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

69. Charmed and light pseudoscalar meson decay constants from HISQ simulations, FERMILAB-CONF-14/474-T, arXiv:1411.2667 [hep-lat]; with 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, J. Komijani, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and R. Zhou.

68. Heavy-meson spectrum tests of the Oktay–Kronfeld action, FERMILAB-CONF-14/482-T, arXiv:1411.1823 [hep-lat]; with Jon A. Bailey, Yong-Chull Jang, Weonjong Lee, Carleton DeTar, and Mehmet B. Oktay.

67. Low lying charmonium states at the physical point, FERMILAB-CONF-14/460-T, arXiv:1412.1057 [hep-lat]; with Daniel Mohler, Carleton DeTar, Song-haeng Lee, Ludmila Levkova, and J.N. Simone.

66. The D_s, D^+, B_s and B decay constants from 2+1 flavor lattice QCD, *PoS* **LATTICE 2013**, 394 (2014); with 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, J. Komijani, J. Laiho, L. Levkova, P.B. Mackenzie, D. Mohler, E.T. Neil, M.B. Oktay, S. Qiu, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and R. Zhou.

65. Matrix Elements for D- and B-Mixing from 2+1 Flavor Lattice QCD, *PoS* **LATTICE 2013**, 477 (2014); with C.C. Chang, C. Bernard, C.M. Bouchard, A.X. El-Khadra, E.D. Freeland, E. Gámiz, J. Laiho, and R.S. van de Water.

64. Charmed and strange pseudoscalar meson decay constants from HISQ simulations, *PoS* **LATTICE 2013**, 405 (2014); with 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, J. Komijani, J. Laiho, L. Levkova, P.B. Mackenzie, E.T. Neil, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and R. Zhou.

63. K semileptonic form factor with HISQ fermions at the physical point, *PoS* **LATTICE 2013**, 395 (2014); with E. Gámiz, 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, 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, and Ran Zhou.

62. Semileptonic decays $B \to D^{(*)} l \nu$ at nonzero recoil, *PoS* **LATTICE 2013**, 385 (2014); with Si-Wei Qiu, Carleton DeTar, Aida X. El-Khadra, Jack Laiho, and Ruth S. Van de Water

61. $B \to \pi \ell \nu$ and $B \to \pi \ell^+ \ell^-$ semileptonic form factors from unquenched lattice QCD, *PoS* **LATTICE 2013**, 383 (2014); with Daping Du, Jon A. Bailey, A. Bazavov, C. Bernard, A.X. El-Khadra, Steven Gottlieb, R.D. Jain, J. Laiho, Yuzhi Liu, P.B. Mackenzie, Y. Meurice, R.S. Van de Water, and Ran Zhou.

60. Optimization of the Oktay-Kronfeld action conjugate gradient inverter, *PoS* **LATTICE 2013**, 030 (2014); with Yong-Chull Jang, Jon A. Bailey, Weonjong Lee, Carleton DeTar, and Mehmet B. Oktay.

59. Charm semileptonic decays and $|V_{cs(d)}|$ from heavy clover quarks and 2+1 flavor asqtad staggered ensembles, *PoS* **Lattice2012**, 272 (2012); with Jon A. Bailey, D. Du, A.X. El-Khadra, Steven Gottlieb, R.D. Jain, R.S. Van de Water, and R. Zhou.

58. Charmonium mass splittings at the physical point, *PoS* **Lattice2012**, 257 (2012); with C. DeTar, Song-Haeng Lee, L. Levkova, D. Mohler, and J.N. Simone.

57. Pseudoscalar meson physics with four dynamical quarks, *PoS* **Lattice2012**, 159 (2012); with A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, Jongjeong Kim, J. Laiho, L. Levkova, M. Lightman, P.B. Mackenzie, E.T. Neil, M.B. Oktay, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

56. Two-point correlator fits on HISQ ensembles, *PoS* **Lattice2012**, 158 (2012); with A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, Jongjeong Kim, J. Laiho, L. Levkova, M. Lightman, P.B. Mackenzie, E.T. Neil, M.B. Oktay, J.N. Simone, R.L. Sugar, D. Toussaint, R.S. Van de Water, and Ran Zhou.

55. Neutral B mixing from 2+1-flavor lattice QCD, *PoS* **Lattice2012**, 124 (2012); with E.D. Freeland, C.M. Bouchard, C. Bernard, A.X. El-Khadra, E. Gámiz, J. Laiho, and R.S. Van de Water.

54. Form factors for semileptonic B decays, *PoS* **Lattice2012**, 120 (2012); with Ran Zhou, Steven Gottlieb, Jon A. Bailey, Daping Du, Aida X. El-Khadra, R.D. Jain, Ruth S. Van de Water, Yuzhi Liu, and Yannick Meurice.

53. Semileptonic $B \to D$ decays at nonzero recoil with 2+1 flavors of improved staggered quarks: An update, *PoS* **Lattice2012**, 119 (2012); with Si-Wei Qiu, Carleton DeTar, Daping Du, Jack Laiho, and Ruth Van de Water.

52. Kaon semileptonic decay form factors with HISQ valence quarks, *PoS* **Lattice2012**, 113 (2012); with E. Gámiz, Jon A. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, Daping Du, A.X. El-Khadra, J. Foley, E.D. Freeland, Steven Gottlieb, U.M. Heller, Jongjeong Kim, 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, and Ran Zhou.

51. B and D meson decay constants from 2+1 flavor improved staggered simulations, *PoS* **Lattice2011**, 320 (2011); with E.T. Neil, Jon A. 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, Steven Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

50. Form factors for B to Kll semileptonic decay from three-flavor lattice QCD, *PoS* **Lattice2011**, 298 (2011); with Ran Zhou, Jon A. Bailey, Alexei Bazavov, Aida X. El-Khadra, Steven Gottlieb, Rajendra D. Jain, and Ruth S. Van de Water.

49. Semileptonic B to D decays at nonzero recoil with 2+1 flavors of improved staggered quarks, *PoS* **Lattice2011**, 289 (2011); with S.-W. Qiu, C. DeTar, D. Du, J. Laiho, and R.S. Van de Water.

48. Calculation of $K \to \pi l \nu$ form factors with $N_f = 2+1$ flavors of staggered quarks, *PoS* **Lattice2011**, 281 (2011); with E. Gámiz, C. DeTar, A.X. El-Khadra, P.B. Mackenzie, and J. Simone.

47. Semileptonic form factor ratio $B_s \to D_s / B \to D$ and its application to $\mathrm{BR}(B_s^0 \to \mu^+\mu^-)$, *PoS* **Lattice2011**, 279 (2011); with D. Du, C. DeTar, J. Laiho, Y. Meurice, and S.-W. Qiu.

46. Neutral B mixing from 2+1 flavor lattice QCD: the standard model and beyond, *PoS* **Lattice2011**, 274 (2011); with C.M. Bouchard, E.D. Freeland, C. Bernard, A.X. El-Khadra, E. Gámiz, J. Laiho, and R.S. Van de Water.

45. D semileptonic form factors and $|V_{cs(d)}|$ from 2+1 flavor lattice QCD, *PoS* **Lattice2011**, 270 (2011); with Jon A. Bailey, A. Bazavov, A.X. El-Khadra, Steven Gottlieb, R.D. Jain, R.S. Van de Water, and R. Zhou.

44. B mixing in the standard model and beyond: lattice QCD, *AIP Conf. Proc.* **1441**, 672 (2012); with C. Bernard, C.M. Bouchard, A.X. El-Khadra, E.D. Freeland, E. Gámiz, J. Laiho, and R.S. Van de Water.

43. The decay constants f_{D_s}, f_{D^+}, f_{B_s}, and f_B from lattice QCD, *PoS* **Lattice 2010**, 317 (2010); with J. Simone, J.A. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, R. Sugar, D. Toussaint, and R.S. Van de Water.

42. Semileptonic decays of K and D mesons in 2+1 flavor QCD, *PoS* **Lattice 2010**, 306 (2010); with Jon A. Bailey, A. Bazavov, C. Bernard, C.M. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

41. B_s^0 and B^0 mixing in the Standard Model and beyond: A progress report, *PoS* **Lattice 2010**, 299 (2010); with C. Bouchard, A.X. El-Khadra, E.D. Freeland, and E. Gámiz.

40. Numerical tests of the improved Fermilab action, *PoS* **Lattice 2010**, 234 (2010); with C. DeTar and M.B. Oktay.

39. Progress on charm semileptonic form factors from 2+1 flavor lattice QCD, *PoS* **LATTICE 2009**, 250 (2009); with Jon A. Bailey, A. Bazavov, C. Bernard, C. Bouchard, C. DeTar, A.X. El-Khadra, E.D. Freeland, W. Freeman, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, M. Di Pierro, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

38. The D_s and D^+ leptonic decay constants from lattice QCD, *PoS* **LATTICE 2009**, 249 (2009); with A. Bazavov, C. Bernard, C. DeTar, E.D. Freeland, E. Gámiz, Steven Gottlieb, U.M. Heller, J.E. Hetrick, A.X. El-Khadra, J. Laiho, L. Levkova, P.B. Mackenzie, M.B. Oktay, M. Di Pierro, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

37. Quarkonium mass splittings with Fermilab heavy quarks and 2+1 flavors of improved staggered sea quarks, *PoS* **LATTICE 2009**, 115 (2009); with T. Burch, C.E. DeTar, M. Di Pierro, A.X. El-Khadra, Steven Gottlieb, L. Levkova, P.B. Mackenzie, and J.N. Simone.

36. B and D meson decay constants, *PoS* **LATTICE 2008**, 278 (2008); with 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, J. Laiho, L. Levkova, P.B. Mackenzie, J. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

35. The decay constants f_B and f_{D^+} from three-flavor lattice QCD, *PoS* **LATTICE 2007**, 370 (2007); with C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E. Freeland, Steven Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, J. Laiho, L. Levkova, P.B. Mackenzie, D. Renner, J.N. Simone, R. Sugar, D. Toussaint, and R.S. Van de Water.

34. Heavy-quark masses from the Fermilab method in three-flavor lattice QCD, *PoS* **LATTICE 2007**, 243 (2007); with E.D. Freeland, J.N. Simone, and R.S. Van de Water.

33. Perturbative matching of heavy-light currents at one-loop, *PoS* **LATTICE 2007**, 242 (2007); with A.X. El-Khadra, E. Gámiz, and M.A. Nobes.

32. Update on onium masses with three flavors of dynamical quarks, *PoS* **LAT2006**, 175 (2006); with Steven Gottlieb, L. Levkova, M. Di Pierro, A.X. El-Khadra, P.B. Mackenzie, and J.N. Simone.

31. The decay constants f_{B^+} and f_{D^+} from three-flavor lattice QCD, *PoS* **LAT2006**, 094 (2006); with C. Bernard, C. DeTar, M. Di Pierro, A.X. El-Khadra, R.T. Evans, E. Freeland, Steven Gottlieb, U.M. Heller, J.E. Hetrick, R. Jain, J. Laiho, L. Levkova, P.B. Mackenzie, M. Nobes, D. Renner, J.N. Simone, R. Sugar, D. Toussaint, H.D. Trottier, and R.S. Van de Water.

30. $\bar{\Lambda}$, λ_1, and m_b in three-flavor (lattice) QCD, *PoS* **LAT2006**, 083 (2006); with Elizabeth D. Freeland, James N. Simone, and Ruth S. Van de Water.

29. B and D meson semileptonic decays in three-flavor lattice QCD, *PoS* **LAT2005**, 207 (2005); with 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, L. Levkova, F. Maresca, D. Menscher, M. Nobes, M. Okamoto, M.B. Oktay, J. Osborn, D. Renner, J.N. Simone, R. Sugar, D. Toussaint, and H.D. Trottier.

28. Onium masses with three flavors of dynamical quarks, *PoS* **LAT2005**, 203 (2005); with Steven Gottlieb, L. Levkova, M. Di Pierro, A. El-Khadra, D. Menscher, P.B. Mackenzie, and J. Simone.

27. Leptonic decay constants f_{D_s} and f_D in three flavor lattice QCD, in *Lattice 2004*, edited by G. Bodwin *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **140**, 443 (2005); with 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, P.B. Mackenzie, D.P. Menscher, M. Nobes, M. Okamoto, M.B. Oktay, J. Osborn, R. Sugar, D. Toussaint, and H.D. Trottier.

26. Semileptonic $D \to \pi/K$ and $B \to \pi/D$ decays in 2+1 flavor lattice QCD, in *Lattice 2004*, edited by G. Bodwin *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **140**, 461 (2005); with 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, P.B. Mackenzie, D.P. Menscher, M. Nobes, M.B. Oktay, J. Osborn, J.N. Simone, R. Sugar, D. Toussaint, and H.D. Trottier.

25. A precise determination of the B_c mass from dynamical lattice QCD, in *Lattice 2004*, edited by G. Bodwin *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **140**, 440 (2005); with I.F. Allison, C.T.H. Davies, A. Gray, P.B. Mackenzie, and J.N. Simone.

24. `www.fermiqcd.net`, in *Lattice 2003*, edited by S. Aoki, S. Hashimoto, N. Ishizuka, K. Kanaya, and Y. Kuramashi, *Nucl. Phys. B (Proc. Suppl.)* **129**, 832 (2004); with Massimo Di Pierro, Aida X. El-Khadra, Steven Gottlieb, Paul B. Mackenzie, Masataka Okamoto, Mehmet B. Oktay, and James N. Simone.

23. D_s spectrum and leptonic decays with Fermilab heavy quarks and improved staggered light quarks, in *Lattice 2003*, edited by S. Aoki, S. Hashimoto, N. Ishizuka, K. Kanaya, and Y. Kuramashi, *Nucl. Phys. B (Proc. Suppl.)* **129**, 328 (2004); with Massimo di Pierro, Aida X. El-Khadra, Steven Gottlieb, Paul B. Mackenzie, Damian P. Menscher, Masataka Okamoto, and James N. Simone.

22. Properties of charmonium in lattice QCD with $2+1$ flavors of improved staggered sea quarks, in *Lattice 2003*, edited by S. Aoki, S. Hashimoto, N. Ishizuka, K. Kanaya, and Y. Kuramashi, *Nucl. Phys. B (Proc. Suppl.)* **129**, 340 (2004); with Massimo di Pierro, Aida X. El-Khadra, Steven Gottlieb, Paul B. Mackenzie, Damian P. Menscher, Mehmet B. Oktay, Masataka Okamoto, and James N. Simone.

21. A more improved lattice action for heavy quarks, in *Lattice 2003*, edited by S. Aoki, S. Hashimoto, N. Ishizuka, K. Kanaya, and Y. Kuramashi, *Nucl. Phys. B (Proc. Suppl.)* **129**, 349 (2004); with M.B. Oktay, A.X. El-Khadra, and P.B. Mackenzie.

20. Semileptonic decays of D mesons in unquenched lattice QCD, in *Lattice 2003*, edited by S. Aoki, S. Hashimoto, N. Ishizuka, K. Kanaya, and Y. Kuramashi, *Nucl. Phys. B (Proc. Suppl.)* **129**, 334 (2004); with Masataka Okamoto, Massimo di Pierro, Aida X. El-Khadra, Steven Gottlieb, Paul B. Mackenzie, Damian P. Menscher, Mehmet B. Oktay, and James N. Simone.

19. Charmonium with three flavors of dynamical quarks, in *Lattice 2002*, edited by R. Edwards, J. Negele, and D. Richards, *Nucl. Phys. B (Proc. Suppl.)* **119**, 586 (2003); with Massimo Di Pierro, Aida X. El-Khadra, Steven Gottlieb, Paul B. Mackenzie, Damian P. Menscher, Mehmet B. Oktay, and James N. Simone.

18. A relativistic $O(a^2)$ improved action for heavy quarks, in *Lattice 2002*, edited by R. Edwards, J. Negele, and D. Richards, *Nucl. Phys. B (Proc. Suppl.)* **119**, 464 (2003); with M. B. Oktay, A. X. El-Khadra, P. B. Mackenzie, and J. N. Simone.

17. Remark on the theoretical uncertainty in B^0-$\bar{B}^0$ mixing, in *Lattice 2002*, edited by R. Edwards, J. Negele, and D. Richards, *Nucl. Phys. B (Proc. Suppl.)* **119**, 622 (2003); with Sinéad M. Ryan.

16. The $B \to D^* l \bar{\nu}$ form factor at zero recoil and the determination of $|V_{cb}|$, in *Proceedings of the XXXI*st *International Conference on High-Energy Physics*, edited by S. Bentvelsen, P. de Jong, J. Koch, E. Laenen (North-Holland, Amsterdam, 2003); with J. N. Simone, S. Hashimoto, P. B. Mackenzie, and S. M. Ryan.

15. The $\bar{B} \to D^* l \bar{\nu}$ form factor at zero recoil and the determination of $|V_{cb}|$, *Nucl. Phys. B (Proc. Suppl.)* **106**, 394 (2002); with J. N. Simone, S. Hashimoto, P. B. Mackenzie, and S. M. Ryan.

14. One-loop renormalization of heavy-light currents, *Nucl. Phys. B (Proc. Suppl.)* **106**, 802 (2002); with J. Harada, S. Hashimoto, K. I. Ishikawa, T. Onogi, and N. Yamada.

13. First results from the asymmetric $O(a)$ improved Fermilab action, in *Lattice '99*, edited by M. Campostrini *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **83**, 971 (2000); with Z. Sroczynski, A.X. El-Khadra, P.B. Mackenzie, and J.N. Simone.

12. The $B \to D^* l \nu$ form-factor at zero recoil, in *Lattice '99*, edited by M. Campostrini *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **83**, 334 (2000); with J.N. Simone, S. Hashimoto, A.X. El-Khadra, P.B. Mackenzie, and S.M. Ryan.

11. B and D semileptonic decays to light mesons, in *Lattice '99*, edited by M. Campostrini *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **83**, 328 (2000); with S.M. Ryan, A.X. El-Khadra, P.B. Mackenzie, and J.N. Simone.

10. A study of sea-quark effects on the charmonium spectrum, in *Lattice '99*, edited by M. Campostrini *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **83**, 283 (2000); with A.X. El-Khadra, S. Gottlieb, P.B. Mackenzie, and J.N. Simone.

9. $B \to D l \nu$ form factors and the determination of $|V_{cb}|$, in *Lattice '98*, edited by T. DeGrand, C. Detar, R. Sugar, and D. Toussaint, *Nucl. Phys. B (Proc. Suppl.)* **73**, 399 (1999); with S. Hashimoto, A.X. El-Khadra, P.B. Mackenzie, S.M. Ryan, and J.N. Simone.

8. $\bar{B} \to \pi l \bar{\nu}$ at three lattice spacings, in *Lattice '98*, edited by T. DeGrand, C. Detar, R. Sugar, and D. Toussaint, *Nucl. Phys. B (Proc. Suppl.)* **73**, 390 (1999); with S. Ryan, A. El-Khadra, S. Hashimoto, P. Mackenzie, and J. Simone.

7. Estimated errors in $|V_{cd}|/|V_{cs}|$ from semileptonic D decays, in *Lattice '98*, edited by T. DeGrand, C. Detar, R. Sugar, and D. Toussaint, *Nucl. Phys. B (Proc. Suppl.)* **73**, 393 (1999); with J.N. Simone, A.X. El-Khadra, S. Hashimoto, P.B. Mackenzie, and S.M. Ryan.

6. The light quark masses with an $\mathrm{O}(a)$-improved action, in *Lattice '96*, edited by C. Bernard, M. Golterman, M. Ogilvie, and J. Potvin, *Nucl. Phys. B (Proc. Suppl.)* **53**, 289 (1997); with T. Onogi, A.X. El-Khadra, B.J. Gough, G.M. Hockney, P.B. Mackenzie, B.P. Mertens, and J.N. Simone.

5. Determining α_S using lattice gauge theory, in the Proceedings of the XXVIth International Conference on High Energy Physics, edited by J.R. Sanford (AIP, New York, 1993); with Aida X. El-Khadra, George M. Hockney, and Paul B. Mackenzie.

4. Designing machines for lattice physics and algorithm investigation, in *Lattice '89*, edited by N. Cabibbo *et al.*, *Nucl. Phys. B (Proc. Suppl.)* **17**, 263 (1990); with M. Fischler, R. Atac, A. Cook, J. Deppe, E. Eichten, I. Gaines, M. Gao, G. Hockney, D. Husby, P. Mackenzie, T. Nash, T. Pham, and T. Zmuda.

3. A site-oriented supercomputer for theoretical physics: the Fermilab Advanced Computer Program MultiArray Processor System (ACPMAPS), FERMILAB-CONF-89/58, presented at the Fourth Hypercubes Concurrent Computers and Applications Conference, Monterey, Calif., 6–8 March 1989; with T. Nash, R. Atac, A. Cook, J. Deppe, M. Fischler, I. Gaines, D. Husby, T. Pham, T. Zmuda, E. Eichten, G. Hockney, P. Mackenzie, and H.B. Thacker.

2. Lattice gauge theory and perturbative QCD meet experiment, in *Nuclear Chromodynamics—Quarks and Gluons in Particles and Nuclei*, edited by S.J. Brodsky and E.J. Moniz (World Scientific, Singapore, 1986); with Steven Gottlieb.

1. Langevin simulations of lattice field theories using Fourier acceleration, *J. Stat. Phys.* **43**, 1073 (1986); with C. Davies, G. Batrouni, G. Katz, P. Lepage, P. Rossi, B. Svetitsky, and K.G. Wilson.