

CV and Publications

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1 CV

My up-to-date academic CV as of August 2024 can be found [here](#)

2 Academic Publications

2.1 Publications and Preprints

Quantum technologies for climate change: Preliminary assessment, **C. E. Berger**, A. Di Paolo, T. Forrest, S. Hadfield, N. Sawaya, M. Stęchły, and K. Thibault, ArXiv pre-print, July 2021

Complex Langevin and other approaches to the sign problem in quantum many-body physics, **C. E. Berger**, L. Rammelmüller, A. C. Loheac, F. Ehmman, J. Braun, and J. E. Drut, Physics Reports, Vol 892, ISSN 0370-1573, January 2021

[ArXiv](#)

[DOI](#)

[ArXiv](#)

Thermodynamics of rotating quantum matter in the virial expansion, **C. E. Berger**, K.J. Morrell, and J. E. Drut. Physical Review A, 102, 023309, August 2020

Third- and fourth-order virial coefficients of harmonically-trapped fermions in a semi-classical approximation, K. J. Morrell, **C. E. Berger**, and J. E. Drut. Physical Review A, 100, 063626, December 2019

[DOI](#)
[ArXiV](#)

Interacting bosons at finite angular momentum via complex Langevin, **C. E. Berger** and J. E. Drut, Proceedings of the 36th Annual International Symposium on Lattice Field Theory (2019)

[DOI](#)
[ArXiV](#)

Hard-wall and non-uniform lattice Monte Carlo approaches to one-dimensional Fermi gases in a harmonic trap, **C. E. Berger**, J. E. Drut, and W. J. Porter. Computer Physics Communications 208, pp. 103-108 (2016)

[DOI](#)

Harmonically trapped fermions in two dimensions: ground-state energy and contact of $SU(2)$ and $SU(4)$ systems via nonuniform lattice Monte Carlo, Z-H. Luo, **C. E. Berger**, and J. E. Drut, Phys. Rev. A 93, 033604 - (2016)

[DOI](#)
[ArXiV](#)

Energy, contact, and density profiles of one-dimensional fermions in a harmonic trap via nonuniform-lattice Monte Carlo calculations, **C. E. Berger**, E. R. Anderson, and J. E. Drut, Phys. Rev. A 91, 053618 - (2015)

[DOI](#)
[ArXiV](#)

[DOI](#)
[ArXiV](#)

2.2 Doctoral Dissertation

Circumventing the sign problem in rotating quantum matter, **C. E. Berger**, Doctoral Dissertation, UNC Chapel Hill. ProQuest - (2020)

[ProQuest](#)