

Kirby Hermansen
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(952) 992-9893

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– <i>Research Assistant</i>	PI: Hendrik Schatz
<ul style="list-style-type: none">Analyze experimental data to constrain beta-decay transitions in select neutron-rich nucleiFirst author on a sensitivity study of nuclear reaction rates in core-collapse supernovaeContributed to 10 NSF-funded experiments and ongoing detector systems commissioningLead guided public tours of the cyclotron facility	
2018– <i>SECAR Beam Development</i>	PI: Fernando Montes
<ul style="list-style-type: none">Built a machine-learning pipeline for optimizing magnet settings in the SECAR separatorPorted the pipeline to Microsoft Azure resources as a 2021 ICER Cloud Computing FellowOptimized results have been employed in an NSF-funded experiment	
2017–2018 <i>Teaching Assistant</i>	
<ul style="list-style-type: none">Taught 2 semesters of undergraduate physics laboratory	
European Organization for Nuclear Research (CERN)	Geneva, Switzerland
2014 <i>Research Assistant</i>	PIs: Diego Tonelli, Lorenzo Moneta
<ul style="list-style-type: none">Analyzed lifetime ratios and kinematic variables to better determine B-meson lifetimesDeveloped elements of the ROOT/R interface library, later distributed in ROOT	
Nuclear Science Laboratory (NSL)	Notre Dame, IN
2013–2015 <i>Research Assistant</i>	PI: Philippe Colon
<ul style="list-style-type: none">Created an experimental process for radiocarbon dating using accelerator mass spectrometry	

PROFESSIONAL EXPERIENCE

Travelers Insurance Fixed Income Investments	Saint Paul, MN
2015–2017 <i>Senior Associate Quantitative Analyst</i>	
<ul style="list-style-type: none">Assessed return attribution on a \$30 billion municipal bond portfolioModeled asset/liability matching to minimize portfolio systematic and curve risk	

SKILLS

Computer:	Azure, Linux, MS Office, SharePoint, LaTeX, Linux, Access
Programming:	<i>Proficient:</i> ROOT, Python, C++, VBA; <i>Familiar:</i> Node.js, JavaScript, SQL, R
Language:	<i>Basic:</i> French, Spanish