

KATHRYN A. MUMMAH

✉ katiemummah@gmail.com  [nuclearkatie](#)  website & CV [nuclearkatie.com](#)

Objective

Nuclear engineering PhD student seeking national lab roles to expand further into the global security mission after finishing a PhD in nuclear engineering with an emphasis on international nuclear safeguards. Systems thinker experienced in modeling movements of nuclear material throughout the nuclear fuel cycle. Available summer 2024

Education

University of Wisconsin-Madison

PhD Candidate, Nuclear Engineering and Engineering Physics, GPA: 3.8 / 4.0

Master of Science, Nuclear Engineering and Engineering Physics

Graduate Certificate in Science Communication, Graduate Certificate in Energy Analysis and Policy

Madison, WI

Expected 2024

May 2020

University of Illinois at Urbana-Champaign

Bachelor of Science, Nuclear, Plasma, and Radiological Engineering, GPA: 3.6 / 4.0

Minor in Atmospheric Sciences

Urbana, IL

May 2017

Research

University of Wisconsin-Madison Department of Engineering Physics

Graduate Research Assistant, Computational Nuclear Engineering Research Group

- Developing software to model the lifecycle of nuclear materials within Cyclus for safeguards applications
- Reviewing communication efforts in consent-based siting of radioactive waste disposal facilities
- Designed uranium enrichment cascades in Cyclus to model post-JCPOA cascade performance scenarios

Madison, WI

Sept. 2017 – PRESENT

Los Alamos National Laboratory

Graduate Research Assistant (GRA), NEN-1 Safeguards Science & Technology

- Generating synthetic nuclear fuel cycle models, converting simulations into nuclear material accounting reports
- Identifying novel signatures of diversion through comprehensive analysis of accounting reports

Los Alamos, NM

Jan. 2021 – PRESENT

GRA, NEN-2 Advanced Nuclear Technology & Glenn T. Seaborg Summer Research Fellow

May – Aug. 2018

Visiting Student Guest, NEN-5 Systems Design & Analysis

May – Aug. 2017

Idaho National Laboratory

Intern, Fuels Modeling & Simulation

Idaho Falls, ID

May – Aug. 2016

Interests

- Nuclear fuel cycle simulation
- International nuclear safeguards
- Nuclear security
- Radioactive waste disposal
- Data Science
- Risk perception and communication
- Advanced nuclear deployment
- Agent-based modeling
- Emergency Response

Selected Honors & Awards

2019-24: Graduate Fellow, Nuclear Nonproliferation International Safeguards Program

2022: ANS Presidential Citation

2022: Best Presentation in Nuclear Technology & Society, ANS 2022 Student Conference

2020: First Place, Institute of Nuclear Materials Management J.D. Williams Student Paper Award

2017-19: ANS Fuel Cycle and Waste Management Division Randall Scholar

2016: ANS Student Sections Committee Commendation for Service and Leadership

Leadership & Service

American Nuclear Society (ANS)

Current Active Roles

- Chair, Student Sections Committee
- Treasurer, Decommissioning & Environmental Sciences

Member since 2013

- Executive Committee, Fuel Cycle and Waste Management Division

Relevant Former Roles

- Student Director, ANS Board of Directors

- Exec Comm, Nuclear Nonproliferation Policy Division