Kayla Clements

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**Bachelor of Science in Nuclear Engineering**

*University of Florida*

* + GPA: 3.63/4.00
  + Minor: French and Francophone Studies
* Alan Jackson Memorial Scholarship Recipient

Education

Work Experience

**Experiment Nuclear Analyst Intern**

*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**

*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
* Used MCNP and MATLAB to create 3D model of plume

December 2019

June 2019 - August 2019

**MCNP Technical Project**

*University of Florida, Nuclear Engineering Department*

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

April 2018

June 2018 - August 2018

January 2020 - June 2020

**Research Assistant**

*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

April 2017 - May 2019

**National Nuclear Data Center Intern**

*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
* Used MCNP and MATLAB to create 3D model of plume

Involvement

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

Relevant Coursework and Skills

**Finance Director and Women in Engineering Panel Director**

*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

September 2016 - April 2018