

LUCHANG JIN

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EDUCATION

Columbia University, Graduate School of Arts and Sciences

Doctor of Philosophy in Physics

New York, NY

Aug 2016

Peking University, Physics Department

Bachelor of Science in Physics

Beijing, China

May 2011

RESEARCH EXPERIENCE

University of Connecticut

Associate Professor

Assistant Professor

Storrs, CT

2023 - now

2017 - 2023

Brookhaven National Laboratory

Research Associate

Upton, NY

2016 - 2017

GRANTS AND AWARDS

- DOE Early Career Award, 2020.
- Kenneth G. Wilson Award for Excellence in Lattice Field Theory, 2019.
- Three year DOE Grant in High Energy Physics as Co-PI, 2019.
- Intel Fellowship for exceptional research achievements by a PhD student, 2016.
- Champion of Battlecode – MIT AI programming competition (teamed with Greg McGlynn), 2016.
- Joseph C. Pfister Fellowship Fund, 2013-2014.
- Faculty Fellowship in Physics Department, 2011-2013.
- First place in Mini-CUSPEA program, 2011.
- Meritorious Winner in US Mathematical Contest in Modeling, 2010.
- First Prize in Chinese Physics Olympiad, 2006.
- First Prize in Chinese National Olympiad in Informatics in Provinces, 2005.

KEY PUBLICATIONS

1. T. Blum *et al.* [RBC and UKQCD], “Isospin 0 and 2 two-pion scattering at physical pion mass using all-to-all propagators with periodic boundary conditions in lattice QCD,” *Phys. Rev. D* 107, no.9, 094512 (2023) [doi:10.1103/PhysRevD.107.094512](https://doi.org/10.1103/PhysRevD.107.094512) [arXiv:2301.09286].
2. N. Christ, X. Feng, L. Jin, C. Tu and Y. Zhao, “Lattice QCD Calculation of $\pi^0 \rightarrow e^+e^-$ Decay,” *Phys. Rev. Lett.* 130, no.19, 191901 (2023) [doi:10.1103/PhysRevLett.130.191901](https://doi.org/10.1103/PhysRevLett.130.191901) [arXiv:2208.03834].
3. Y. Fu, X. Feng, L. C. Jin and C. F. Lu, “Lattice QCD Calculation of the Two-Photon Exchange Contribution to the Muonic-Hydrogen Lamb Shift,” *Phys. Rev. Lett.* 128, no.17, 172002 (2022) [doi:10.1103/PhysRevLett.128.172002](https://doi.org/10.1103/PhysRevLett.128.172002) [arXiv:2202.01472].
4. X. Feng, L. Jin and M. J. Riberdy, “Lattice QCD Calculation of the Pion Mass Splitting,” *Phys. Rev. Lett.* 128, no.5, 052003 (2022) [doi:10.1103/PhysRevLett.128.052003](https://doi.org/10.1103/PhysRevLett.128.052003) [arXiv:2108.05311].

5. N. H. Christ, X. Feng, [L. C. Jin](#) and C. T. Sachrajda, “Finite-volume effects in long-distance processes with massless leptonic propagators,” *Phys. Rev. D* 103, no.1, 014507 (2021)
[doi:10.1103/PhysRevD.103.014507](#) [[arXiv:2009.08287](#)].
6. X. Feng, M. Gorchtein, [L. C. Jin](#), P. X. Ma and C. Y. Seng, “First-principles calculation of electroweak box diagrams from lattice QCD,” *Phys. Rev. Lett.* 124, no.19, 192002 (2020)
[doi:10.1103/PhysRevLett.124.192002](#) [[arXiv:2003.09798](#)].
7. T. Blum, N. Christ, M. Hayakawa, T. Izubuchi, [L. Jin](#), C. Jung and C. Lehner, “Hadronic Light-by-Light Scattering Contribution to the Muon Anomalous Magnetic Moment from Lattice QCD,” *Phys. Rev. Lett.* 124, no.13, 132002 (2020)
[doi:10.1103/PhysRevLett.124.132002](#) [[arXiv:1911.08123](#)].
8. X. Feng and [L. Jin](#), “QED self energies from lattice QCD without power-law finite-volume errors,” *Phys. Rev. D* 100, no.9, 094509 (2019)
[doi:10.1103/PhysRevD.100.094509](#) [[arXiv:1812.09817](#)].
9. T. Blum *et al.* [RBC and UKQCD], “Calculation of the hadronic vacuum polarization contribution to the muon anomalous magnetic moment,” *Phys. Rev. Lett.* 121, no.2, 022003 (2018)
[doi:10.1103/PhysRevLett.121.022003](#) [[arXiv:1801.07224](#)].
10. T. Izubuchi, X. Ji, [L. Jin](#), I. W. Stewart and Y. Zhao, “Factorization Theorem Relating Euclidean and Light-Cone Parton Distributions,” *Phys. Rev. D* 98, no.5, 056004 (2018)
[doi:10.1103/PhysRevD.98.056004](#) [[arXiv:1801.03917](#)].
11. T. Blum, N. Christ, M. Hayakawa, T. Izubuchi, [L. Jin](#), C. Jung and C. Lehner, “Using infinite volume, continuum QED and lattice QCD for the hadronic light-by-light contribution to the muon anomalous magnetic moment,” *Phys. Rev. D* 96, no.3, 034515 (2017)
[doi:10.1103/PhysRevD.96.034515](#) [[arXiv:1705.01067](#)].
12. T. Blum, N. Christ, M. Hayakawa, T. Izubuchi, [L. Jin](#) and C. Lehner, “Lattice Calculation of Hadronic Light-by-Light Contribution to the Muon Anomalous Magnetic Moment,” *Phys. Rev. D* 93, no.1, 014503 (2016)
[doi:10.1103/PhysRevD.93.014503](#) [[arXiv:1510.07100](#)].

SYNERGISTIC ACTIVITIES

- Chair of the Physics department Particle and Nuclear (PAN) seminars, 2017 - 2022.
- Member of the Search Committee for theoretical atomic, molecular, and optical physics, 2020.
- Conference organizing:
 - Convener of the “Precision Physics at High Intensities” session of “[14th Conference on the Intersections of Particle and Nuclear Physics \(CIPANP 2022\)](#)”. Hilton Orlando, Aug 29 - Sep 4, 2022.
 - Member of the Organizing Committee for “[BNL-HET & RBRC Joint Workshop DWQ@25: The event marks the passage of twenty-five years since the first numerical simulations with Domain Wall Quarks \(DWQ\)](#)”. BNL-HET & RBRC (virtual event), December 13-17, 2021.
 - Chair of the Local Organizing Committee for “[Muon \$g - 2\$ Theory Initiative Hadronic Light-by-Light Working Group Workshop](#)”. University of Connecticut, March 12th - March 14th, 2018.