

Sarah Skinner

Graduate Student

📞 (412)298-6783 ✉ sarahski@andrew.cmu.edu 🏠 xinucode.github.io 🌐 xinucode 📄 Google Scholar(qrd.by/sss) 📍 Pittsburgh, PA

Education

Carnegie Mellon University (CMU)

Ph.D. in Physics

3.8/4.3

Aug 2020 - Aug 2024

Missouri University of Science and Technology (Missouri S&T)

B.S. Physics, *Minors in Computer Science, Mathematics*

3.9/4.0

June 2016 - Dec 2019

Publications

- [1] J. Bulava, A. D. Hanlon, B. Hörz, C. Morningstar, A. Nicholson, F. Romero-López, **S. Skinner**, P. Vranas, and A. Walker-Loud, *Elastic nucleon-pion scattering at $m=200$ mev from lattice qcd*, *Nuclear Physics B* **987** (2023) 116105.
- [2] T. Vojta, S. Halladay, **S. Skinner**, S. Janušonis, T. Guggenberger, and R. Metzler, *Reflected fractional brownian motion in one and higher dimensions*, *Phys. Rev. E* **102** (Sep, 2020) 032108.
- [3] T. Vojta, **S. Skinner**, and R. Metzler, *Probability density of the fractional langevin equation with reflecting walls*, *Phys. Rev. E* **100** (Oct, 2019) 042142.
- [4] A. Nicola, D. Alonso, J. Sánchez, A. Slosar, H. Awan, A. Broussard, J. Dunkley, E. Gawiser, Z. Gomes, R. Mandelbaum, H. Miyatake, J. A. Newman, I. Sevilla-Noarbe, **S. Skinner**, and E. L. Wagoner, *Tomographic galaxy clustering with the subaru hyper supprime-cam first year public data release*, *Journal of Cosmology and Astroparticle Physics* **2020** (mar, 2020) 044.

Research Projects

Calculating Resonance Information from Lattice QCD (CMU)

Advisor: *Dr. Colin Morningstar*. Investigation into how resonances impact the scattering of hadrons.

Pittsburgh, PA

Jan 2021 - Present

Analysis on GlueX Data (CMU)

Advisor: *Dr. Curtis Meyer*. Isolated scattering channels in Gluex detector data.

Pittsburgh, PA

Aug 2020 - Dec 2020

Scalability Improvement of Plasma Simulation (NASA Glenn)

Advisor: *Dr. Maria Choi*. Improved methods within a hybrid fluid/Monte Carlo plasma simulation in confined geometries to predict physics in an ion thruster.

Cleveland, OH

Jan 2020 - May 2020

Anomalous Diffusion in Confined Geometries (Missouri S&T)

Advisor: *Dr. Thomas Vojta*. Modeled anomalous diffusion determined by the fractional Langevin equation using Monte Carlo methods.

Rolla, MO

Jan 2018 - Dec 2019

Errors in Dark Matter Halos Fit Model (Brookhaven National Laboratories)

Advisor: *Dr. Ane Slosar*. Inserted error into dark matter fit model to assess its significance.

Upton, NY

Jun 2019 - Aug 2019

Binary Black Hole Model (Louisiana State University)

Advisor: *Dr. Peter Diener*. Added rotation parameter for smaller black hole in binary system with a high mass difference.

Baton Rouge, LA

May 2018 - Jul 2018

Computer Skills

C++
MPI

Python
OpenMP

LaTeX
Linux

Fortran
Windows

Mathematica
Microsoft Office

Conferences

American Physical Society Topical Group on Hadronic Physics Meeting

Minneapolis, MI, April 2023

American Physical Society April Meeting

Minneapolis, MI, April 2023

American Physical Society March Meeting

Boston, MA, Mar 2019

Conference for Undergraduate Women in Physics

Corpus Christi, TX, Jan 2019

Workshops

Hampton University Graduate Studies (HUGS) Program (Jefferson Lab)

Newport News, VA, June 2022

International HPC Summer School on Challenges in Computational Sciences

Athens, Greece, June 2022