

# Steven Gottlieb

## List of Publications by Year in descending order

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117  
papers

10,313  
citations

41344

49  
h-index

31849

101  
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117  
all docs

117  
docs citations

117  
times ranked

6748  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Computing nucleon charges with highly improved staggered quarks. Physical Review D, 2021, 103, .   | 4.7  | 1         |
| 2  | The anomalous magnetic moment of the muon in the Standard Model. Physics Reports, 2020, 887, 1-166.  | 25.6 | 790       |
| 3  | Hadronic-vacuum-polarization contribution to the muon's anomalous magnetic moment from four-flavor lattice QCD. Physical Review D, 2020, 101, .              | 4.7  | 82        |
| 4  | FLAG Review 2019. European Physical Journal C, 2020, 80, 1.  | 3.9  | 486       |
| 5  | $\langle \hat{t}   K   \hat{a} \rangle$  | 4.7  | 30        |
| 6  | from $\langle \hat{t}   K   \hat{a} \rangle$   | 4.7  | 33        |
| 7  | Lattice computation of the electromagnetic contributions to kaon and pion masses. Physical Review D, 2019, 99, .   | 4.7  | 27        |
| 8  | Lattice QCD Impact on Determination of the CKM Matrix. Springer Proceedings in Physics, 2019, , 235-244.   | 0.2  | 0         |
| 9  | Short-distance matrix elements for $D \rightarrow 0$ -meson mixing from lattice QCD. Physical Review D, 2018, 97, .  | 4.7  | 21        |
| 10 | Strong-Isospin-Breaking Correction to the Muon Anomalous Magnetic Moment from Lattice QCD at the Physical Point. Physical Review Letters, 2018, 120, 152001. | 7.8  | 71        |
| 11 | $\langle B   s   \hat{t} \rangle$ form factors with 2+1 flavors. EPJ Web of Conferences, 2018, 175, 13008.   | 0.3  | 4         |
| 12 | $D$ -meson leptonic decay constants from four-flavor lattice QCD. Physical Review D, 2018, 98, .   | 4.7  | 149       |
| 13 | Up-, down-, strange-, charm-, and bottom-quark masses from four-flavor lattice QCD. Physical Review D, 2018, 98, .   | 4.7  | 67        |
| 14 | Review of lattice results concerning low-energy particle physics. European Physical Journal C, 2017, 77, 112.  | 3.9  | 439       |
| 15 | $B$ form factors from three-flavor lattice QCD. Physical Review D, 2016, 93, .   | 4.7  | 71        |
| 16 | Phenomenology of semileptonic $B$ -meson decays with form factors from lattice QCD. Physical Review D, 2016, 93, .   | 4.7  | 60        |
| 17 | $B$ form factors from three-flavor lattice QCD. Physical Review D, 2016, 93, .   | 4.7  | 71        |
| 18 | $B$ decays   | 4.7  | 82        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Update of $B_s \rightarrow D_s \gamma$ form factors at nonzero recoil and $B \rightarrow D_s^* \gamma$ form-factor ratios and their application to $B \rightarrow D_s^* \gamma$ . Physical Review Letters, 2012, 109, 071802. | 4.7 | 163       |
| 20 | Factors for New Physics Searches from Lattice QCD. Physical Review Letters, 2015, 115, 152002.  | 7.8 | 45        |
| 21 | Electromagnetic effects on the light hadron spectrum. Journal of Physics: Conference Series, 2015, 640, 012052.   | 0.4 | 9         |
| 22 | Charmed and light pseudoscalar meson decay constants from four-flavor lattice QCD with physical light quarks. Physical Review D, 2014, 90, .  | 4.7 | 92        |
| 23 | Equation of state in $^{3+1}D$ . Physical Review D, 2014, 90, .   | 4.7 | 107       |
| 24 | QCD. Physical Review D, 2014, 90, .   | 4.7 | 694       |
| 25 | Leptonic-Decay-Constant Ratio $\frac{f_K}{f_{D^*}}$ from a Lattice QCD Calculation of the $D^* \rightarrow \pi l \bar{\nu}$ form factor. Physical Review Letters, 2013, 110, 172003.  | 7.8 | 36        |
| 26 | Lattice QCD with Physical Light Quarks. Physical Review Letters, 2013, 110, 172003.   | 7.8 | 41        |
| 27 | Lattice QCD ensembles with four flavors of highly improved staggered quarks. Physical Review D, 2013, 87, .   | 4.7 | 173       |
| 28 | Kaon semileptonic vector form factor and determination of $ V_{us} $ using staggered fermions. Physical Review D, 2013, 87, .   | 4.7 | 27        |
| 29 | Refining New-Physics Searches in $B \rightarrow D_s^* \gamma$ with Lattice QCD. Physical Review Letters, 2012, 109, 071802.   | 7.8 | 70        |
| 30 | Fluctuations and correlations of net baryon number, electric charge, and strangeness: A comparison of lattice QCD results with the hadron resonance gas model. Physical Review D, 2012, 86, .                                 | 4.7 | 211       |
| 31 | form-factor ratios and their application to $B \rightarrow D_s^* \gamma$ . Physical Review Letters, 2012, 109, 071802.  | 7.8 | 163       |

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|----|--|-----|-----------|
| 37 | Design of MILC Lattice QCD Application for GPU Clusters. , 2011, , .   |     | 10        |
| 38 | Tuning Fermilab heavy quarks in $\langle \bar{\psi} \psi \rangle$ flavor lattice QCD with application to hyperfine splittings. Physical Review D, 2011, 83, .                      | 4.7 | 40        |
| 39 | Future of Lattice Calculations with Staggered Sea Quarks. , 2011, , .  |     | 0         |
| 40 | Topological susceptibility with the asqtad action. Physical Review D, 2010, 81, .  | 4.7 | 25        |
| 41 | Quarkonium mass splittings in three-flavor lattice QCD. Physical Review D, 2010, 81, .   | 4.7 | 69        |
| 42 | Scaling studies of QCD with the dynamical highly improved staggered quark action. Physical Review D, 2010, 82, .   | 4.7 | 112       |
| 43 | Nonperturbative QCD simulations with $\langle \bar{\psi} \psi \rangle$ of improved staggered quarks. Reviews of Modern Physics, 2010, 82, 1349-1417.                               | 4.7 | 43        |
| 44 | $B \rightarrow D^* \ell \bar{\nu}_\ell$ form factor at zero recoil from three-flavor lattice QCD: A model independent determination of $ V_{cb} $ . Physical Review D, 2009, 79, . | 4.7 | 50        |
| 45 | The Bottom-Up Implementation of One MILC Lattice QCD Application on the Cell Blade. International Journal of Parallel Programming, 2009, 37, 488-507.                              | 1.5 | 10        |
| 46 | Visualization of semileptonic form factors from lattice QCD. Physical Review D, 2009, 80, .  | 4.7 | 28        |
| 47 | form factor from three-flavor lattice QCD: A model-independent determination of $ V_{cb} $ . Physical Review D, 2009, 79, .  | 4.7 | 88        |
| 48 | Equation of state and QCD transition at finite temperature. Physical Review D, 2009, 80, .   | 4.7 | 424       |
| 49 | QCD thermodynamics with 2+1 flavors at nonzero chemical potential. Physical Review D, 2008, 77, .  | 4.7 | 38        |
| 50 | Diquark representations for single heavy baryons with light staggered quarks. Physical Review D, 2008, 77, .   | 4.7 | 3         |
| 51 | QCD equation of state with 2+1 flavors of improved staggered quarks. Physical Review D, 2007, 75, .  | 4.7 | 77        |
| 52 | PREDICTIVE LATTICE QCD. International Journal of Modern Physics A, 2006, 21, 713-719.  | 1.5 | 5         |
| 53 | Properties of light quarks from lattice QCD simulations 1. Journal of Physics: Conference Series, 2005, 16, 160-164.   | 0.4 | 0         |
| 54 | Results for light pseudoscalars from three-flavor simulations. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 231-233.  | 0.4 | 7         |

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|----|---|-----|-----------|
| 55 | Semileptonic and decays in flavor lattice QCD. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 461-463.   | 0.4 | 113       |
| 56 | Three Flavor QCD at High Temperatures. Nuclear Physics, Section B, Proceedings Supplements, 2005, 140, 538-540.   | 0.4 | 0         |
| 57 | Semileptonic Decays of DMesons in Three-Flavor Lattice QCD. Physical Review Letters, 2005, 94, 011601.  | 7.8 | 141       |
| 58 | Charmed-Meson Decay Constants in Three-Flavor Lattice QCD. Physical Review Letters, 2005, 95, 122002.   | 7.8 | 126       |
| 59 | QCD thermodynamics with three flavors of improved staggered quarks. Physical Review D, 2005, 71, .  | 4.7 | 196       |
| 60 | High-Precision Lattice QCD Confronts Experiment. Physical Review Letters, 2004, 92, 022001.   | 7.8 | 276       |
| 61 | Light pseudoscalar decay constants, quark masses, and low energy constants from three-flavor lattice QCD. Physical Review D, 2004, 70, .                                  | 4.7 | 246       |
| 62 | Light hadrons with improved staggered quarks: Approaching the continuum limit. Physical Review D, 2004, 70, .   | 4.7 | 253       |
| 63 | Excited states in staggered meson propagators. Nuclear Physics, Section B, Proceedings Supplements, 2004, 129-130, 230-232.   | 0.4 | 4         |
| 64 | Properties of charmonium in lattice QCD with 2 + 1 flavors of improved staggered sea quarks. Nuclear Physics, Section B, Proceedings Supplements, 2004, 129-130, 340-342. | 0.4 | 19        |
| 65 | The phase diagram of high temperature QCD with three flavors of improved staggered quarks. Nuclear Physics, Section B, Proceedings Supplements, 2004, 129-130, 626-628.   | 0.4 | 6         |
| 66 | Exotic hybrid mesons from improved Kogut-Susskind fermions. Nuclear Physics, Section B, Proceedings Supplements, 2003, 119, 260-262.                                      | 0.4 | 7         |
| 67 | High temperature QCD with three flavors of improved staggered quarks. Nuclear Physics, Section B, Proceedings Supplements, 2003, 119, 523-528.                            | 0.4 | 15        |
| 68 | A lattice study of $b \rightarrow c$ semileptonic decay. Nuclear Physics, Section B, Proceedings Supplements, 2003, 119, 644-646.   | 0.4 | 17        |
| 69 | Lattice calculation of $1\hat{a}^+$ hybrid mesons with improved Kogut-Susskind fermions. Physical Review D, 2003, 68, .   | 4.7 | 52        |
| 70 | Topological susceptibility with the improved Asqtad action. Physical Review D, 2003, 68, .  | 4.7 | 28        |
| 71 | Lattice calculation of heavy-light decay constants with two flavors of dynamical quarks. Physical Review D, 2002, 66, .   | 4.7 | 49        |
| 72 | Benchmarking and tuning the MILC code on clusters and supercomputers. Nuclear Physics, Section B, Proceedings Supplements, 2002, 106-107, 1031-1033.                      | 0.4 | 1         |

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|----|--|-----|-----------|
| 73 | QCD spectrum with three quark flavors. Physical Review D, 2001, 64, .  | 4.7 | 328       |
| 74 | Static quark potential in three flavor QCD. Physical Review D, 2000, 62, .   | 4.7 | 97        |
| 75 | Scaling tests of the improved Kogut-Susskind quark action. Physical Review D, 2000, 61, .  | 4.7 | 77        |
| 76 | Exotic meson spectroscopy from the clover action at $\hat{\beta}^2 = 5.85$ and 6.15. Nuclear Physics, Section B, Proceedings Supplements, 1999, 73, 264-266.                   | 0.4 | 41        |
| 77 | Quenched hadron spectroscopy with improved staggered quark action. Physical Review D, 1998, 58, .  | 4.7 | 48        |
| 78 | B mixing on the lattice: $f_{[sub B]}$ , $f_{[sub B[sub s]]}$ and related quantities. , 1998, , .  |     | 0         |
| 79 | Improving flavor symmetry in the Kogut-Susskind hadron spectrum. Physical Review D, 1997, 55, R1133-R1137.   | 4.7 | 98        |
| 80 | Which Chiral Symmetry is Restored in High Temperature Quantum Chromodynamics?. Physical Review Letters, 1997, 78, 598-601.   | 7.8 | 66        |
| 81 | Equation of state for two flavor QCD at $Nt=6$ . Physical Review D, 1997, 55, 6861-6869.   | 4.7 | 73        |
| 82 | QCD thermodynamics with an improved lattice action. Physical Review D, 1997, 56, 5584-5595.  | 4.7 | 26        |
| 83 | Exotic mesons in quenched lattice QCD. Physical Review D, 1997, 56, 7039-7051.   | 4.7 | 132       |
| 84 | Two-flavor staggered-fermion thermodynamics at $Nt = 12$ . Nuclear Physics, Section B, Proceedings Supplements, 1996, 47, 499-502.   | 0.4 | 3         |
| 85 | The $Nt = 6$ equation of state for two flavor QCD. Nuclear Physics, Section B, Proceedings Supplements, 1996, 47, 503-510.   | 0.4 | 3         |
| 86 | Two-flavor staggered fermion thermodynamics at $Nt=12$ . Physical Review D, 1996, 54, 4585-4594.   | 4.7 | 47        |
| 87 | The $\hat{\beta}^2$ function and equation of state of two flavor QCD. Nuclear Physics, Section B, Proceedings Supplements, 1995, 42, 460-465.                                  | 0.4 | 4         |
| 88 | $\hat{\beta}^2$ function and equation of state for QCD with two flavors of quarks. Physical Review D, 1995, 51, 5153-5164.   | 4.7 | 74        |
| 89 | Effects of spatial size, lattice doubling, and source operators on the hadron spectrum with dynamical staggered quarks at $6g^2=5.6$ . Physical Review D, 1994, 49, 6026-6038. | 4.7 | 10        |
| 90 | Nature of the thermal phase transition with Wilson quarks. Physical Review D, 1994, 49, 3574-3588.   | 4.7 | 21        |

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|-----|---|-----|-----------|
| 91  | Baryon density correlations in high temperature hadronic matter. Physical Review D, 1994, 49, 6051-6062.  | 4.7 | 7         |
| 92  | Finite-size and quark mass effects on the QCD spectrum with two flavors. Physical Review D, 1993, 48, 4419-4434.                                    | 4.7 | 27        |
| 93  | Comparison of lattice Coulomb-gauge wave functions in the quenched approximation and with dynamical fermions. Physical Review D, 1993, 47, 285-294. | 4.7 | 7         |
| 94  | Simple hadronic matrix elements with Wilson valence quarks and dynamical staggered fermions at $6g^2=5.6$ . Physical Review D, 1993, 48, 370-387.   | 4.7 | 15        |
| 95  | Thermodynamics of lattice QCD with two light quarks on a $16^3 \times 8$ lattice. Physical Review D, 1993, 47, 3619-3632.                           | 4.7 | 30        |
| 96  | QCD thermodynamics with two flavors at $N_t=6$ . Physical Review D, 1992, 45, 3854-3861.  | 4.7 | 41        |
| 97  | Hadron spectrum in QCD with valence Wilson fermions and dynamical staggered fermions at $6g^2=5.6$ . Physical Review D, 1992, 46, 2169-2178.        | 4.7 | 24        |
| 98  | Spatial structure of screening propagators in hot QCD. Physical Review Letters, 1992, 68, 2125-2128.  | 7.8 | 63        |
| 99  | Finite size scaling and the QCD high temperature phase transition. Nuclear Physics, Section B, Proceedings Supplements, 1990, 17, 173-176.          | 0.4 | 0         |
| 100 | Hadron spectrum with staggered dynamical quarks. Nuclear Physics, Section B, Proceedings Supplements, 1990, 17, 404-407.                            | 0.4 | 2         |
| 101 | Lattice gauge theory on the Intel parallel scientific computer. AIP Conference Proceedings, 1990, , .   | 0.4 | 0         |
| 102 | Quantum chromodynamics at $6/g^2=5.60$ . Physical Review Letters, 1990, 65, 2106-2109.  | 7.8 | 25        |
| 103 | Hadron spectrum in QCD at $6g^2=5.6$ . Physical Review D, 1990, 42, 3794-3818.  | 4.7 | 46        |
| 104 | QCD thermodynamics with eight time slices. Physical Review D, 1990, 41, 622-625.  | 4.7 | 13        |
| 105 | Four-flavor QCD with intermediate- and light-mass quarks. Physical Review D, 1989, 40, 2389-2409.   | 4.7 | 9         |
| 106 | More on the spectrum with Kogut-Susskind fermions. Nuclear Physics, Section B, Proceedings Supplements, 1989, 9, 259-263.                           | 0.4 | 2         |
| 107 | Phase diagram of four flavor QCD. Nuclear Physics, Section B, Proceedings Supplements, 1989, 9, 326-330.  | 0.4 | 1         |
| 108 | Hadronic screening lengths and quark number susceptibility from lattice QCD. Nuclear Physics A, 1989, 498, 435-439.                                 | 1.5 | 9         |

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|-----|--|-----|-----------|
| 109 | Finite temperature QCD with dynamical fermionsâ€”quark number susceptibility and chiral symmetry restoration. Nuclear Physics, Section B, Proceedings Supplements, 1988, 4, 294-298. | 0.4 | 3         |
| 110 | Hadron masses with two quark flavors. Physical Review D, 1988, 38, 2245-2265.  | 4.7 | 59        |
| 111 | Fermion-number susceptibility in lattice gauge theory. Physical Review D, 1988, 38, 2888-2896.   | 4.7 | 71        |
| 112 | Empirical study of the hybrid-molecular-dynamics approach to the simulation of QCD. Physical Review D, 1987, 36, 3797-3803.  | 4.7 | 11        |
| 113 | Testing an exact algorithm for simulation of fermionic QCD. Physical Review D, 1987, 35, 2611-2614.  | 4.7 | 9         |
| 114 | Quark-number susceptibility of high-temperature QCD. Physical Review Letters, 1987, 59, 2247-2250.   | 7.8 | 160       |
| 115 | Chiral-symmetry breaking in lattice QCD with two and four fermion flavors. Physical Review D, 1987, 35, 3972-3980.   | 4.7 | 92        |
| 116 | Estimating the chiral-symmetryâ€™restoration temperature in two-flavor QCD. Physical Review Letters, 1987, 59, 1513-1516.  | 7.8 | 99        |
| 117 | Hybrid-molecular-dynamics algorithms for the numerical simulation of quantum chromodynamics. Physical Review D, 1987, 35, 2531-2542.   | 4.7 | 357       |