

# Kayla Clements

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## Education

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### Bachelor of Science in Nuclear Engineering

December 2019

*University of Florida*

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

## Work Experience

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### Experiment Nuclear Analyst Intern

January 2020 - June 2020

*Idaho National Laboratory, ID*

- Continued previous INL project optimizing critical TREAT configurations by integrating upgrade fuel models into a standard TREAT model using MCNP

### Reactor Physics Intern

June 2019 - August 2019

*Idaho National Laboratory, ID*

- Modeled upgrade fuel in MCNP for TREAT, INL's Transient Reactor Test Facility, using fabrication and technical specification documents from the upgrade's previous design work
- Implemented the upgrade fuel model into an existing model of TREAT's current design and found a critical geometry
- Calculated excess reactivity, power peaking factors, and power coupling factors throughout the core using MCNP

### 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 using HiPerGator, the University of Florida's supercomputer
- Generated and tested the continuous energy and problem-independent multigroup cross section libraries to be included in the next release of SCALE

### National Nuclear Data Center Intern

June 2018 - August 2018

*Brookhaven National Laboratory, NY*

- Wrote a bash shell script to automate runs of EMPIRE, a nuclear reaction code, and analyze the data
- Generated 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 rare-earth region and applied it to all isotopes of Gadolinium and Tungsten

### MCNP Technical Project

April 2018

*University of Florida, Nuclear Engineering Department*

- Modeled the steady-state C5G7 benchmark, a 16 assembly LWR mini-core, in MCNP
- Calculated eigenvalue and thermal and fast flux using MCNP

## Involvement

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### Finance Director and Women in Engineering Panel Director

September 2016 - April 2018

*American Nuclear Society UF National Conference Team*

- Created and maintained monetary records for a proposed budget of approximately \$200,000 and worked with committee members to allocate funds
- Maintained relationships with organizations who contributed monetarily to the conference and panelists for a Women in Nuclear panel

## Relevant Coursework and Skills

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- Radiation Interactions and Sources, Reactor Analysis and Computation, Reactor Thermal Hydraulics, Radiation Detection and Instrumentation, Radiation Shielding
- MATLAB, MCNP, AMPX, Bash scripting, Linux systems
- Conversational French