Kayla Clements

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Education

PhD in Nuclear Engineering September 2020 - 2025

Oregon State University

- Advisor: Dr. Todd Palmer
- GPA: 4.00/4.00
- ARCS Scholar (Achievement Rewards for College Scientists Foundation)

Bachelor of Science in Nuclear Engineering December 2019

University of Florida

- GPA: 3.63/4.00
- Minor: French and Francophone Studies

Work Experience

Graduate Student Intern June 2021 - Present

Sandia National Laboratory, NM

- Develop uncertainty quantification methods for Monte Carlo radiation transport solvers to deconvolve the solver and parametric variances
- Performed and published numerical studies corroborating methods development in peer-reviewed SNL intern proceedings

Graduate Research Assistant September 2020 - Present

Oregon State University, OR

Center for Exascale Monte Carlo Neutron Transport (CEMeNT)

- Use dynamic-mode decomposition to develop an alternate approach to iterative alpha-eigenvalue searches (continuing work published by Dr. Ryan McClarren)
- Primary instructor for junior-level numerical methods course in the School of Mechanical Engineering
- Participated in hackathon at ORNL to implement MFEM-based transport solver on GPU

Reactor Physics Intern June 2019 - August 2019, January 2020 - June 2020

Idaho National Laboratory, ID

- Modeled fuel assemblies in MCNP for INL's Transient Reactor Test Facility using fabrication and technical specification documents from the reactor's previous design work
- Integrated fuel model into an existing model of TREAT's current design and found a critical geometry

Research Assistant April 2017 - May 2019

University of Florida, Nuclear Engineering Department

- Processed the ENDF/B-VIII.0 evaluated cross section libraries with the AMPX code system in SCALE
- Generated and tested the continuous energy and problem-independent multigroup cross section

National Nuclear Data Center Intern June 2018 - August 2018

Brookhaven National Laboratory, NY

- Automated runs of the nuclear reaction code EMPIRE to generate reliable evaluated files across the whole nuclide chart, including nuclei off-stability
- Implemented a previously developed adiabatic model to describe statically-deformed nuclei in the