

Published Papers 2010-July 2011

2010:

1. *Hyperon Electromagnetic Properties in Two-Flavor Chiral Perturbation Theory*, F.-J. Jiang, B. C. Tiburzi, Phys. Rev. D **81**, 034017 (2010).
2. *Photon Contribution to the Angular Momentum of Hydrogen Atom*, P. Chen, X. Ji, F. Xu, Y. Zhang, Phys. Lett. **B688**, 55 (2010). [arXiv:0909:1560 [hep-ph]]
3. *P-Odd and CP-Odd Four-Quark Contributions to Neutron EDM*, H. An, X. Ji, F. R. Xu, JHEP **1002**, 043 (2010). [arXiv:0908.2420 [hep-ph]]
4. *Neutron Electric Dipole Moment Constraint on Scale of Minimal Left-Right Symmetric Model*, F. Xu, H. An, X. Ji, JHEP **1003**, 088 (2010). [arXiv:0910.2265 [hep-ph]]
5. *The Relation between Equal-Time and Light-Front Wave Functions*, G. A. Miller, B. C. Tiburzi, Phys. Rev. C **81**, 035201 (2010).
6. *Leptogenesis as a Common Origin for Matter and Dark Matter*, H. An, S-L Chen, R. N. Mohapatra, Y. Zhang, JHEP **1003**, 124 (2010). [arXiv:0911.4463 [hep-ph]]
7. *Extracting Nucleon Magnetic Moments and Electric Polarizabilities from Lattice QCD in Background Electric Fields*, W. Detmold, B. C. Tiburzi, A. Walker-Loud, Phys. Rev. D **81**, 054502 (2010).
8. *Baryons in QCD(AS) at Large $N(c)$: A Roundabout Approach*, T. D. Cohen, D. L. Shafer, R. F. Lebed, Phys. Rev. D **81**, 036006 (2010). [arXiv:0912.1566 [hep-ph]]
9. *Comment on 'Do Gluons Carry Half of the Nucleon Momentum?' by X.S. Chen et. al. (PRL103, 062001 (2009))*, X. Ji, Phys. Rev. Lett. **104**, 63910 (2010). [arXiv:0910.5022 [hep-ph]]
10. *Comment on 'Spin and Orbital Angular Momentum in Gauge Theories: Nucleon Spin Structure and Multipole Radiation Revisited'*, X. Ji, Phys. Rev. Lett. **104**, 039101 (2010).
11. *Chiral Symmetry and Holographic Models of the Baryon: Testing Holographic Models of the Baryon with Model-Independent Relations*, T. D. Cohen, Int. J. Mod. Phys. **A25**, 464-469 (2010). [arXiv:0912.1566 [hep-ph]]
12. *Angular Momentum in Non-Relativistic QED and Photon Contribution to Spin of Hydrogen Atom*, P. Chen, X. Ji, Y. Xu, Y. Zhang, Phys. Lett. **B688**, 55-58 (2010). [arXiv:0909.1560 [hep-ph]]
13. *Color Superconductivity at Large N : A New Hope*, M. I. Buchoff, A. Cherman, T. D. Cohen, Phys. Rev. D **81**, 125021 (2010). [arXiv:0910.0470 [hep-ph]]
14. *Nucleon, Δ and Ω Excited States in $N_f = 2 + 1$ Lattice QCD*, J. Bulava, R. G. Edwards, E. Engelson, B. Joó, H-W. Lin, C. Morningstar, D. G. Richards, S. J. Wallace, Phys. Rev. D **82**, 014507 (2010). [arXiv:1004.5072 [hep-lat]]
15. *Energy Dependence of Direct Detection Cross Section for Asymmetric Mirror Dark Matter*, H. An, S-L Chen, R. N. Mohapatra, S. Nussinov, Y. Zhang, Phys. Rev. D **82**, 023533 (2010). [arXiv:1004.3296 [hep-ph]]

16. *Chiral Lattice Fermions, Minimal Doubling, and the Axial Anomaly*, B. C. Tiburzi, Phys. Rev. D **82**, 034511 (2010). [arXiv:1006.0172 [hep-lat]]

Jan-July 2011:

1. *Kaon Thresholds and Two Flavor Chiral Expansions for Hyperons*, F.-J. Jiang, B. C. Tiburzi, A. Walker-Loud, Phys. Lett. B **695**, 329 (2011). [arXiv:0911.4721 [nucl-th]]
2. *Effective Angular Momentum Operators in NRQED and Matching at One-Loop Order*, P. Chen, X. Ji, Y. Zhang, JHEP **1102**, 107 (2011). [arXiv:1012.3668 [hep-ph]]
3. *Gauged Flavor Group with Left-Right Symmetry*, D. Guadagnoli, R. N. Mohapatra, I. Sung, JHEP **1104**, 093 (2011). arXiv:1103.4170 [hep-ph]
4. *The Phases of Deuterium at Extreme Densities*, P. Bedaque, M. Buchoff, A. Cherman, JHEP **1104**, 094 (2011). [arXiv:1007.1972 [hep-ph]]
5. *Orbifold Equivalence and the Sign Problem at Finite Baryon Density*, A. Cherman, M. Hanada, D. Nobles-Llana, Phys. Rev. Lett. **106**, 091603 (2011).
6. *Quark Mass Variation Constraints from Big Bang Nucleosynthesis*, P. F. Bedaque, T. Luu, L. Platter, Phys. Rev. C **83**, 045803 (2011). [arXiv:1012.3840 [nucl-th]]
7. *Comment on 'Do Gluons Carry Half of the Nucleon Momentum?' by X.S. Chen et. al. (PRL103, 062001 (2009))*, X. Ji, Phys. Rev. Lett. **106**, 259101 (2011).
8. *Chiral Symmetry Restoration at Finite Density in Large N_c QCD*, P. Adhikari, T. D. Cohen, R. R. M. Ayyagari, M. C. Strother, Phys. Rev. C **83**, 065201 (2011). [arXiv:1104.2236]
9. *Baryons and Baryonic Matter in the Large N_c and Heavy Quark Limits*, T. D. Cohen, N. Kumar, K. Ndousse, DOE/ER/40762-493, accepted for publication in Phys. Rev. C (2011). [arXiv:1102.2197 [nucl-th]]
10. *Vortons in Dense Quark Matter*, P. Bedaque, E. Berkowitz, A. Cherman, DOE/ER/40762-494, accepted for publication in Phys. Rev. C (2011). [arXiv:1102.4795 [nucl-th]]
11. *The Phases of Deuterium and Extreme Densities*, P. F. Bedaque, M. I. Buchoff, A. Cherman, JHEP **1104**, 094 (2011). [arXiv:1007.1972 [hep-ph]]

Invited Papers: 2010-July 2011:

1. *Tests of Universality of Baryon Form Factors in Holographic QCD*, A. Cherman, T. D. Cohen, M. Nielsen, "Light Cone 2009: Relativistic Hadronic and Particle Physics (LC 2009)," Sao Jose dos Campos, Brazil, 8-13 Jul 2009, in Nucl. Phys. Proc. Suppl. **199**, 103-106 (2010) [arXiv:0909.5359 [hep-ph]]
2. *Large $N(c)$ QCD and the Hagedorn Spectrum*, T. D. Cohen, Proc. of 11th Hadron Physics: In Honor Of Erasmo M. Ferreira 80th Birthday, 22-27 Mar 2010, Maresias Beach, Sao Paulo, Brazil, ed. by M. Nielsen, F. S. Navarra, M. E. Bracco, AIP Conf. Proc. **1296**, 140 (2010).
3. *Chiral Perturbation Theory in Finite Volume*, B. C. Tiburzi, INT workshop on "Finite-Volume Effects in Few-Body Systems," April 2010, Inst. for Nuclear Theory, Seattle WA.

4. *When Perturbation Theory Fails*, B. C. Tiburzi, INT workshop on “Simulations and Symmetries: Cold Atoms, QCD, and Few-Hadron Systems,” April 2010, Inst. for Nuclear Theory, Seattle WA, INT-10-1.
5. *Leptogenesis as Common Origin for Matter/Dark Matter and Direct Detection*, H. An, “Phenomenology 2010 Symposium (Pheno10),” Univ. of Wisconsin, Madison WI, May 10-12, 2010.
6. *Chiral Symmetry and Holographic Models of the Baryon: Testing Holographic Models of the Baryon with Model-Independent Relations*, T. D. Cohen, Proc. of Crossing the Boundaries: Gauge Dynamics at Strong Coupling: Honoring the 60th Birthday of Misha Shifman, Minneapolis MN, May 2009, ed. M. Shifman, M. Peloso, A. Vainshtein (World Scientific, Hackensack NJ, 2010).
7. *P-odd and CP-odd Four-Quark Contributions to Neutron EDM*, H. An, Intl. Workshop on “Particle’s EDM and Implications,” Shanghai Jiao Tong Univ., P R China, June 14-16, 2010.
8. *Effective Field Theory Approach to Neutron EDM*, X. Ji, Intl. Workshop on “Particle’s EDM and Implications,” Shanghai Jiao Tong Univ., P R China, June 14-16, 2010.
9. *Nucleon, Delta and Omega Excited State Spectra at Three Pion Mass Values*, J. Bulava, R. G. Edwards, B. Joo, D. G. Richards, E. Engelson, H.-W. Lin, C. Morningstar, S. J. Wallace, 28th Int. Symp. on Lattice Field Theory (Lattice 2010), June 14-19, 2010, Villasimius, Sardinia, Italy, in Proc. of Science, PoS LATTICE2010: 129 (2010). [arXiv:1011.1509 [hep-lat]]
10. *Extracting Scattering Parameters Using the Isospin Chemical Potential*, M. I. Buchoff, 28th Int. Symp. on Lattice Field Theory (Lattice 2010), June 14-19, 2010, Villasimius, Sardinia, Italy, in Proc. of Science, PoS LATTICE2010: 132 (2010). [arXiv:1011.1323 [hep-lat]]
11. *The Hagedorn Spectrum and Large N_c QCD*, T. D. Cohen, Workshop on “Excited QCD 2011,” Ecole de Physique des Houches, France, Feb. 20-25, 2011, DOE/ER/40762-500 (May 2011).

Contributed Papers (Published in proceedings or books): 2010-July 2011

1. C. Morningstar, A. Bell, J. Bulava, E. Engelson, J. Foley, K.J. Juge, D. Lenkner, M. Peardon, S. Wallace, C.H. Wong, “The Excited Hadron Spectrum in Lattice QCD Using a New Method of Estimating Quark Propagation,” Proceedings of Hadron 2009, Florida State Univ., AIP Conf. Proc. (2010). [arXiv:1002.0818]
2. W. Detmold, B. C. Tiburzi, A. Walker-Loud, “Nucleon Magnetic Moments and Electric Polarizabilities,” 28th Int. Symp. on Lattice Field Theory (Lattice 2010), June 14-19, 2010, Villasimius, Sardinia, Italy, in Proc. of Science, PoS LATTICE2010: 161 (2010). [arXiv:1008.2011 [hep-lat]]

Theses: 2010 - 2011

1. *Topics in Lattice QCD and Effective Field Theory* by Michael Buchoff (2010)
Advisor: Paulo Bedaque
2. *Transport Coefficients and Universality in Hot Strongly Coupled Gauge Theories* by Aleksey Cherman (2010)
Advisor: Thomas D. Cohen

3. *Neutron Electric Dipole Moment in Minimal Left-Right Symmetric Model*, by Fanrong Xu (2010)
[Joint China-US PhD Program]
Advisor: Xiangdong Ji
4. *The Minimal Left-Right Symmetric Model and Neutron Electric Dipole Moment* by Haipeng An (2011)
Advisor: Xiangdong Ji

Papers Submitted to Journals

1. *The Hagedorn Spectrum and Large N_c QCD in 2+1 and 3+1 Dimensions*, T. D. Cohen, V. Krejcirik, DOE/ER/40762-496 (Apr. 2011). [arXiv:1104.4783 [hep-ph]]
2. *Excited State Baryon Spectroscopy from Lattice QCD*, R. G. Edwards, J. J. Dudek, D. G. Richards, S. J. Wallace (for the Hadron Spectrum Collaboration), DOE/ER/40762-497 (Apr. 2011). [arXiv:1104.5152 [hep-ph]]