

RPI ANS Student Section 2011-2012 Glasstone Submission

Submission Summary

Enclosed is the Rensselaer Polytechnic Institute Student Section submission for consideration for the 2011-2012 Glasstone Award. Included in this document is a summary of the past year's general section activities, details of section events, committee actions, and conference attendance results. Accounts included have been prepared by committee heads and the section Board of Governors.





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RENSSELAER POLYTECHNIC INSTITUTE STUDENT SECTION
Glasstone Submission for 2011-2012 Academic Year

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Introduction

The Rensselaer Polytechnic Institute Section of the American Nuclear Society, founded in 1964, has become a fixture in the RPI community, growing in numbers, activities, and influence. The objectives of the Section are to 1) continually support the nuclear community through increased awareness by public education, 2) to support the Section by providing opportunities of employment, research, and furthering knowledge in the nuclear field, 3) to increase communication between the Section, faculty, and department, and 4) create an atmosphere of a true community through networking and social activity. By working closely with the Mechanical, Aerospace, and Nuclear Engineering (MANE) Department, the RPI community, industry, the local community, and the national American Nuclear Society, the Section has been able to accomplish these objectives for the 2011-2012 academic year.

This year has marked a new dedication to both Section-Department and Section-Industry partnerships. With the recent appointment of Dr. George Xu as the Nuclear Engineering Program Direction, the Section has been drafted into service with select faculty members to study and make recommendations for possible improvements to the Nuclear Engineering program. For the first time in over a decade, the Section has had a voice at faculty and department meetings and has been able to voice the concerns of the students. Additionally, the local section, NENY-ANS, partnered with the RPI Student Section to host four technical presenters and guest speakers over the course of the academic year, including Dr. Eric Loewen and Dr. Salame-Alfie. The strong reception of these events has earned the student section a voting seat on the local section's Board of Governors in the upcoming year as part of an ongoing effort to build a "pipeline" between students and industry professionals.

Like the previous year, mild membership drop off due to a shrinking incoming class size has spurred the Section to focus on retaining its members through an increase in social activities and major efforts towards strengthening the Section and the bonds between upper and lower classmen. This was done while maintaining the growth of events directed at providing the Section with employment and research opportunities, and expanding students' knowledge of the field while educating the public.

The goals of the Section continue to be achieved through the use of five standing committees: Professional Relations, Institute Relations, Outreach, Social, and Conference. As the institute



and department begin a program of drafting a larger number of nuclear engineering graduate students, the section elected to take a proactive step towards including these students in our activities with the formation of the Graduate and Alumni Relations committee. These six committees, made up of dedicated Section members, have achieved the goals of the Section through their events and programs.

Administrative Updates

Recruitment and Membership

Since 2007, the number of incoming freshmen in the nuclear program at RPI has annually decreased. Despite the corresponding decrease in active members, the Section has maintained or even grown its number of events from previous years. For the 2011-2012 academic year, the Section had a total of 30 active members, down from last year's 32 active members. The number of unique individuals attending meetings, though, was 97, marking a significant rise from the 79 unique individuals in the previous year. The Section has 5 active graduate students, with 8 unique graduate students attending meetings – also an increase from previous years.

This decrease in active members has sparked the Section into action, prompting an increase in social activities. The active members are mostly comprised of upper classmen for several reasons. Coursework specification in the field typically occurs in the late-sophomore or early-junior year. Accordingly, students want to become more involved in their field of study, as well as receive the benefit of catered tutoring as they enter their major-specific classes. As the date of graduation looms closer, the pursuit of internships and employment increases the membership as well. Upperclassmen join for these benefits, however underclassmen typically such motivations. The key benefit to joining the Section as a freshman is the community and support that it provides - underclassmen can get advice, friendship, and guidance on future academic choices and connections with future alumni. The underclassmen that are very active expressed their regret at not having joined earlier, as they realize what they have missed.

Increasing the number of social events promotes the level of community within the Section, and with this, the Section hopes to attract new freshmen and sophomores in the coming years. Recruitment and retention of underclassmen is also supported by the mentoring program, in which underclassmen are paired with upperclassmen. Younger members of the Section are



recruited through short presentations by upperclassmen in the class Introduction to Nuclear Engineering, as well as class announcements of meetings by professors and fellow students.

Section Bylaws and Rules Update

The latest changes to the Section bylaws and rules occurred in Spring 2011, in which the Section voted to adopt the most recent edition of the standard bylaws of the Society and amend the Section rules to include the Conference Committee as a formally recognized special committee.

Board of Governors

The 2011-2012 Board of Governors met every Monday at 7:00 pm to handle the activities and management of the Section. For the last two years each officer has joined a committee in order to increase the communications between the committees and the officers. This practice also encouraged the Section to become more involved in the committees. It was observed by the previous Board of Governors that this method was not enough. Committee heads were only in communication with the Board through emails or committee meetings, whose frequency was determined by the committee head. This was observed to be ineffective in helping the committees to complete their objectives in the previous years.

Continuing in the previous Board's footsteps, it was decided that in order to accomplish the lengthy list of activity goals set out in the 2011-2012 Plan of Action presented by the Board of Governors and approved by the Section, the appointed committee heads would join in on the first half of the weekly executive meetings as deemed necessary. This, in addition to each officer's participation in a committee, had wonderful success. During these joint meetings the committee heads would discuss their progress with the officers, trading ideas on how to do things, who to talk to, and what would work best. The officers would use the time to inform committee heads of new opportunities, remind them of short term goals, and to urge the continual planning of long term goals. This setup worked well for both parties; the committee heads were held accountable and as such held regular meetings with their committees. At the same time, the officers also had a bigger audience to test ideas for new events.

The 2011-2012 Board of Governors included President Matthew Riblett '12, Vice-President Briana Bollinger '12, Secretary Melissa Urquhart '13, and Treasurer Ryan Norval '12. The recently elected Board of Governors for the 2012-2013 academic year includes President



Nicholas Thompson, Ph.D. Candidate, Vice President Brian Waite '13, Secretary Matthew Zimmer '15 and Treasurer Matthew Riblett, now a Ph.D. Candidate.

Member of the Month

In continuing RPI ANS tradition, the Board of Governors, after conferring with the committee heads, selects one student a month to be awarded a trophy and the esteemed title of Member of the Month. This title is awarded to a member of the general body, a committee member, or committee head that has done outstanding work for the Section in the month awarded. The benefits of winning this highly desired title are gifts that could include a \$10 gift card to Price Chopper, an Entergy gift set, an Entergy laundry bag, flash drive, pen, and pencil, and custody of the trophy until the next member is awarded.

General Body Meetings

One of the main goals set out by the 2010-2011 Board of Governors was to increase the knowledge of the Section during general body meetings. This included knowledge of the nuclear field, what research is conducted at RPI, opportunities for internships and employment, as well as opportunities to participate in other types of programs. Described below are some of the events that helped in accomplishing those goals. The events here do not include those listed elsewhere in the report.

Undergraduate Summer Research Presentation

On September 21st, Steve Logan '13, a student intern at Idaho National Laboratory, presented his latest research in next-generation nuclear power and his summer activities at INL to the Section. Although it was an advanced concept for some younger members of the Section, Steve was able to present his research in a clear and concise manner, demonstrating his skill in presenting. It was these skills that assisted him throughout the year in the section-run peer tutoring program as he instructed his fellow classmates and during his INL recruitment presentations to the campus at large.

Dr. Tom Shea: Non-Proliferation Lecture

As part of the ongoing efforts to improve both the MANE Department and the Nuclear Engineering program, the section frequently partnered with other student groups and most notably the MANE Department Student Advisory Council (SAC) to put together larger and



more successful events. The first embodiment of this joint ANS-SAC partnership was seen at the October 12th guest lecture given by Dr. Tom Shea on the subject of “Verifying Nuclear Disarmament: the US-Russian Plutonium Management and Disposition Agreement”. As one of the largest guest lectures of the year, it marked a great beginning to a prosperous endeavor.

Nicholas Thompson: Plutonium Assay and Fuel Cycle Innovations Presentation

On the night of November 16th, after the general body meeting, then-masters student Nicholas Thompson presented on his award-winning research in the area of Plutonium Assay and how it pertains to the nuclear fuel cycle. Pulling in interest for RPI’s Lead Slowing Down Spectrometer (LSDS), the largest of only two in the nation, Nick was able to gain the attention of the diverse audience for a novel method of materials evaluation. The presentation, which was chosen as one of the 2011 Fuel Cycle Innovations Award winners, wowed even the graduate students who work at the LSDS facility.

Constellation Energy Nuclear Group Information Session

On December 7th, representatives from Constellation spoke with RPI’s student Section about the company and the plants they operate. The following day, CENG representative and Ginna Nuclear Power Station worker Joe Lazzaro held onsite interviews with over a dozen MANE students for internships and full time positions.

Nuclear Awareness Week Activities

After returning for the spring semester, the section hit the ground running with a series of events and activities celebrating Nuclear Awareness Week. Making use of the RPI-designed digital signage system, Concerto, the section posted digital flyers citing interesting facts about nuclear power sourced from the CAsEnergy Coalition. On the night of January 26th, the section held an open-campus discussion about the nuclear industry, again bringing in interesting facts and visual aids to draw awareness. Following the discussion, the points made were driven home by a viewing of the recently-debuted TEDx Talk by Suzie Hobbs-Baker of Pop Atomic Studios where she called on concerned individuals to bring attention to disparities between fact and fiction in the nuclear world.



RPI and NENY-ANS Joint Meeting: Dr. Michael Hynes

On February 16th, the RPI section held a joint meeting with the NENY-ANS local section to hear a presentation from Dr. Michael Hynes, Raytheon and adjunct professor at MIT. The talk, entitled "Nuclear Forensics: From Mutually Assured Destruction to Mutually Assured Detection" commenced at 6:00PM in the Darrin Communications Center with pizza and drinks provided. This meeting marked the first of a series of successful RPI-NENY joint meetings.

RPI, NENY, and NYS-HPS Joint Meeting: Dr. Salame-Alfie

On March 22nd, RPI ANS and NENY-ANS joined again to host the New York State Health Physics Society and guest speaker Dr. Salame-Alfie of the NYS Department of Health. Dr. Salame-Alfie is the Acting Director of the Division of Environmental Health Investigation in the New York State Department of Health (DOH). Prior to that appointment she was the Director of the Bureau of Environmental Radiation Protection. During the session, again held in the Darrin Communications Center, Dr. Salame-Alfie presented on two topics: "An Overview of New York State Response to Radiological Events" and "A Summary of the US Domestic Public Health and Medical Response to the Fukushima Nuclear Power Plant Accident."

RPI and NENY-ANS Host Dr. Eric Loewen

On April 19th, the RPI and NENY-ANS sections hosted Dr. Eric Loewen, President of the Society. To commence his visit to the area, Dr. Loewen sat down with over 20 students from the RPI student section for a luncheon roundtable event. Students discussed topics including the future of the nuclear industry, advice pertaining to career paths and employment opportunities, and opinions on public policy. Additionally, Dr. Loewen brought his style advice, popularized with students at conference, to the event and briefly educated the section on proper attire. Following the lunch, Dr. Loewen toured the RPI Gaerttner Linear Accelerator (LINAC) Facility, meeting with researchers and graduate students to discuss activities onsite and get a feel for day-to-day operations. To close out the day at RPI, Dr. Loewen met with Professors Sastry Sreepada, Michael Podowski, and Peter Caracappa to discuss departmental affairs. Later that evening, Dr. Loewen presented as the keynote speaker for the NENY-ANS spring banquet on the "Future of Nuclear Power for Our Grandchildren". In attendance was the RPI student section, the NENY-ANS local section, and the KAPL-WIN chapter.

RPI and NENY-ANS Joint Meeting: Student Research Projects

On May 3rd, for the final joint meeting of the semester, the RPI and NENY sections met once again, this time at the Schenectady Public Library Niskayuna Branch to hear presentations from



a set of students. One Senior Design team, consisting of Matthew Riblett, Ryan Norval, Joe Mancuso, Sean McKibben, and Sean Egnaczyk, and two student researchers, Dillon Shaver and Brian Waite, presented their ANS Student Conference presentations before a panel of industry personnel and NENY-ANS members. For the Senior Design team, this presentation served as a dry run for their final presentation the following day. Each of the groups presenting received valuable feedback from the NENY-ANS attendees and the meeting served to cement relations between the student and local section. Plans are already in the works to field industry-inspired (and perhaps sponsored) senior design projects for the upcoming senior class and to bring the local section into closer contact with the faculty and staff at RPI.

Professional Relations Committee

The role of the Professional Relations committee is to provide the Section with opportunities for internships, employment, and participation in other nuclear programs. This year the committee, headed by Steve Logan '13, achieved their goals through multiple information sessions, organization of employer information, and advice for career seekers. They were also thrown a curveball after the tragedy in Japan, and the events that followed.

Employer Information Organization

One difficulty the Section sees in the nuclear engineering curriculum at RPI is the lack of exposure to what companies are involved in industry. Only a handful of students attend the career fair at the ANS Student conference, and only a select few nuclear companies attend the career fair at RPI. To remedy this, RPI's student Section created an informational drawer in the MANE Department's Student Services office that contains fact-sheets and promotional information for a variety of companies and graduate schools that want nuclear engineers. It is updated by the Section with any extra information that students pick up at career fairs or from information sessions.

Do's and Don'ts of Career Fairs

RPI Student Section membership is heavily dominated by undergraduate students and many are looking for jobs or internships. Upperclassmen had an informal roundtable session to discuss what to and to not do when attending a career fair. Attendees asked questions about



what to wear, strategies for who to talk to, and what to bring while upperclassmen answered with personal experiences and observations.

Institute Relations Committee

The role of the Institute Relations committee is to handle all events on campus, working with the MANE department, the School of Engineering, and other student groups on campus. The committee, headed by Kelly Rowland '13, not only works with other groups but hosts its own ANS events on campus, increasing the visibility and presence of RPI ANS on campus. In addition, the committee is charged with maintaining all of the materials needed for these tasks.

RPI Activities Fair

The first event to use those materials was the activities fair, a campus-wide event aimed at underclassmen at which all organizations within RPI can hold a booth. With the new updated board and a bowl full of candy, RPI ANS signed up at least 95 people on the email list. In attendance to speak to underclassmen about RPI was the entire Board of Governors as well as a group of at least 5 from the general body of the Section.

Program in Review Document

The Section maintains a Program in Review Document (PIRD), a summary of all courses offered by the MANE Department, research performed the faculty, and the research of graduate students. In past years this document was kept as a hard copy, but after the newest revision of the document it will be posted on the Section website – expected to occur at the end of the present academic term.

Exploring Engineering Day

On February 19th the RPI School of Engineering hosted Exploring Engineering Day (EED). EED is an event that brings about 300 4-8th graders to campus to engage them in engineering activities. Section members Ryan Norval '12, Matthew Riblett '12, Selena Willoughby '11, Kelly Rowland '13, and Jared Geer '13 staffed the event. During the day six groups of about 25 students each, spent 45 minutes in the workshop. Students were shown a presentation on nuclear energy and science after which they circulated through a set of stations looking at topics including chain reactions, the random nature of radioactive decay, health considerations, and



radiation detection. Section volunteers answered questions from the students as they passed through the stations. The students seemed most interested in the chain reaction videos. This was the second time RPI ANS has participated in EED and the Section plans to participate in the exciting day again in the future.



Volunteers from the Section help out at the Exploring Engineering Day activities.

Accepted Students Day

On April 14th RPI held its annual Accepted Students Day. Briana Bollinger '12, Melissa Urquhart '13, Steve Logan '13, Kelly Rowland '13, and Jared Geer '13 staffed a four-hour event where potential RPI students had the opportunity to ask questions about nuclear engineering and student life in general. Approximately one hundred students had discussions with Section members.

Design Your Future Day

April 16th marked Design Your Future Day (DYFD), a campus event hosted by RPI SWE and the School of Engineering that the Section participated in. The event was designed to encourage high school girls to get involved Science, Technology, Engineering, and Math (STEM) fields. Briana Bollinger '12 and Kylie McCulla '12 staffed the event. About 20 high school girls discussed a potential future in nuclear engineering with one of the two Section members. Questions about careers, graduate school, and student life were also answered.



Outreach Committee

The role of the Outreach committee is to provide opportunities to the Section to educate the general public about the nuclear field. This semester the committee, headed by Eric Amaral '11 and Matt Zimmer '15, has collaborated with many of the other committees on events listed previously, including the Fukushima Public Forum, and the Bernard Harris Summer Science Camp.

Nuclear Science Merit Badge

For the sixth consecutive year at Rensselaer Polytechnic Institute the ANS Outreach Committee hosted the Boy Scout Nuclear Science Merit Badge. The event took place on April 21st at the Linear Accelerator that RPI operates. In order to ensure consistent events each year the members of the Outreach Committee worked hard before the event in order to create their own personal PowerPoint presentation. Each committee member was required to produce a set of slides corresponding to a specific merit badge requirement. The slides were then compiled into one presentation that could be reused each year. This way the future committee chairs will not have the necessity of borrowing another university's work. In addition to this effort, the members had to be trained and registered as merit badge counselors.

When the 21st arrived sixteen Boy Scouts arrived, some driving all the way from Lake Placid, in order to learn about the study of nuclear science. Throughout the day, which lasted from 10am to 3:30pm, the scouts were lectured on important nuclear definitions ranging from the components of an atom to the actual fission and fusion processes. They also learned about possible careers that a degree in the field could lead to and how to protect themselves in case of radiation exposure. The lectures were interrupted with activities including construction of model atoms, drawing of chain reactions, and a demonstration on how to use a Geiger counter to detect alpha and gamma radiation sources. The most popular part of the day however, was the tour of the Linear Accelerator guided by Jason Thompson '06. The event had to actually be extended half an hour due the interest the scouts displayed during the tour.

By the end of the event all sixteen scouts had earned the merit badge and many of the adults that attended said they were already looking forward to attending next year with more scouts.



Volunteers from the Section help out at the Nuclear Science Merit Badge program



Social Committee

The role of the Social committee is to increase the interactions between students in the Section as well as encourage the development of faculty-student development. This year the Social committee, led by Lara Peguero '12 and Selena Willoughby '12, worked hard to continue the success of last year's committee. Students had opportunities to participate in a variety of events which ranged from intramural sports, to movie nights, to pot lucks, to student-faculty mixers.

Intramural Basketball

The lineup for the third infantry of Duderstadt's Army included Allyce Bolger '11, Melissa Urquhart '13, Brian Waite '12, Kevin Higgins '11, Zachary Hoagland '11, Ryan Norval '12, Lindsay O'Brien '11, Daniel Baran '11, Mohammad Al-Quraan '14, and Enow Ebott '14. During regular season the team played sensationally with a 4-2 record. They faced off against one of our more difficult opponents in the first round of playoffs and unfortunately suffered a defeat of 21 to 15. Much improvement was seen in their goal keeping skills and overall the team enjoyed competitive but exciting that that team dynamic provided.

Bowling

November 17th was the date of another 'interesting' social event- Dollar Bowling at Uncle Sam's Lanes. Five section members attended the event. After separating the group and making embarrassing nicknames, bowling occurred as one would expect. Competition heated up between the two groups, as did discussion of proper form and who handled the balls the best.

Potluck Dinner

In order to make ANS feel even more like home, a potluck dinner was organized for the general body meeting on February 16th. Food brought included pulled pork, fried chicken and fried Oreos, macaroni cheese, bacon wrapped water chestnuts, hummus, cheesecake, cupcakes and cookies. The potluck was a huge success, with many expressing interest in doing it again.

Bake Sale

In order to help the section raise funds for the Section, the social committee planned a bake sale for March 21st. Various members of the Section donated a number of different baked goods ranging from cupcakes, to cookies, to brownies and sold them to the RPI student body. The event was a great success, raising over \$80 for the Section!



Student-Faculty Mixer

Student-Faculty Mixers were a large focus for the social committee this year. As the Nuclear Engineering program at RPI is undergoing some upper-level changes, it provided a great opportunity to better relationships between the faculty and the section. The first mixer, held on March 22nd, saw an attendance of twenty section members and five faculty members. Faculty were pleasantly surprised when they found out that students had prepared all the food at the event. The first mixer was so popular that faculty requested a second event be hosted by the Section. The second mixer will occur on May 10th, and serve as an end of the year BBQ for the Nuclear Engineering Program. A very high turn-out is expected for the event: approximately thirty students and another ten professors.

Laser Tag

A very relaxing trip was taken by five of the Section members to Zero Gravity, a local laser tag arena on December 14th. This was a first time event for some of our members, and a refresher course for many others.

Relay for Life

RPI ANS participated in the campus's Relay for Life again this year on April 26th. The team consisted of four members this year: Selena Willoughby '12, Melissa Urquhart '13, Steve Logan '13, and Ryan Norval '12. The team raised \$250 for the charity and spent the night walking around the indoor track of RPI's Armory to support cancer research.

Senior Appreciation Dinner

The senior appreciation dinner this year will be at Brown's Brewing Company on May 18th. This will be an exciting night where underclassmen can spend some final bonding time with the seniors, and of course there will be reminiscing about our time at RPI and with ANS. Active senior members will have their dinner paid for (with limitations due to the financial issues) but of course all Section members will be encouraged to join in the farewell. ANS will be graduating a large portion of its membership with sad farewells.

Section T-Shirts

Every year the Social committee is responsible for organizing the annual Section t-shirt. This year the Section shirts were designed to poke fun at the neutron transport equation and its complexities. Interestingly enough, the shirt called into question the reader's understanding of



the formula with the catch phrase “What part of <Eqn.> don’t you understand?” It was not until much later, after the shirts had been printed, delivered, and worn by section members across campus for several weeks that it was noted by a bystander that the word “understand” had been misspelled on the design. This instantly made the shirts all the more humorous to the section membership and prompted a second order to be placed shortly thereafter. Images of the shirt are provided below:



Previous year’s shirts included “I <3 U235”, “Gone Fission”, “Fast Breeders”, and “It’s not rocket science, it’s nuclear physics”, and “RPI American Nuclear Society; Causing Mayhem Since 1964”.

In past years, the section shirts had been ordered through a nearby manufacturing plant for their modest setup fees and retention of shirt design printing plates. As a changeup for this year’s order, the section elected to commission our designs with OoShirts, a startup company in California composed of recent college graduates that designs shirts and jerseys primary for college clubs. Focusing on a niche market, the group offered the section a bargain with very inexpensive, high-quality, and responsibly manufactured apparel, zero setup fees, and rapid turn around times. Pursuing business with OoShirts allowed us to fundraise substantially more money for section activities while actually reducing the cost of ordering a section shirt and improving their overall quality. We plan to continue doing business with the company and recommend them highly to other sections looking to turn out shirts.



Conference Committee

The Conference Committee was created in the previous academic year in anticipation of submitting a proposal to host the 2013 ANS Student Conference. The addition of this committee has provided the Section members with more opportunities to get involved in the RPI Section as well as a way to give back to the ANS national Section through the planning of such an important event. There are five active members on this committee who have been dedicated to researching and brainstorming ideas to create a noteworthy proposal. The committee chose a potential theme to lead the conference building; the theme chosen was "Binding the World through Nuclear Energy." The committee has contacted many people and places regarding venues, accommodations, and travel for a conference in Troy, NY. Lists of events, speakers, and workshops have been created to start generating a schedule for the extended weekend. A great deal of thought was put into creating an organizational structure to carry out the proposal objectives. Overall, extensive time and effort has been placed into this committee in order to start creating a proposal for next year.

Though originally scheduled for this year, the goal of the committee for coming year is to have a proposal submitted for the 2014 Student Conference. In order to do this, the size and support of the committee will be increased. Younger members will be encouraged to participate in the development of this proposal so that when RPI ANS obtains control over the next conference there will be many students ready to help in the implementation of the event. More ideas for events, speakers, and workshops will be brought to the table. All of the information gathered over the three semesters will be brought together to create a spectacular proposal for the Student Sections Committee to review.



Section Accomplishments

Website Development

In the spring of 2010, development began on a new RPI ANS website, located at <http://www.rpians.org>. The old website hadn't been updated in years, due to the lack of website skills in the Board of Governors. An ongoing pet project of Matthew Riblett '12, who built the new site, he has continued to develop it over past two years to include many new features aimed at promoting our section both internally to members of the RPI community and externally to the rest of the world. New revisions were presented to the Section throughout the year, and a final statement was given at the conclusion of the spring semester. The new website is not only a public display of the events that RPI ANS conducts, but a tool for the members of the Section. Each member can post a resume for employers to see, create an individual page accessible from the site, and access all of the official documents of the Section, including the Rules and Bylaws, the Plan of Action, previous Glasstone reports, and the PIRD. For site visitors, the website has an information section, a news and events section to see what the Section is up to, and links and information on other relevant sites.

Social Networking and Media Experiments

In addition to the Section website, Section President Matthew Riblett took it upon himself to develop and test out a series of social networking tools for the section. The obvious first steps, namely Facebook and Twitter, immediately gave the section a digital following comprised of RPI students, program alumni, and nuclear professionals. Moving onward, a new email system was designed, porting the older list-serve system to an automated user-oriented interface. Over the course of the year, over 10,000 content-rich emails were sent out to Section membership, keeping everyone up to date. Finally, as an experiment still under evaluation, Matthew implemented the first ever live video stream of a section meeting through the section website. This effort was very well received, particularly by alumni, for its ease of use and ability to facilitate communication with members virtually.

Local Relations with NENY ANS

RPI ANS continues to maintain a strong relationship with the Northeastern New York Section of American Nuclear Society (NENY ANS). This year our Section members attended the membership drive hosted by NENY ANS on September 16th. NENY ANS often brings speakers



to the Nuclear Engineering and Science building on RPI campus, supplementing the general body presentations with more technical presenters that would not be available otherwise. This year, RPI ANS and NENY ANS collaborated and worked together to formalize these meetings with joint sessions and collaborative logistical planning. Bringing together students, faculty, nuclear professionals, and members of the community, these joint sessions saw presentations by speakers including Dr. Michael Hynes, Dr. Adela Salame-Alfie, and Dr. Eric Loewen. As an ongoing effort to improve student-industry relations, the collaborative work of the two sections has already made waves in both the RPI and NENY communities – as described earlier, efforts are underway to involve the nuclear industry in student activities and research and to explore the possibility of expanding course offerings to go above and beyond industry expectations. The success of the joint meetings and special events has ensured a strong and continued relationship between RPI and local industry members far into the foreseeable future.

Mentoring Program

Every year, RPI ANS attempts to guide its underclassmen through the maze of academia with the assignments of mentors – upperclassmen who are ready and willing to give advice. At the beginning of the year, underclassmen seeking help were paired up with upperclassmen. Mentors are there to provide help choosing classes, professors, methods on homework management, life at RPI, or just about anything. Vice-President Briana Bollinger '12 organized this year's program.

Tutoring Program

The biweekly meetings of the RPI ANS Section are complimented by weekly tutoring sessions established by previous officers. Every Thursday night at 7 pm (Wednesday in the fall semester) members of the Section get together to do homework. Upperclassmen often bring their own back work, and if not, just themselves. Any student that needs help has only to wave a hand, or ask a question across the room. Over the last two years the tutoring program has morphed into something even better; an interactive study session. Students come to meet with their group mates and often come just to do homework while talking to friends, enjoying the friendly atmosphere. Oftentimes teaching assistants from nuclear courses set up shop at the tutoring sessions, increasing attendance and communication between the assistants and the students. This weekly event is one of the places at which the community of ANS really shows, as students from every class merge together to work and hang out.



Conferences

Despite the slight decrease in active membership the Section continued to send a large numbers of students attending both professional and student conferences. Aside from the information sessions and the career fairs, students have no feel for the nuclear industry. Encouraging more students to attend conferences allows for them to be exposed to the commercial industry, research happening at top universities and national laboratories, as well as the collaborative projects between them. Almost just as important, conferences provide students with exposure to the larger nuclear community, beyond that of the RPI campus. This is important in establishing contacts as well as understanding how all aspects of the nuclear field come together to advance the nation.

2011 Winter Meeting: Washington D.C.

On November 7th, the Section sent at least 11 members, past and present, to the 2011 ANS Winter Meeting held at the Omni Shoreham Hotel in Washington D.C., President Matthew Riblett '11 and Faculty Advisor Dr. Peter Caracappa attended the Student Section Committee meeting. Nicholas Thompson, '11, presented his research in plutonium assay at the student Fuel Cycle Innovations session. Several students worked as student assistants, and all attended different sessions of interest as well as the Technology Expo.



Left: Student attendees out to lunch with Dr. Michael Podowski across the street from the conference venue.
Right: Nicholas Thompson '11, receiving recognition for his work in Fuel Cycles Innovation.



2012 Student Conference: Las Vegas, NV

On April 11th, the Section sent nine members to the 2011 ANS Student Conference hosted by UNLV in Las Vegas, Nevada. President Matthew Riblett '12, Dillon Shaver '08 and Brian Waite '13 attended the Student Sections Committee meeting. Seven RPI students presented: Matthew Riblett '12, Ryan Norval '12, Joe Mancuso '12, Dillon Shaver '08, Lara Peguero '12, Matthew Lynch '12, and Brian Waite '13. This year three of the Section's presenters won Best Presentation in their division; Matthew Riblett '12, Ryan Norval '12, and Joe Mancuso for their research in "Active Interrogation Schema for the Detection of SNM in Transit". RPI ANS students, bearing the traditional lapel pins, represented the Section well, both in presentations and in social activities. The students garnered the attention of Dr. Eric Loewen on the first night of activities and quickly formed a strong attachment to the Society President that served to improve his visit to the campus the following week. Students were excited to see UNLV's campus, as well as some of the highlights of Las Vegas, including the fabulous strip of Casinos and the Nevada National Security Site.



Left: Senior Design presenters in the Accelerator Applications session. Right: Most of the section members standing outside Caesar's Palace after a group excursion to get Gelato after a long day at the student conference.

Conclusion

The Board of Governors for the year of 2011-2012 has had a highly efficient and successful year. This can be attributed to many improvements made in the structure of the section, as well as the dedication of the officers, committee heads, and section members. It is hoped that in the coming year, the increased number of events and active recruiting will increase the active membership. Despite any obstacles, the RPI ANS section will continue to grow in influence, visibility, and activity.