Kirby Hermansen
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EDUCATION

Michigan State University East Lansing, MI
Ph.D in Physics; Grad. Cert. in High-Performance Computing Exp. May 2023
Tentative Thesis: Total Absorption Spectroscopy of A=57 Neutron-rich Nuclei
University of Notre Dame Notre Dame, IN
B.S. in Physics, Economics May 2015

RESEARCH EXPERIENCE

National Superconducting Cyclotron Laboratory (NSCL/FRIB) East Lansing, MI

2017– *Research Assistant* PI: Hendrik Schatz

- Analyze experimental data to constrain beta-decay transitions in select neutron-rich nuclei
- First author on a sensitivity study of nuclear reaction rates in core-collapse supernovae
- Contributed to 10 NSF-funded experiments and ongoing detector systems commissioning
- Lead guided public tours of the cyclotron facility

2018– *SECAR Beam Development* PI: Fernando Montes

- Built a machine-learning pipeline for optimizing magnet settings in the SECAR separator
- Ported the pipeline to Microsoft Azure resources as a 2021 ICER Cloud Computing Fellow
- Optimized results have been employed in an NSF-funded experiment

2017–2018 *Teaching Assistant*

- Taught 2 semesters of undergraduate physics laboratory

European Organization for Nuclear Research (CERN) Geneva, Switzerland

2014 *Research Assistant* PIs: Diego Tonelli, Lorenzo Moneta

- Analyzed lifetime ratios and kinematic variables to better determine B-meson lifetimes
- Developed elements of the ROOT/R interface library, later distributed in ROOT

Nuclear Science Laboratory (NSL) Notre Dame, IN

2013–2015 *Research Assistant* PI: Philippe Colon

- Created an experimental process for radiocarbon dating using accelerator mass spectrometry

PROFESSIONAL EXPERIENCE

Travelers Insurance Fixed Income Investments Saint Paul, MN

2015–2017 *Senior Associate Quantitative Analyst*

- Assessed return attribution on a $30 billion municipal bond portfolio
- Modeled asset/liability matching to minimize portfolio systematic and curve risk

SKILLS

Computer: Azure, Linux, MS Office, SharePoint, LaTeX, Access
Programming: *Proficient*: ROOT, Python, C++, VBA; *Familiar*: HTML, JavaScript, SQL, R
Language: *Basic*: French, Spanish