

# Glasstone Award Application

## Oregon State

## University

## ANS Student Chapter

May 2<sup>nd</sup>, 2014



College of Engineering

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## Introduction

The Oregon State University ANS chapter currently includes over 200 student members, with nine student officers. From their freshman year, the ANS chapter encourages nuclear engineering and radiation health physics students to join their respective professional societies.

Last year, five Oregon State University students presented papers at the ANS National Student Conference hosted by Penn State. Oregon State students went on to represent the department at the 2015 Student Conference at Texas A&M this year.

As a registered student group at Oregon State University, our ANS chapter provides nuclear education and outreach through student involvement fairs, university and department organized activities, elementary school science fairs, K-12 and public presentations. OSU ANS members also host tours of the facilities at the Radiation Center.

## Executive Committee Officers

### Ari Foley, President

Ari Foley is a junior in Nuclear Engineering with a minor in Resource Economics at Oregon State and the President of the OSU chapter of ANS. Prior to university, she lived in Portland, Oregon; Austin, Texas; and Lucan, Co. Dublin, Ireland with her family. At OSU, she has participated in the LSAMP (Louis Stokes Alliance for Minority Participation) Bridge program, been the Education Chair for the Oregon State Space Society, and a math tutor at College Hill Alternative High school. She attended the ANS National Student Conference at MIT in 2013 and at Penn State in 2014. Outside of academics, Ari enjoys baking, reading, running, playing Tetris, and roller derby.

### Alex Dueñas, Vice-President

Alexander Dueñas is a junior in nuclear engineering with a minor in Business and Entrepreneurship at Oregon State University. He currently works at the Multi-Application Small Light Water Reactor test facility at Oregon State University as a research assistant to Dr. Wu. He is from San Diego, California and enjoys motorsport, running, and reading about nuclear physics.

### Cristina Martinez Galvez, Secretary

Cristina Martinez Galvez is a sophomore in nuclear engineering. She has attended and presented at the Oregon NASA Space Grant Student Symposium. She has participated in creating two clubs at OSU, Gravity and Space research club and Adelante en Accion; as well as participating in the LSAMP (Louis Stokes Alliance and Minority Participation) program, SHPE (Society of Hispanic Professional Engineers), SWE (Society of Women Engineers), practices Kendo with the Kendo club at OSU, is a tutor for the NE/RHP department at OSU. She also enjoys playing racquetball, video games, and reading.

### Sophia Uchiyama, Financial Chair

Sophia Uchiyama is a Pre-Nuclear Engineering major at Oregon State University. She is a military child and doesn't really have a hometown, although considers it to be Chicago, IL. She loves arts and crafts, playing soccer, hiking, traveling, rock climbing, and participating as a member of SWE.

### Musa Moussaoui, Social Chair

Musa Moussaoui is a sophomore at Oregon State University studying Nuclear Engineering. He is a native of Corvallis. In high school, he found a passion for Engineering through outreach programs at Oregon State. Currently, he works as an undergraduate research assistant to Dr. Wade Marcum on the Hydro-Mechanical Fuel Test Facility. While earning his baccalaureate, he hopes to explore new facets of nuclear power and complete his undergraduate research. Some of Musa's hobbies include cooking, camping, and watching movies.

### Jordan Cox, Outreach Chair

Jordan Cox is a second year Masters student in Nuclear Engineering. His research focuses on thermal hydraulics surrounding pebble bed reactors. Besides being active in ANS Jordan works with Engineers Without Borders and volunteers for the Trevor Project. Jordan believes that engineered solutions only become valuable when they are shared with others to improve the quality of their lives. Jordan hopes to obtain his Masters and Ph.D. in nuclear engineering and eventually to implement nuclear solutions in the developing world. Besides academics Jordan really likes food. Like a lot.

### Joshua Halstead, Sophomore Representative

Josh Halsted is a second year student majoring in nuclear engineering at Oregon State University. He is uncertain what he wants to do with his degree after graduation, but would like to work in the fields of radiochemistry, reactor design, nuclear nonproliferation, and/or the aerospace industry. Josh has also expressed interest in graduate school for chemical engineering.

### Hemere Mosqueda-Ramirez, Freshman Representative

Hemere Mosqueda-Ramirez is a freshman pursuing a bachelor's of science in Nuclear Engineering while also pursuing a minor in Naval Science. During the summer before his freshman year, he participated in the LSAMP (Louis Starks Alliance for Minority Participation) bridge program. He also is in an intramural flag football side for the Navy ROTC (Reserved Officer Training Corps) program on campus. In his spare time, Hemere enjoys running, playing pokemon, going out with friends, and participating in the dance club on campus.

## Professional Events

### ANS Winter Conference

In January, the OSU ANS put on the annual Winter Conference, which provided the opportunity for students in the NERHP department to present their research and gave a chance for students to present within our department. Overall, thirty students presented at the conference. Later that week the department hosted a Student Recognition Dinner to provide celebration as well awards for NERHP students. Preparing and planning this event also provided some further experience with professional conferences to the ANS officers.

### Professional Presenting Talk

As a favor to our ANS Chapter, the NERHP Department's own Public Information Specialist, Jens Odegaard, produced and presented a presentation on Professional Presenting. While many of the tips were for professional presenting in general, he also highlighted aspects of presenting specifically for our ANS Winter Conference that would help students rank higher in order to gain funding to travel to Texas A&M for the National Student Conference. For the students who were unable to attend the talk, it was recorded and sent out to all of the students in the department.

The video can be found here: [https://media.oregonstate.edu/media/t/0\\_8gwzio4l](https://media.oregonstate.edu/media/t/0_8gwzio4l)

### Proposal to Host the National Conference 2016

The officers this year began in the summer of 2014 to edit the last proposal to host the national conference at Oregon State University. This was the second year of submitting the proposal, but due to an unavoidable issues with email, it was the first year that our proposal was judged against other schools since hosting in 2007. We spent many weekends and meetings going over this proposal and have plans to continue polishing it for the potential to host in 2017.

## Outreach Events

### College of Engineering Cupcake Social

Tabling at the College of Engineering Cupcake Social was the first event our chapter participated in the 2014-2015 school year. This event, hosted yearly by the OSU College of Engineering, is during the freshman orientation week before fall term starts. All engineering student groups table and work to get freshman involved. Our chapter had demonstrations and flyers to give out to students with an interest in nuclear science and technology.



### Nuclear Science Week Tabling

For nuclear science week 2014 the ANS student chapter focused its efforts on outreach to the general public. To do this space was rented on the university quad, or common outdoor area, where a table, nuclear demonstrations, and posters were set up. Small pamphlets and bookmarks were handed out to the public. Many informative nuclear conversations took place surrounding the policy, safety, and benefits of nuclear Energy. This event took place over 6 hours, split between multiple days, during the busiest times of the day. The number of people contacted during this event is approximately 500-750.



### Father's Weekend Radiation Center Facility Tours

The Father's Weekend tours led people through the research facilities in the Radiation Center such as APEX and the TRIGA reactor on campus. The public learned about the research done with reactors and the safety included within the facility. Information about how objects are irradiated and other items helped inform the public to lessen the stigma and promote the use of nuclear power. Before and after the tour the C104 classroom would have stations with Geiger counters,

slide shows, a cloud chamber, and speakers that would help provide more information about nuclear power. These tours were able to reach about 150 - 200 people.

### Mother's Weekend Radiation Center Facility Tours

On May 2<sup>nd</sup>, 2015, we will be having Mother's Weekend Tours of the Radiation Center facilities. This is in the works to happen during the OSU Mother's Weekend Tours which is a campus-wide event every May. These follow the same guidelines of the Father's Weekend Tours.

### Explore Engineering Careers Night

Like many other Engineering student groups, we had an American Nuclear Society table at the Explore Engineering Careers Night. This was an event hosted by the College of Engineering for high schools and college freshman interested in getting to know more about the different engineering majors Oregon State University has to offer. We talked to many high school students (with many intense parents) and transfer students who were interested in pursuing the nuclear engineering major.



### Nuclear Science Talks at Crescent Valley High School

During the last week of April, volunteers from the NERHP Department went to Crescent Valley High School in Corvallis to give talks and demonstrations on nuclear science. This happened over a period of two days where the students came in to classes in the morning.

## Social Events

### ANS Welcome Barbecue

At the beginning of each fall term, the ANS Hosts a BBQ for all students in the department and community. This year we had great weather and a huge turnout of over 200 students, staff, faculty and friends. With the suggestion of our many allergy-having ANS officers, there was special precaution taken for gluten-free, dairy-free, nut-free, and vegetarian/vegan diets. The director of the Radiation Center helped to cook burgers and prepare the hot dogs. Overall, this event was a great success with freshman to grad students interacting.



## Nuclear Science Week Bowling

After two days of outreach tabling, we finished the week with a Bowling night at the on-campus bowling alley in the Memorial Union. This was the social event hosted for the year outside of the ANS Welcome Barbecue. There was cake and some small snacks provided for students. The entire bowling center was rented out and a large group of students came. Mostly grad students and freshman came, which was an interesting mixture of people to have together. A photographer and journalist from the OSU magazine, *Beaver's Digest*, came to write an article on the American Nuclear Society Chapter at Oregon State.



## Nuclear Movie Night – *The China Syndrome* (1979)

Our ANS Chapter hosted a movie screening of *The China Syndrome* during Winter Term. The movie was selected based off of a poll distributed to the students in the department and catered with pizza and beverages. The event had a considerable turnout of around 40 students and several family members ranging from freshman to graduate students. Everyone was able to enjoy the suspenseful thriller with a full stomach and quenched palate.



## Nuclear Movie Night – National Science Foundation: Fluid Mechanics Series

Along with the nuclear engineering juniors in Fluid Mechanics, we hosted a movie night to watch different videos from the MIT Fluid Mechanics Series. This was very successful for students taking Fluid Mechanics as well as older students who wanted a refresher. A possibility for student s to



## Bowling at Highland Bowl

The last social event the chapter hosted was at Highland Bowl, an off campus bowling alley. This was at the request of the older students since the off-campus location allowed them to order beer

for themselves. This was a very low-key event hosted on a Friday evening at the beginning of Spring term.

## Across Organizations

Oregon State University student ANS members are active leaders and members in their local community, and are active in dozens of student groups, philanthropic organizations, professional teams, and athletic affiliations.

- Navy ROTC
- NERHP department Academic Tutors (ANS executive committee)
- LSAMP (Louis Stokes Alliance for Minority Participation)
- OSU Honors Society
- Health Physics Society
- Alpha Nu Sigma chapter executive members
- Oregon State Space Society and Rocketry Team
- ANS Cherenkov FC Soccer Team
- GRASP (Gravity and Space Research)
- Adelante en Accion
- OSU Kendo Club

## Conclusion

The ANS chapter at Oregon State University has been highly involved with educating the public and its students about the nuclear field. It is committed to fostering professional development with its students and promoting a community for them. This year the ANS chapter was able to host numerous outreach events and host its own winter conference for students to present their research and help prepare them for presenting at this year's 2015 National Student Conference. The chapter is proud to have worked on the proposal to host the National Student Conference and is looking forward to pursuing it again next year.