

Shivesh Pathak

Publication List

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Peer-Reviewed Journal Publications

S. Pathak *et al.* "Excited states in variational Monte Carlo using a penalty method", *J. Chem. Phys.* **154** (2021). (<https://doi.org/10.1063/5.0030949>)

S. Pathak, L.K. Wagner, "A light weight regularization for wave function parameter gradients in quantum Monte Carlo", *AIP Advances* **10** (2020). (<https://doi.org/10.1063/5.0004008>)

S. Pathak, L.K. Wagner, "Non-orthogonal determinants in multi-Slater-Jastrow trial wave functions for fixed-node diffusion Monte Carlo", *J. Chem. Phys.* **149** (2018). (<https://doi.org/10.1063/1.5052906>)

J.T. Uhl, **S. Pathak** *et al.* "Universal Quake Statistics: From Compressed Nanocrystals to Earthquakes," *Scientific Reports* **5**, 16493 (2015). doi:10.1038/srep16493. (<http://www.nature.com/articles/srep16493>)

Conference Presentations

S. Pathak *et al.* "Excited states in variational Monte Carlo using a penalty method", APS March Meeting 2021.

W. Wheeler, **S. Pathak**, J. Rodrigues, C. Lorusso, Y. Chang, Y. Zhou, B. Busemeyer, K. Williams, A. Munoz, L.K. Wagner, "PyQMC: an all-Python real-space quantum Monte Carlo code", APS March Meeting 2021.

B. Busemeyer, J. Rodrigues, **S. Pathak**, L. K. Wagner, "An approach to discovering the low-energy space for effective quantum models of realistic systems", APS March Meeting 2020.

W. Wheeler, **S. Pathak**, L.K. Wagner, "Fitting effective models using QMC parameter derivatives", APS March Meeting 2019.

S. Pathak, L.K. Wagner, "Non-Orthogonal Determinant Multi-Slater-Jastrow Wave Functions in QMC", APS March Meeting 2018.

S. Pathak, L.K. Wagner, "Implementing orbital optimization of quantum Monte Carlo wavefunctions in QWalk", National High Magnetic Field Laboratory Theory Winter School 2017.