

Kathryn A. Mummah

UNDERGRADUATE STUDENT

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Education

University of Illinois

Urbana, IL

B.S. NUCLEAR, PLASMA, AND RADIOLOGICAL ENGINEERING

May 2017

- GPA: 3.61 / 4.00
- Concentration in Power, Safety, and the Environment
- Minor in Atmospheric Sciences

Research

Advanced Reactors and Fuel Cycle Research Group

UNDERGRADUATE RESEARCH ASSISTANT

Aug. 2016 - PRESENT

- Developed introductory experience in running the CYCLUS fuel cycle code
- Conducted literature review on previous fuel cycle transition studies

Analysis of Reactor Transients and Stability Research Group

UNDERGRADUATE RESEARCH ASSISTANT

Jan. 2016 - PRESENT

- Developed BISON cases benchmarking pellet cladding mechanical interactions, building on summer work at Idaho National Lab

Experimental Thermal Hydraulics Research Group

UNDERGRADUATE RESEARCH ASSISTANT

Aug. 2015 - Dec. 2015

- Developed a Computer-Aided-Design (CAD) 3D model of a section of lab space with over 30 pipes and supports for use in developing laboratory experiments

Experience

Idaho National Laboratory

Idaho Falls, ID

FUELS MODELING & SIMULATION INTERN

May. 2016 - Aug. 2016

- Benchmarked the BISON fuel performance code with experimental data from the Halden Research Reactor, focusing on pellet clad mechanical interactions (PCMI)
- Organized the collection of donations at 16 different buildings/complexes on the INL site. Ultimately collected \$1500, 100 handwritten cards, and 150 lbs of donations to be sent to active servicemembers, veterans, and first responders through Operation Gratitude.

University of Illinois

Urbana, IL

TEACHING ASSISTANT

- Lead Engineering Learning Assistant (ELA) for ENG 100 for Nuclear, Plasma, and Radiological Engineering Department. Fall 2015 & '16
- Teaching Assistant for NPPE 100: Introduction to Nuclear, Plasma, and Radiological Engineering. Fall 2014, '15, & '16
- Teaching Assistant for NPPE 101: Introduction to Energy Sources. Spring 2014 & '15
- Grader for ASTR 100: Introduction to Astronomy. Fall 2014

Oyster Creek Generating Station

Forked River, NJ

REACTOR ENGINEERING INTERN

Jun. 2015 - Aug. 2015

- Aligned 700 employees on Reactivity Management (RM) responsibility. For example, the weekly plant newsletter includes a "Reactivity Management System of the Week" that focuses on how that particular system could effect reactivity, or power changes in the core.
- Verified Special Nuclear Material Inventory and bundle orientations for spent fuel
- Lead a raffle fundraiser that raised \$600 to place retired Military Working Dogs in loving homes, often with retired servicemembers.

Exelon Generation Cantera Regional Headquarters

Warrenville, IL

SPENT FUEL & DECOMMISSIONING INTERN

Jun. 2014 - Aug. 2014

- Accumulated and analyzed data on fuel cycle burnups and fuel assembly failures.
- Created and reviewed documents to track all Special Nuclear Material

Leadership

Engineering Ambassadors

RECRUITMENT & PUBLICITY CHAIR

Apr. 2016 - PRESENT

AMBASSADOR

Nov. 2015 - PRESENT

American Nuclear Society

LOCAL SECTIONS COMMITTEE

Jun. 2016 - PRESENT

STUDENT SECTIONS COMMITTEE

American Nuclear Society Student Section

MEMBER

Aug. 2013 - PRESENT

PRESIDENT

Apr. 2015 - Apr. 2016

INTERNAL VICE PRESIDENT

Apr. 2014 - Apr. 2015

FRESHMAN PRESIDENT

Oct. 2013 - Apr. 2014

Women in Nuclear Student Section

FOUNDER

Aug. 2015

MEMBER

Aug. 2015 - PRESENT

Engineering Council

UNDERGRADUATE ADVISORY BOARD REPRESENTATIVE

Apr. 2014 - PRESENT

STUDENT INTRODUCTION TO ENGINEERING (SITE) RESERVATIONS CHAIR

May 2015 - May 2016

Student Chapter of the American Meteorological Society

SECRETARY

Apr. 2015 - Apr. 2016

Illinois Space Society

RASC-AL TECHNICAL TEAM

Aug. 2014 - Dec. 2014

REPRESENTATIVE TO STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE (SEDS)

Sept. 2013 - Sept. 2014

Honors & Awards

SCHOLARSHIPS

2017-2017	Dale W. and Wanda L. Weaver Engineering Scholarship
2016-2017	Crowe Horwath Scholarship
2016-2017	Edith and Harry Darby Leadership Scholarship
2015-2017	DOE Nuclear Energy University Program (IUP) Scholarship Award
2015-2017	Nuclear Regulatory Commission Scholarship
2015-2017	American Nuclear Society Decontamination & Environmental Sciences Division Scholarship
2015-2017	Catherine Pritchard Undergraduate Scholarship
2015-2016	Exelon Energy for Education Scholarship Award
2014-2016	National Academy for Nuclear Training Scholarship
2013-PRESENT	Mike Harper Leadership Scholarship

AWARDS

2016	Alpha Nu Sigma
2016	William R. Schowalter Award
2016	American Nuclear Society Commendation for Service and Leadership
2014	American Nuclear Society Most Committed Member
2013	University of Illinois James Scholar

Presentations

2016 American Nuclear Society Winter Meeting - Student Poster Session

Las Vegas, NV

INVESTIGATING THE EFFECTS OF FUEL PELLET GEOMETRY ON PELLET CLADDING MECHANICAL INTERACTION (PCMI)
USING BISON

Nov. 2016

2016 American Nuclear Society Student Conference

Madison, WI

PUBLIC IMAGE IN SPENT FUEL DISPOSAL: LESSONS LEARNED FROM SWEDEN'S SKB

Apr. 2016

- Winner of "Public Image" technical track

2015 American Nuclear Society Winter Meeting - Student Poster Session

Washington, DC

REACTIVITY MANAGEMENT: MORE THAN JUST REACTOR ENGINEERS

Nov. 2016

Professional Organizations

2014 - PRESENT **Student Member** American Nuclear Society

2015 - PRESENT **Student Member** Society of Women Engineers

2015 - 2016 **Student Member** American Meteorological Society