

# Kathryn A. Mummah

UNDERGRADUATE STUDENT

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## Education

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### University of Illinois

Urbana, IL

B.S. NUCLEAR, PLASMA, AND RADIOLICAL ENGINEERING

May 2017

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

## Experience

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### 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 NPRE 100: Introduction to Nuclear, Plasma, and Radiological Engineering. Fall 2014, '15, & '16
- Teaching Assistant for NPRE 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

## Research

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### Advanced Reactors and Fuel Cycle Research Group

Aug. 2016 - PRESENT

UNDERGRADUATE RESEARCH ASSISTANT

- Introductory experience in CYCLUS fuel cycle code

### Analysis of Reactor Transients and Stability Research Group

Jan. 2016 - PRESENT

UNDERGRADUATE RESEARCH ASSISTANT

- Gained introductory experience in running the BISON fuel performance code
- Continued development of BISON cases benchmarking pellet cladding mechanical interactions

### Experimental Thermal Hydraulics Research Group

Aug. 2015 - Dec. 2015

UNDERGRADUATE RESEARCH ASSISTANT

- 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

## Leadership

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### Engineering Ambassadors

RECRUITMENT & PUBLICITY CHAIR  
AMBASSADOR

Apr. 2016 - PRESENT  
Nov. 2015 - PRESENT

### American Nuclear Society

LOCAL SECTIONS COMMITTEE  
STUDENT SECTIONS COMMITTEE

Jun. 2016 - PRESENT

### American Nuclear Society Student Section

MEMBER  
PRESIDENT  
INTERNAL VICE PRESIDENT  
FRESHMAN PRESIDENT

Aug. 2013 - PRESENT  
Apr. 2015 - Apr. 2016  
Apr. 2014 - Apr. 2015  
Oct. 2013 - Apr. 2014

### Women in Nuclear Student Section

FOUNDER  
MEMBER

Aug. 2015 - PRESENT

### Engineering Council

UNDERGRADUATE ADVISORY BOARD REPRESENTATIVE  
STUDENT INTRODUCTION TO ENGINEERING (SITE) RESERVATIONS CHAIR

Apr. 2014 - PRESENT  
May 2015 - May 2016

### Student Chapter of the American Meteorological Society

SECRETARY

Apr. 2015 - Apr. 2016

### Illinois Space Society

RASC-AL TECHNICAL TEAM  
REPRESENTATIVE TO STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE (SEDS)

Aug. 2014 - Dec. 2014  
Sept. 2013 - Sept. 2014

## Honors & Awards

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### SCHOLARSHIPS

- 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
- 2013-2016 Mike Harper Leadership Scholar

### 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

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### 2016 American Nuclear Society Student Conference

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

*Madison, WI*

*Apr. 2016*

- Winner of "Public Image" technical track

### 2015 American Nuclear Society Winter Meeting & Vendor Technology Expo -

#### Student Poster Session

REACTIVITY MANAGEMENT: MORE THAN JUST REACTOR ENGINEERS

*Washington, DC*

*Nov. 2016*

## Professional Organizations

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

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

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