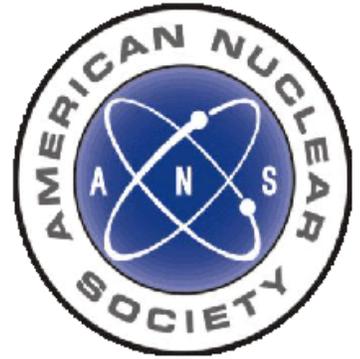




**UNIVERSITY OF WISCONSIN-MADISON  
STUDENT SECTION OF THE  
AMERICAN NUCLEAR SOCIETY**

1500 ENGINEERING DRIVE  
MADISON, WI  
(608) 265-8699



To whom it may concern:

It is with great pleasure that I strongly support the application of the UW American Nuclear Society Student Section (UW-ANS) for the Samuel Glasstone Award. As Faculty Advisor, I place a great value on innovation and creativity in the officers and members of the UW-ANS. As a student section with a strong history of success, it is this creativity that allows them to continue that success and maintain their value to members.

This year ANS showed its dedication to their students, school, and to their local community by hosting meetings, participating in outreach events, and showing up to school functions to promote the message of UW-ANS. One of the strongest showings of UW-ANS this year came by winning the best booth at the Engineering Expo, which is an event hosted every other year where thousands of students attend the Engineering campus to see organization's displays. This is a great accomplishment in any circumstances, but UW-ANS had to pull off this victory even without the help of many dedicated members, since 25 members were attending the ANS Conference that same weekend. This year, UW-ANS was able to regain the title of Engineers Week Champions by defeating all other organizations in a week-long competition.

ANS demonstrated their commitment to the community by hosting six Boy Scouts workshops with 300 boy scouts attending, traveling to various local schools for science nights, continuing our adopt-a-highway stretch, and helping out a local school in their Science Olympiad projects. One event that they hosted that was very important to the community and the school was a student-run forum on the Fukushima Dai-ichi nuclear plant situation. The goal of this was to allow students who were interested in clearing up the facts about the nuclear accident by providing an open discussion forum on the event. The event was marked as a success, as students from many disciplines came to the forum.

Their efforts to grow the organization and its programs are a testament to their leadership and evidence of a robust and successful student section. I hope that the Glasstone award committee recognizes the continued outstanding accomplishments of this organization throughout this past year.

Sincerely,

Robert Witt, Faculty Advisor

[witt@enr.wisc.edu](mailto:witt@enr.wisc.edu)

(608) 263-2760

**Annual Report: 2010 - 2011**  
**American Nuclear Society:**  
**University of Wisconsin - Madison**  
**Student Section**

Submitted to the ANS Glasstone Award Committee



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Lucas Mynsberge  
Stephanie Zwolinski

Brian Strebel  
Thomas Eiden  
Carlos Paz-Soldan

Amir Jaber  
Robert Witt  
Troy Haskin

Darius Lisowski  
David Adam

Patrick Snouffer  
Stuart Slattery

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# 1. Introduction

During the 2010-2011 academic school year, the University of Wisconsin-Madison chapter of the American Nuclear Society (UW-ANS) continued its tradition of organizing, coordinating, and executing a myriad of events related to public outreach, community service, and professional development. The goal of UW-ANS and its officers was to maintain the high standard set by the previous administration of UW-ANS as well as to build on the program, both with the events traditionally hosted as well as by developing new opportunities for its members, the College of Engineering, and the Madison, WI community.

As in previous years, UW-ANS continued to participate in such community service and public outreach activities as Adopt-A-Highway, the high school essay contest, Boy Scout Nuclear Science Merit Badge Days, Science Olympiad, and Science Nights for local schools. And as in previous years, these events were incredibly successful. Following the events at the Fukushima disaster, UW-ANS hosted a student-oriented open discussion forum to provide a detailed recap of the events and to answer questions about the event, and was a success with multiple students from multiple disciplines taking part in the discussion.

UW-ANS hosted a variety of professional development events that allowed students the opportunity to network with professionals and to learn more about the prospects available to them upon graduation. These events included general meetings in which professionals from the nuclear industry were invited as speakers, various UW-ANS national and student conferences, and career fairs put on by the College of Engineering in which UW-ANS helped facilitate. We also heavily encouraged students to present at the ANS conference, along with attending many workshops that were provided by other organizations with close ties to UW-ANS.

On the social front, UW-ANS continued with many of its time honored traditions. The bi-annual department picnic "Pic-Nuke" was hosted by UW-ANS, turning out over 150 attendees. UW-ANS members met throughout the year for social events that included movie nights and games nights, which had very strong turnouts this year. Students networked with professors and amongst themselves at the coffee and donuts event every Wednesday morning. And as they have for over ten years, UW-ANS students, alumni, and professors showed up at Mickie's Dairy Bar at 7 A.M. every Friday morning for breakfast. Students also occasionally met at the local bar for Friday after Class and card games

UW-ANS hosted many events in cooperation with the University of Wisconsin chapters Women in Nuclear (WiN) and the American Institute of Aeronautics and Astronautics (UW-AIAA) this year. Branching outside of that tradition, UW-ANS also hosted events with the the Biomedical Engineering Society (BMES), The Hacker Within (THW), Energy Hub, American Society of Mechanical Engineers (ASME), and the Society of Industrial and applied Mathematics (SIAM) as well as WiN and AIAA. Participating in event planning with these student organizations expanded UW-ANS's involvement with the university as well as provided excellent networking opportunities for its members and the members of the other student organizations.

In summary, UW-ANS continued with many of its traditional programs and events but made a concerted effort to expand and grow. Despite the challenges of maintaining all the events and programs in which UW-ANS currently participates, the current executive committee is confident that next year's officers and members will be able to uphold and possibly develop new traditions for UW-ANS and the Department of Engineering Physics at the University of Wisconsin-Madison.

## **2. Section Management**

The success of the UW-Madison section of ANS is due in large part to the commitment and competency of the executive board, its chairs, and other positions that provide support to the section. The efforts and duties of those students (and in one case, faculty member) are described herein.

### **Executive Officers**

The executive committee consisted of seven officers: the President, the Vice-President, the Public Information Officer, the Treasurer, the Communications Officer, and two Governor positions. The President, Vice-President, Public Information Officer, and the Treasurer are elected positions that last one year in length. The Communications Officer and two Governor positions are one semester appointments.

#### **President**

The President's main responsibilities included moderating general member and executive committee meetings, scheduling speakers for general meetings, organizing tours and conferences, managing the section's schedule, appointing the Webmaster and Mentoring Chair, and acting as the liaison and representative for the section both professionally and among other student organizations. The President for UW-ANS this year was Casey Anderson, who served as Communications Officer last year. Next year's president will be Darius Lisowski, who served as Communications Officer this semester.

#### **Vice-President**

The Vice-President's responsibilities are organizing the section's social activities, tours and bookkeeping active membership status of students, acting as President in the President's absence, and providing support for the President. This year, the vice president was Brian Strelbel, and he helped arrange tours to Tomotherapy and Point Beach, coordinate Pick-Nuke and the other UW-ANS socials, and designed and ordered new t-shirts. Next year the vice president will be Jacob Sager, who served on the Engineering Expo committee this year.

## **Public Information**

The Public Information (PI) Officer's duties were to develop, organize, schedule, and execute the section's public outreach efforts as well as to appoint and oversee the work of the Boy Scouts Workshops, Science Olympiad, and Essay Contest. Included in this responsibility was proper inventorying public outreach supplies, writing and designing presentations to be used at public outreach events, coordinating with teachers and scout leaders to organize events such as Boy Scouts and the Essay Contest, and providing support to the UW-Madison WiN section as they developed their Girl Scouts program. The PI for this year was Amir Jaber, and next year will be Lucas Mynsberge, who served as Governor this semester.

## **Treasurer**

The Treasurer's responsibilities included drafting budgets for each semester and for the entire year, keeping track of all transactions completed by the organization, writing grant proposals, acting as liaison between UW-ANS and the UW-Madison Student Leadership Center (an organization that oversees the donated funds of College of Engineering student organizations), and advising the other executive officers on how best to spend the section's funds. The treasurer this year was Patrick Snouffer, and next years elected officer is Thomas Eiden, who served as Governor this semester.

## **Communications**

The Communications Officers duties are to take minutes at executive committee meetings, to send out weekly announcements, advertise for upcoming events (usually by flyers, by chalking information on sidewalks, or via email), and to maintain and update the UW-ANS announcement mailing list. The importance of this position is to ensure that the members, students, and community are properly informed about the events going on within UW-ANS. As a one semester term, we have seen two Communications Officers this year; Stuart Slattery in the fall semester, and Darius Lisowski for the spring semester. Next semester's Communications Officer will be Maddie Wolter.

## **Governors**

The main purpose of the Governor position is to get acquainted with the workings and dealings of the UW-ANS executive committee and to develop their leadership skills. Because of this, Governors are preferred to be underclassmen or those just starting to get involved. Some of their responsibilities are are planning and facilitating special events throughout the semester, such as Adopt-A-Highway and E-Week. There are two Governor positions, and like the Communications Officer position, are only one semester terms. The Governors in the fall semester were Stephanie Zwolinski and David Adam, and in the spring term were Lucas Mynsberge and Thomas Eiden. Next semesters Governors will be Jonathan Klabacha and Mary Alice Cusentino.

## **Chairs**

The chairs of the UW-Madison ANS section are appointed by members of the Executive committee, and therefore are non-elected positions. As such, chairs are not required to attend executive committee meetings and are more committed to a more focused set of responsibilities. Some chairs are consistent, year-long events, while some appear on an as-needed basis.

### **Boy Scouts Chair**

The Boy Scouts Chair main responsibility is facilitating and organizing UW-ANS's Boy Scouts Merit Badge Workshops, which helps ease the burden of placing too many duties on the Public Information officer. The Boy Scouts Chair should understand the basic operations behind Boy Scouts, the nuclear science merit badge, and the outreach and communication required in order to organize this event. The Scouts Chair this year was Carlos Paz-Soldan, who has been helping out with UW-ANS for several years, and is also a former Boy Scout.

### **Expo Chair**

The Expo Chair was appointed by the President to oversee the successful execution of the Engineering Expo. This was a special position for this year, since the timing of the Expo (over the same weekend as the ANS Student Conference) made it tough for the normal overseers to properly set up. Even already serving his time as the Communications officer, Darius Lisowski accepted the duties as the Expo Chair this year, and helped UW-ANS win the title of Best Engineering Expo Exhibit.

### **Science Olympiad Chair**

The Science Olympiad Chair is appointed by the Public Information officer, and is charged with coordinating UW-ANS members to coach students at Mount Horeb Elementary School as they construct projects. This year, Amir Jaber took responsibility of Science Olympiad, on top of his current position as the Public Information officer.

### **Scholarship Chair**

The Scholarship Chair is appointed by the Public Information officer, and is in charge of coordinating the yearly Scholarship program that is offered through UW-ANS. This year, Amir Jaber headed up the Scholarship program.

## **Other Positions**

In addition to our executive and chair positions, there were several other UW-ANS members that provided support to the UW-Madison chapter in one way or another. Like the Chairs, some of these positions are appointed, and others come based on the need at the time.

## **Webmaster**

The two main responsibilities of the Webmaster are to maintain the UW-ANS website and to provide support for the use of Google. Tasks included in maintaining the website are syncing the website's forms with Google Docs, updating pictures and presentations, and ensuring that the website continues to function as intended. To aid the executives in using Google (email, calendar, and docs), the Webmaster organizes information, aids in turnover between administrations, and teaches current users the capabilities of using Google. This year, the Webmaster was Troy Haskin.

## **Polygon Representative**

Polygon is the student council for all the student organizations of the College of Engineering. The UW-ANS representative attends Polygon meetings, informs the UW-ANS executive board of its decisions, advocates for UW-ANS in student council meetings, and makes UW-ANS eligible for funding opportunities from Polygon. This year, the Polygon Representative was Patrick Snouffer, who also served as President of Polygon last year, and therefore is very familiar with the workings of the Polygon committee.

## **Faculty Advisor**

The Faculty Advisor for UW-ANS is there to provide the chapter with advice and act as a liaison between the organization and the department. Often, the Faculty advisor retains his position for many years, so they are able to provide valuable information to the organization, as the Executives and Chairs often are served by people new or just getting involved in UW-ANS. This year, the Faculty Advisory was Robert Witt, who served as the faculty advisor many years ago here at Madison.

UW-ANS would also like to thank Paul Wilson for his support from this position. He has been the faculty advisor for many years before this, and had to step down this year for being on sabbatical. Even without the official title and his busy schedule this year, he was there to provide great feedback and information with his wealth of experience running UW-ANS. His experience, commitment, and dedication to UW-ANS was just as much a part of our success this year as it has been in the years past. He will return again next year as the faculty advisor.

## **Expo Planning Committee**

With the scale of the Engineering Expo, UW-ANS also appointed 5 volunteers with the Expo Chair, to help plan and execute the Engineering Expo. They were each appointed to various tasks the Expo Chair, met throughout the week, and then volunteered their time to ensure that that Expo was a success. The members on this board were Darius Lisowski, Maddie Wolter, Abdullah Alharji, Jacob Sager, Angela Weier, Lucas Mynsberge, and Amir Jaber.

## **3. Operations**

In addition to the contributions of the executive committee and its general members, UW-ANS attributes its success to the administrative procedures and processes that kept it organized. Furthermore, these processes made it possible for turnover to be carried out with relative ease between each year's executive committee.

### **Office Hours**

This year, UW-ANS hosted office hours in which members of the executive board were available at the UW-ANS office located in the Engineering Centers Building on UW-Madison campus. For ten hours every week, UW-ANS executives were available for questions, t-shirt sales, and even informal tutoring for courses offered within the Nuclear Engineering Department.

One hour each week of these office hours included the weekly executive meetings in which the executive board discussed current issues, upcoming events and their logistics, and other items of interest regarding the section. The Chairs, Webmaster, Polygon Representative, and general members were at these meetings to provide input for the executive board.

### **Active Membership**

Active membership is a distinguished title that UW-ANS awards to members who demonstrate a strong commitment to the continuation and betterment of UW-ANS and its programs. To attain active membership status, members were required to acquire a certain number of active membership points in order to achieve this status. These points were obtained by attending meetings, workshops, outreach events, tours, etc. that UW-ANS hosted or encouraged. The intent of the Active Membership points were to encourage people to help out with UW-ANS and the Community, while also helping themselves develop professionally. For those members receiving the title of active membership, along with the current and appointed executive board, a catered banquet will be held during the last week of the semester. During this banquet, awards were given out to the most active members in respective categories.

### **Financial Planning**

Spending money and obtaining funds is always a challenge for any student organization. UW-ANS applied principles that have worked in previous years in conjunction with lessons learned to allocate funds appropriately and ensure that sufficient funds would be available for next year's administration. The student section has two spending accounts. We have a checking account with Associated Bank-Corp. and an account through the Student Leadership Center (SLC) in the College of Engineering. The SLC requires us to maintain an account with them to apply for certain grants. The account is used to pay for large events such as conferences. The checking account is used to reimburse members and smaller items due to the ease of use. All checks written must be signed by two members of authorized signers which include: the President, Vice-President, Treasurer and Faculty Advisor. This method ensures more responsibility when spending and has provided success in all recent years

## Budget

As the school year commenced, each member of the executive board submitted a budget detailing the costs and earnings that their respective position could predict for the year. Some activities, such as supporting local Science Olympiad groups, earn money for our section, while some activities, such as food for unfunded meetings and supplies for outreach activities, entail a cost. These budgets were finalized at a designated executive meeting. This meeting enabled a discussion to inform the way in which the money could best be allocated and served to highlight distribution of events that each officer in our organization should prepare to focus on and take responsibility for. This year, the budget compiled from this meeting was made available in our Google Docs account. Thus, members of the executive board had access to the agreed-upon budgets for the events under their supervision and could make appropriate appeals if unexpected expenses arose. This year, our section stayed well within our budget, having generously predicted possible expenses for our events.

This year the UW ANS section spent approximately \$10,500. To balance our spending, we solicited donations from many companies and organizations in the nuclear field and associated with the University of Wisconsin. By relying on materials from past years and applying lessons learned, our spending this year was slightly lower than previous years' spending, but no events were cut.

## Funding

A significant fund-raising effort was put forth to account for the large amount of money spent. The treasurer put many requests out to nuclear and energy related companies for general funding, and several other members put in requests for their individual events. Although not all of these requests received responses, we were pleased to receive support from both Dominion and TomoTherapy. Dominion, a consistent supporter of the University of Wisconsin ANS section, provided funds for coffee and donuts, the high school scholarship essay contest, and \$100 per student, up to fifteen students, to attend the student conference in Atlanta, GA. Grant money that we received came from Polygon (College of Engineering's student council) each semester. This money was applied to conference hotels and travel. Other sources of funding came from Science Olympiad volunteering, Boy Scouts Merit Badge Workshops, and the selling of our student section t-shirts. The money received from these sources was used for our semi-annual picnic (Pic-Nuke), food for meetings, and outreach supplies.

## T-Shirts

As a means to both raise money for UW-ANS and advertise UW-ANS and the UW Department of Nuclear Engineering and Engineering Physics, UW-ANS sold "I ♥ Nuclear" t-shirts. Vice-President Brian Strebel designed and ordered 100 t-shirts in various sizes. We then sold these t-shirts for \$10 to active members and \$15 to everyone else. The t-shirt sales were especially a success at Boy Scouts Workshops. T-shirts were also raffled off throughout the year at various UW-ANS meetings to encourage participation.

## **UW-ANS Website & Google**

UW-ANS has now been using the AtomicBadger.org domain and Google Apps for more than two years. While the use of Google Calendar, Google Sites, and GMail were quickly adopted (and are still heavily used). Google Docs has officially become the primary communication tool for the UW-ANS organization. The word processor, spreadsheet, and presentation software are all used to assemble, coordinate, and disseminate organizational activities and proceedings. A non-exhaustive list of these uses follows:

- Executive committee meeting agendas and minutes
- Expo planning committee and minutes
- Budgetary planning
- Membership rosters
- Active Membership Point Submission
- Conference tour and sign-ups
- General meeting introductions / presentation
- Guest speaker presentations
- Descriptive source inventory
- Chapter logo storage
- Collaborative editing / sharing

In addition to these "standard" document abilities, Google Docs also offers Forms. Forms is a simple tool that allows us to quickly create surveys or applications that can be embedded in a website. When filled out and submitted, the Form sends the information to a spreadsheet and creates summary statistics for all of the submissions. This service from Docs is an important part of the current website.

This year saw UW-ANS commit firmly to communication in the digital age through full utilization of the Google Apps suite of services. Building upon the previous years' careful trek into new ground, we now consider Google Apps as a natural and effective means for effective collaboration amongst current UW-ANS officers and members while providing a steady and promising base for the future.

## **Facebook**

The utilization of Social Networking sites has been taking off these last few years, and UW-ANS has utilized this opportunity to keep in touch with the community. With students checking their Facebook more often than their email, it is becoming the best way to quickly and readily relay information to a particular group, and can even be utilized to advertise to more than just members. While we had many individuals advertise these events through their own personal Facebook account, UW-ANS has a Facebook alias of "Captain Neutron", who has 60 friends within UW-ANS. We have also recommended at all the members of UW-ANS become a fan of the UW - Madison Nuclear Engineering Facebook page, which was designed by one of the faculty members in the Engineering Physics Department. Several UW-ANS executive members were given permission to edit the webpage, which has proven to be a useful tool in helping advertise events, meetings, and keeping others informed about the current events going on in UW-ANS.



**Figure 1: The Facebook fan page of the UW - Madison Nuclear Engineering.**

We are continuing to expand and utilize all these resources that are out there, such as Google, Facebook, Twitter, and LinkedIn to name a few. Utilizing these can help increase the efficiency of the organization, along with provide the means that will allow everyone to get involved and informed about the workings of UW-ANS.

## 4. General Meetings and Events

UW-ANS strives to supply professional development options to its members. The chapter continued to provide a wide variety of speakers, opportunities to attend conferences, tours of nuclear and medical facilities, and seminars as it has in past years.

### UW-ANS General Meetings

During this past academic year, UW-ANS scheduled, organized, and hosted ten general meetings and information sessions, and two elections meetings. General meetings typically included a brief presentation by the President detailing upcoming UW-ANS events followed by a distinguished speaker. The information sessions were short informal presentations given by recruiters to the UW-ANS membership. In addition to these meetings, UW-ANS held two elections meetings in which members elected new executives; the first meeting was on December 14th in which the Communications Officer and Governors for the spring semester were elected, and the second was on April 25th to elect the new executive committee for the next academic year.

## General Meetings & Speakers

Date	Speaker	Company
September 15th, 2010	Thomas Steele	Idaho National Laboratory
September 16th, 2010	Eric Edwards	Bechtel Marine Propulsion Company
September 22nd, 2010	Surendra Rao, Leonam dos Santos Guimaraes, Myung-Sub Roh	Korea Hydro & Nuclear Power US Department of Energy Eletrobras –Termonuclear The Energy and Resources Institute
September 28th, 2010	Sam Zenobia	Pacific Northwest National Laboratory
October 14th, 2010	Scott Luchau, Andrew Kelliher	Dominion
November 2nd, 2010	**No speaker**	** UW-ANS General Update Meeting **
November 19th, 2010	Mark Knut	Argonne National Laboratory
December 14th, 2010	** No Speaker**	** UW-ANS Elections Meeting **
January 28th, 2011	Justin Bloesch, David Knuti	UW - Madison Energy Hub, Peak Oil Group
February 17th, 2011	Ross Radel	Phoenix Nuclear Labs
March 30th, 2011	Kirsten Laurin-Kovitz	Argonne National Laboratory
April 14th, 2011	Robert W. Atcher	Los Alamos National Laboratory
April 26th, 2011	** No Speaker**	UW-ANS Elections Meeting

**Table 1: Summary of all the general meetings, information sessions, and speakers that UW-ANS either hosted, helped advertise for, or has shown strong attendance by members**

## Coordination with Student Organizations

UW-ANS especially strove to coordinate with other student organizations of UW-Madison this year. As in the past, UW-ANS coordinated events with the Women in Nuclear (WIN) and the American Institute of Aeronautics and Astronautics (AIAA) chapters of UW-Madison. UW-ANS also held joint events and collaborated closely with The Hacker Within (THW), Energy Hub, Society for Industrial and Applied Mathematics (SIAM), the Engineering Physics Department, and the UW - Energy Institute.

## **Women In Nuclear (WiN)**

WiN and UW-ANS jointly hosted several events, including the games night social, the non-proliferation talk by Dr. Kirsten Laurin-Kovitz, and the talk by Dr. Mark Knutt. Last year, UW-ANS helped WiN start up their Girls Scout Workshops, and the cooperation between the two organizations for scouts workshops has strongly continued this year, with UW-ANS and WiN members helping out for both those events. They also combined forces for E-Week and the Engineering Expo, helping us win both. Because UW-ANS and WiN are within the same department and share members, cooperation between UW-ANS and WiN will undoubtedly continue next year.

## **American Institute of Aeronautics and Astronautics (AIAA)**

The Engineering Mechanics/Engineering Mechanics and Astronautics (EM/EMA) program is within the same department (Engineering Physics) as the Nuclear Engineering program at UW-Madison. As such, the student organization associated with the EM/EMA degree, AIAA, and UW-ANS commonly coordinate events together, in a very similar manner as WIN.

As in past years, UW-ANS and AIAA organized two advising sessions (one each semester) for students and a meeting to brainstorm recommendations for the Industrial Liaison Committee from the students in the department. AIAA and UW-ANS jointly hosted the September 16th information session with Bechtel Marine Propulsion Corporation. We also joined forces in pursuit of a joint lab-space, since the space would be utilized by both parties.

## **Energy Hub (E-Hub)**

The University of Wisconsin -Energy Hub has always had a strong connection with UW-ANS, since many of us advocate for the same policies and practices regarding all forms of energy. This year, E-Hub hosted a presentation on Peak Oil, which unfortunately was planned on the same night as one of our general meetings and speakers. Due to travel difficulties, the UW-ANS speaker was unable to attend and thus E-Hub kindly invited ANS to join in their meeting and listen to their talk. Many UW-ANS also had many members attend the E-hub conference in Madison in November, which also shows how both organizations appeal to all people concerned about energy.

## **Society for Industrial and Applied Mathematics (SIAM)**

SIAM joined UW-Madison last year under the chapter founder Lewis Lloyd, an UW-ANS member, and since then, SIAM has always remained in close connection with us. Many members of SIAM are members of UW-ANS, and all SIAM events were advertised to the members of UW-ANS. We are hoping that this great partnership will continue.

## **UW - Energy Institute & World Affairs and the Global Economy (WAGE)**

The UW - Energy Institute has always been strong at inviting UW-ANS and their members to many of the meetings that they arrange. This year, they began with a strong start by hosting an “Emerging Nuclear Powers Panel”, which was a panel consisting of people from various countries and governing agencies, and hosted it together with WAGE, and sought the help of the UW-ANS to advertise this panel discussion to the nuclear community.

## **The Hacker Within (THW)**

THW is a student group that has very close ties with UW-ANS, as many members of THW are members of UW-ANS. UW-ANS strongly encouraged it’s members to attend many of the workshops and speakers hosted by THW, as they help utilize the computational aspect dealt with in Nuclear Engineering. Active membership points were awarded for those who attended, since THW meetings help develop important computer skills. THW hosted a Software Carpentry Bootcamp during winter break, which consisted of a three day training course in software development.

## **American Society of Mechanical Engineers (ASME)**

ASME and UW-ANS remained in close collaboration this year as in years past. While no meetings or sessions were hosted together this year, meetings and events were advertised between the two organizations.

## **Biomedical Engineering Society (BMES)**

UW-ANS and BMES have often hosted joint meetings to appeal to the medical aspect of Nuclear Engineering. This year, we both jointly sponsored the speaker from Phoenix Nuclear Labs, which discussed medical isotope production techniques.

## **ANS Conferences**

UW-ANS was once again in attendance at the ANS Summer, Winter, and Student Conferences this year. These conferences provide excellent opportunities for students to present their research and projects to other professionals, network with other professionals and students, and talk with recruiters at the career fairs.

### **2010 Summer Conference**

Four UW students attend the ANS Summer Conference in San Diego, CA. One student, Ahmad Ibrahim, presented at the conference

### **2010 Winter Conference**

Eleven UW students attended the ANS Winter Conference in Las Vegas, NV. There were three students who presented posters; Alex Robinson, Casey Anderson, and Darius Lisowski, and one who presented, Ahmad Ibrahim. Casey Anderson and Darius Lisowski won honorable mention for their poster presentations.

### **2011 Spring Student Conference**

The Spring Student Conference in Atlanta, GA, had a great turnout by UW-ANS members, in which 24 people attended from our chapter. UW-ANS coordinated the logistics for all the students who wished to drive to Atlanta, which, while a long drive, was deemed a reasonable trip from Madison. Through a grant from Polygon, the College of Engineering Student Council, and Dominion, UW-ANS was able to fund the transportation part of the trip for those who wished to drive, in which 14 of the 24 people utilized this method. Without the ability to drive, many of those would not have been able to attend, and this would not have been possible without help from the Department of Engineering Physics and the Department of Administration.

Many of the students attending utilized events such as the career fair and other resources and contacts to help benefit them in their career. We had three people give a presentation, Amanda Lang, Mahima Gupta, and Ahmad Ibrahim, and one who presented a poster, Amir Jaber. Ahmad won the best presentation in the Fusion section for his topic: "Global Evaluation of Prompt Dose Rates in ITER Using FW-CADIS"



*Figure 2: Group photo at the Georgia Aquarium during the 2011 ANS Student Conference.*

## **5. Public Information and Outreach Events**

### **Point Beach Nuclear Plant Tour**

UW-ANS strives to provide its members with the opportunity to get out of the classroom and tour industry related facilities. For the fall semester, on October 29th, UW-ANS organized a tour of Point Beach Nuclear Plant in Two Rivers, WI. A group of ten students participated on the tour and included both those majoring in Nuclear Engineering, Mechanical Engineering and Electrical Engineering. The tour was a great opportunity for the members to see a nuclear power station in person. UW-ANS provided transportation and a group of engineers from the plant showed us around the facility: including the turbine deck, the simulated control room and the visitor center.



**Figure 3: NextEra Energy's Point Beach Nuclear Power Plant Tour.**



**Figure 4: TomoTherapy, Inc. tour group photo.**

## **TomoTherapy Inc. Manufacturing Facility Tour**

For the spring semester, on April 7th, UW-ANS organized a tour of the manufacturing facility at TomoTherapy Inc. right outside of Madison, WI. TomoTherapy produces high precision computed tomography (CT) imaging machines used for radiation therapy. The fall semester tour provided a great opportunity for those members interested in nuclear power, whereas this tour was more oriented at those interested in nuclear medical applications. A group of nine students participated on the tour and including those majoring in Nuclear Engineering students as well as others majoring in Veterinary Medicine and Physics. UW-ANS provided transportation.

## **Boy Scouts Workshops**

At Wisconsin, there is a strong partnership between UW-ANS and the Boy Scouts organization, and that was continued in the 2010-2011 school year. UW-ANS hosted six Boy Scout Nuclear Science Merit Badge Workshops at the University of Wisconsin-Madison campus. Each of these events allowed UW-ANS to reach out to some of the next generation of scientists, engineers, and leaders while they are still developing.

As in past years, UW-ANS sets a maximum of 60 scouts per event in addition to usually getting about 20-30 adults as well. UW-ANS hosted approximately 360 Scouts and 150 Scout leaders at the three fall and three spring semester Boy Scout Nuclear Science Merit Badge Workshops. Workshops were filled to capacity weeks in advance. The workshops were all day events that lasted six hours on Saturdays. To ensure the scouts were prepared for the modules, they were asked to complete several pages of homework before attending the workshop. The homework encompassed nuclear science basics by asking such as "What are electrons, protons, and neutrons?"

The scout age ranges are normally grades 6-9. Each event requires about 10 volunteers, 2 per station (5 stations). The workshops began with a large group discussion on nuclear and atomic structure models with pipe cleaners and colored cotton balls as visual aids. This was followed by an overview of stochastic and deterministic events as they relate to radiation and then radiation hazard symbol identification. The groups then spread up into groups for the five modules. The modules were: Cloud Chambers, Radiation Shielding with Counters, Inertial Electrostatic Confinement (IEC) lab tour, Pegasus Fusion Experiment demonstration, and Nuclear Careers and Myths. This year there UW-ANS was able to collaborate with the Physics Department to host a lunch-time show put on by UW's Wonders of Physics team where scouts watch and interact with the presenter to learn many different physical concepts first-hand. After completing all five modules, the Scouts and Scout leaders reassembled back into one large group. The Scouts then are returned their homework, and upon receiving a passing grade, receive their Nuclear Science Merit Badge. The few insufficient homework scores were given the opportunity to resubmit the homework and have the Nuclear Science Merit Badge mailed to them.

One to two UW-ANS volunteers were needed to staff each module. Despite the significant time commitment, UW-ANS has always had enough volunteers for each Workshop. Several UW-ANS members were involved in Boy Scouts when they were younger, and UW-ANS members enjoy the opportunity to talk with youth who are motivated and interested in nuclear science. People journey

to Madison from all over Wisconsin and neighboring states to attend the workshop and we always get very positive feedback from the scouts and adults.

One of the biggest success stories of UW-ANS this year happened during Boy Scouts, and was a direct result of one of the biggest mix-ups of the semester. UW-ANS and WiN accidentally double booked Boy Scouts and Girls for the same date, and since it was not detected until several weeks prior to the event, it was too late to cancel or switch. Since the workshops utilize many of the same resources, such as counters, cloud chambers, demos, and volunteers, this had the potential to stretch our resources thin. However, come crunch time, both Boy Scouts and Girl Scouts had more than enough volunteers, and both events went off without a problem. Once again, the dedication and commitment of UW-ANS active members held strong.



**Figure 5 Boy Scout with the cloud chambers session**



**Figure 6: UW - ANS member Kevin Robb speaking chambers demonstration;**



**Figure 7: Boy scouts learning about radiation shielding with a Geiger Counter**

<b>Academic Year</b>	<b>Workshops</b>	<b>Attendee Estimates</b>
'04-'05	5	500 Scouts and adults
'05-'06	5	500 Scouts and adults
'06-'07	5	500 Scouts and adults
'07-'08	5	250 Scouts, 150 adults
'08-'09	6	300 Scouts, 150 adults
'09-'10	5	229 Scouts, 119 adults
'10-'11	6	300 Scouts, 150 adults

**Table 2: Summary of UW-ANS Boy Scout workshops over the years**

## **Girl Scouts with WIN**

The University of Wisconsin Women in Nuclear (WiN) chapter hosted two Girl Scouts Nuclear Science Workshops this year. UW-ANS members volunteered to run some of the modules which were similar in nature to those offered at the Boy Scouts Workshop. The Girl Scouts were generally younger than the Boy Scouts attending the Nuclear Science Merit Badge Workshop. Experience has shown how revamping the way information about nuclear science needed to be changed for a younger audience with a different method of learning. There were about fifty Girl Scouts and Girl Scout leaders that attended the workshops.

## **Discovery World**

UW-ANS participated in the Whys and Wows exposition at the Discovery World science center in Milwaukee on February 21st. The one day event, organized by the UW Alumni Association, consisted of about a dozen hands-on science exhibits staffed by experts from the UW with a portion of the ticket proceeds going towards needs-based scholarships. Our booth helped families with middle school and younger aged children to explore and understand radiation. Visitors used Geiger counters to learn how everyday objects are radioactive (Brazil nuts, salt substitute (potassium chloride), smoke detectors, etc.) and how time, distance, and shielding can decrease radiation exposure. There were also cloud chambers on hand and the ever popular M&M half life game. This is the first time UW-ANS participated in this event.

## **Science Expeditions**

UW-ANS was asked to participate as one of 50 exploration stations in the one day UW Science Expeditions event on April 2nd. This outreach event was well attended by many hundreds of people from the general public. Our station focused on educating the public about radiation through hands on activities and demonstrations. We also handed out educational materials and fielded questions concerning the situation at the Fukushima nuclear power plant. This is the first time UW-ANS participated in this event.

## **Science Olympiad**

Over the past seven years, UW-ANS has developed a strong relationship with the Wisconsin Young Scientists of America (YSA) Science Olympiad (SO) program. This year UW-ANS began working with a different school than in previous years. The UW-ANS was partnered with Mount Horeb Middle School as UW-ANS members served as mentors for the Towers, Storm the Castle, Optics, and Bottle Rockets events. These are some of the building events that needed the most work done before the competitions as they were the most time intensive. Middle school students working on the building events benefited from having UW-ANS students available to offer suggestions and guidance when requested. Staci Meister was the head coach of Mount Horeb Middle School SO team and was very appreciative of our consistent support of her team.

UW-ANS mentorship took place from early November to late April. Two UW-ANS members truly stepped up this year to provide dependable and consistent participation. Brandon Semerau and Zach Bundies were two consistent volunteers that barely missed any weeks to travel to Mount Horeb and help with the design competitions. The Coach, Staci Meister, was extremely grateful for all the help UW-ANS provided over the school year.

“Every single week, two to five college students would show up to help me with various events. My middle school students really enjoyed working with Amir and all the other college students. They were excellent role models for my students. They will be a tough act to follow for next year.”

- Staci Meister, Mount Horeb Middle School Science Olympiad Coach

The SO mentoring does fulfill another important role for UW-ANS. It is a major source of funding for the chapter and allows us to purchase supplies for other UW-ANS service project and outreach events. This year UW-ANS raised over \$1350 dollars due to the dedication of the mentors.

At the State Competition for our Science Olympiad group (Mount Horeb Middle School), one of the teams took third place in the state out of 51 teams! In the individual competitions, one student got first place, one got second place, and six others received honorable mention.

## **Essay Contest**

The Essay contest is a way to reach a broad audience of high students by discussing nuclear science and engineering and motivating them to take the next learning step by offering monetary awards to students who write the best essays. Typically, the essay topic switches between nuclear power and radiation sciences issues, however due to the success of the essay contest topic last year, UW-ANS picked the same topic. The essay topic this year from radiation sciences was:

Does irradiated food provide safety benefits to humans equivalent to other food preservation methods?

This year the option was given to UW-ANS members to travel to their respective high schools but more emphasis was placed on easier forms of communication such as emailing. A list of over 20 high school science teachers was gathered through contacts with the YSA program and UW-ANS asked that the essay contest information sheet be distributed to interested students. Periodic email reminders regarding the April 1st deadline were sent to teachers to continue their encouragement to their students. The awards for the top two students were \$500 for the first place essay and \$250 for the second place essay. Dominion was supportive of this contest and helped with its funding

## **Science Nights**

Every year, UW-ANS attends various science fairs and general outreach programs to local schools to explain nuclear sciences to young children.

## **Glenn Stephens Annual Science Night**

UW-ANS was approached again this year to participate in the annual Science Night at Glenn Stephen Elementary School. From past experience, it was known that the kids did not want to listen to anything that took more than five minutes in total to explain. Thus, UW-ANS took the traveling M&Ms radioactive decay game, a few counters and sources, and a new poster put together by the Governors. The result was a success with the exception that UW-ANS members had to repeatedly stop the kids from trying to eat all the M&Ms right away.

Approximately 200 elementary school children, and about as many parents and teachers, were at the Science Night. There were a total of three different nights in which this occurred spanning about two months. Many different members volunteered to help out.

## **Sunset Elementary School**

The UW-Madison Engineering Student Leadership Center (SLC) was approached by the Middleton-Cross Plains school district to provide science related displays for two elementary school science fairs. With the experience from the Glenn Stephen Science Night, the M&Ms radioactive decay game and Cloud Chambers demonstrations were selected for showcasing at the Sunset Ridge Elementary School. Several hundred students and parents attended the Sunset Ridge Science Fair. The UW-ANS volunteers who attended the event were Amir Jaber, Matt Gidden, Amanda Lang, and Tom Eiden.

## **Park Elementary School Science Fair**

The other Middleton-Cross Plains Science Fair for which UW-ANS provided displays was Park Elementary School. Again, the M&Ms radioactive decay game and Cloud Chambers were used to explain nuclear science to several hundred attendees. As always, the M&Ms game was the more effective teaching tool because it seemed the kids wanted to participate repeatedly and learn about radioactive decay. The UW-ANS volunteers who attended the event were Amir Jaber, Lucas Mynsberge, and Sam Maslonkowski.

## **Camp Badger**

Camp Badger is a program that allows talented Wisconsin middle school students to visit UW-Madison for a week to learn about science and technology over the summer. A donor provided a sizable grant to Camp Badger so that it could incorporate a module on nuclear science to attending students. Thus, UW-ANS was asked by John Murphy of the Nuclear Engineering Department to provide a series of modules to teach the students about nuclear science after he gave them an overview presentation. UW-ANS agreed to host three modules for all five Camp Badger sessions.

The modules for Camp Badger were also used as test runs for activities that would become staples at other UW-ANS outreach activities, such as the stationary M&Ms radioactive decay game. The other primary modules were the Cloud Chamber demonstration and Counters experiment. Overall, about 250 middle school students attended the UW-ANS Camp Badger modules.

## **Chicago Charter School Outreach**

The UNOCharter School in Chicago's mostly Latino/Latina Little Village neighborhood brought several students to Madison to learn about the careers available to scientists and engineers. About fifty UNOCharter school students attended the careers event. As part of the program, UW-ANS hosted a half day module discussing nuclear science and engineering and showed them several modules based off the Boy Scouts Nuclear Science Merit Badge Workshops. One of the most successful modules was the walk through of the IEC laboratory.

## **Capital Science and Engineering Fair**

UW-ANS jointly provided the student volunteers needed to run the Capital Science and Engineering Fair (CSEF) with the Society of Women Engineers (SWE) and the American Society of Materials (ASM). The job of the student volunteers was to support the judges and volunteers as needed. This included printing and organizing the brochures, serving as chaperones during the campus research lab tours, and arranging the display areas to suit CSEF needs. Since the CSEF is part of the Wisconsin State Science Fair, it was a perfect opportunity for UW-ANS members to encourage and support local high school students in math and science. The UW-ANS volunteers who helped with this event were Amir Jaber, Shane Swager, and Thomas Eiden.

## **Student Public Forum – Fukushima Dai-ichi**

Following the Events of the nuclear accident in Japan, UW-ANS discussed on how to appropriately act to help spread the word throughout the community. Immediately following the event, the Engineering Physics Department, Wisconsin Public Utility Institute, and the UW Energy Institute hosted a public forum, so instead of holding our own we helped advertise people to attend that forum, as it was bringing experts from many fields..

We noticed there wasn't a large attendance of students at that particular forum, since it was mostly geared towards public utilities, so members of UW-ANS decided to host a forum specifically geared towards students, which happened on April 11th. The purpose was to inform those who interested and help clear up the situation based on the wealth of information out there. Topics covered were an overview of nuclear reactors and fission, the sequence of events at Fukushima, and the biological risks associated with radiation. There were approximately 40 people who attended the forum, mainly composed of engineering, physics, and other science majors. The event was a success since it drew in many students outside Nuclear Engineering and UW-ANS.

## 6. Community Service

### Adopt-A-Highway

UW-ANS participated in Adopt-A-Highway for the seventh consecutive year. Members cleaned a two mile stretch of University Avenue between county highway Q and Old Middleton Road. Per the requirements of the program, participants are required to clean the highway a minimum of three times between March and December of every year. Following clean up, participants are typically rewarded with food. The volunteers for the highway cleanup for fall semester had a picnic and cookout following the event.



### UW College of Engineering Student Council

Polygon is the UW Engineering Student Council. Their responsibilities include allocating funds to the engineering student organizations, organizing and facilitating E-Week, helping Engineering Career Services (ECS) execute a career fair each semester, and providing cohesion between the student organizations. Each student organization is allowed one representative to attend Polygon meetings and provide input. This year, Patrick Snouffer represented UW-ANS at these meetings. His main duties were to act as liaison between the UW-ANS executive committee and Polygon and to advocate for UW-ANS, especially for funding. Eligibility for funding through Polygon requires that a representative be present at Polygon's meetings and that the organization help at the ECS Career Fair. Patrick Snouffer was the President of Polygon last year, so was a very strong asset to UW-ANS, with his understanding and ability to work with Polygon.

### Engineer's Week

During E-Week (February 14th through 18th), members of the student organizations of the College of Engineering compete against one another in a series of events hosted by participating organizations. UW-ANS is always a strong contender, and this year, UW-ANS came in first place out of the thirteen competing engineering organizations. The section was able to pull off this victory by participating and placing in several events, such as E-Weekopoly, Tug-of-War, Don't Forget the Lyrics, Bean Bag Toss, and much more, and a Mr. and Mrs. Engineer Contest. This year, Thomas Eiden of UW-ANS was able to rake in Mr. Engineer, for his outstanding guitar skills, while Angela Weier took 2nd place as Mrs. Engineer, with her lightning fast rubix-cube solving ability.

In place of the events UW-ANS competed in, we also hosted three events: the Scrambler Eating Contest, the Energy Game, and a Sheepshead Tournament.

The Scrambler Eating Contest is an event in which participants eat as many scramblers from Mickie's Dairy Bar as they can throughout the entire week. This event is also an excellent community service activity, as Mickie's donates \$1 for every scrambler eaten to the American Heart Association. This was the sixth year that UW-ANS has hosted and won this event during E-Week.

The Energy Game was another event that UW-ANS hosted, and it was an excellent public outreach opportunity as well. The game consists of having student organization teams answer engineering and energy related questions; upon answering these questions correctly, that team can then buy power plants (whether nuclear, solar, wind, coal, etc.) to generate electricity. As UW-ANS makes up all the questions, the organization was not allowed to compete in the game itself; however, hosting the event still helped UW-ANS's standing in E-Week and gave UW-ANS the opportunity to teach other student organizations about electricity generation and review some engineering trivia.

The final event that UW-ANS hosted during E-Week was a Sheepshead Tournament. This was UW-ANS's first year hosting this event, and it had resounding success. The one problem that could have been faced for Sheepshead was how competing organizations could be on the same team for a hand, and therefore give points to the other team. In the end, everyone respected the integrity of the game, and the sheepshead event turned into a fun, social card game between everyone.

## Engineering Expo

The Engineering Expo is a three day event that is held every two years at the Engineering campus in Madison. Run entirely by students, this event brings over 10,000 elementary, middle, and high school students to learn about engineering. On the 3rd and final day the event becomes open to the public, drawing older students from the university and curious adults from Madison and surrounding communities.

During this three day event, UW-ANS hosted an exhibit that presented nuclear engineering in a way that catered to the entire range of students and adults visiting the event. 3 months prior, a UW-ANS internal committee was established to organize the logistics and plan the educational displays. Meeting on a weekly basis, three main categories of exhibit displays were planned; Display items from industry, hands on learning activities, and informational posters.

**Industry Display:** Networking contacts were reached out to obtain generous loans for real world industry display items. Items on display included fuel grid assemblies, reactor pressure vessel o-ring seal, a complete real control rod from Dominion, a fuel bundle assembly from the UW Reactor, and prototype advanced test reactor parts from Idaho National Lab. These items were elegantly displayed as the center piece of the exhibit. In additionally, the circumference of a reactor was drawn with tape on the floor to help spectators obtain a feel of the sheer size of a nuclear power plant.

**Hands on Learning:** With over 5,000 students expected to attend the Expo (with 5,200 counted at the finally tally), UW-ANS catered to the learning style of younger students. Several Geiger Counters were put around the room, and shielding demos were put out to teach students about the importance of shielding, distance, and time. For a more fun approach, students played "Find the Radioactive Beanie Baby" by sifting through a box of 25 Beanie Babies, five of which had low

energy gamma sources sewed inside. Additionally, 3 radioactive sources were hidden underneath a large carpet, and kids could drive two remote controlled cars with Geiger Counters mounted on top to locate the hidden sources. Lastly, a ping-pong critically demo was borrowed from the Physics department that featured 255 mouse traps contained inside of a Plexiglas box. A “neutron” (ping-pong ball) was placed on each set mouse trap, and after everything was set, a new “neutron” would be dropped into the box, setting off a chaotic chain reaction representative of a fission reaction.

**Educational Posters:** Several educational and informative posters were created specifically for the Engineering Expo and placed on display throughout the exhibit room. Posters on the Basics of Fission, Radiation Shielding, Life of Nuclear Engineering, and details of the Fukushima event were made and printed on large 3’x5’ poster boards.

The Engineering Expo proved to be a huge success for both the College of Engineering and UW-ANS. With over 50 student organizations, each with their own exhibit, and many more independent exhibits of student projects, UW-ANS was able to win 1st place and secure a \$1,000 grand prize. Over 5,000 students visited the Expo, and we believe the majority of which visited our exhibit. We entertained many curious students, teachers, and adults, answering basic questions such as “What is an atom?” to “How much dose would you receive from a 9 pCi injection of I-131 (this was an *actual* question asked, and one dedicated UW-ANS member did the calculation and sent the student an answer via e-mail later that day.)



**Figure 8. UW-ANS exhibit during Engineering Expo**



*Figure 9. UW-ANS members that helped organize Expo exhibit*

## **ECB open house**

The Engineering Centers Building on campus is a central hub for creative spaces, student organizations, and events in the engineering community. This year, in order to introduce students to the resources available in this space, the Polygon Engineering Student Council organized an alcohol-free Friday night alternative for which UW-ANS was invited to volunteer to advertise our student section to the undergraduate population, assist with running games, and other activities.

## **Industrial Liason Committee**

The Engineering Physics Department hosts a group of high ranking alumni from across the nuclear and aeronautics career fields every year. These alumni form the Industrial Liaison Committee, and the purpose for their visit is to provide the department with advice on how to improve. Part of the time spent at the department is with the students, where the students are given the opportunity to anonymously voice concerns to the committee. Prior to the ILC's visit, UW-ANS and AIAA organize a meeting with their members to brainstorm comments, and the Presidents of the two organizations write up a report detailing those comments.

This year, the ILC visited the department on the evening of April 28th, and met with undergraduate and graduate students of the Engineering Physics Department over dinner. UW-ANS President Casey Anderson and AIAA President Nathan Wong presented their report of the students concerns, and other students present at the meeting added to and brought up other concerns and improvements.

## **7. Socials**

UW-ANS traditionally organizes and coordinates many social events for its members throughout the year. These events give students the ability to relax in a social setting and network and helps build camaraderie between all of UW-ANS, including students, faculty, alumni and friends.

### **Movie Night**

To give members a break from the grind of coursework, UW-ANS hosted a movie night in November where a nuclear related movie was showed on a large projection screen. Food was catered from a local sandwich shop and projector was rented to show the 1979 thriller, “The China Syndrome.”

### **Games/ Social Night with WiN**

In April, UW-ANS partnered with UW-WIN to host a games night. The event was very well received with thirty plus students in attendance. Pizza and salad were catered from a Madison favorite, Ian’s Pizza. As a sweet treat for UW-ANS members, build-your-own ice cream sundaes were served for dessert. Even as the food ran out, members stayed for nearly three hours relaxing and having fun with fellow students. Some members played video games such as Rock Band and Smash Bros. on large projector screens while others played games such as Mouse Trap, Apples to Apples and Euchre. The event was a huge success and will hopefully continue to be a part of UW-ANS tradition for many more years.

### **Pic-Nuke**

Semiannually, UW-ANS hosts a picnic for the UW Department of Nuclear Engineering and Engineering Physics members, friends, and family. Pic-Nuke is held in scenic Vilas Park on the first Friday afternoon of the fall semester and the last Friday afternoon of the spring semester. UW-ANS provides and prepares a wide variety of food and beverages for the attendees to enjoy, along with music and activities such as volleyball, softball, and card games. The fall Pic-Nuke is especially useful for new or prospective members to talk with current UW-ANS officers or members and professors of the department in a social setting in order to get a feel for what to expect from the section and from their classes in the coming year. The spring Pic-Nuke provides a fun evening for members to relax and socialize for a few hours before final exams begin. As the student population and interest in the department increases, attendance at Pic-Nuke has increased as well. Typically, around 150 people attend every semester. The upcoming spring Pic-Nuke will be held on Friday, May 6.

## **Coffee and Donuts**

On Wednesdays throughout the year, UW-ANS makes coffee and provides donuts from nearby Greenbush Bakery for its members and friends on the second floor lobby of Engineering Research Building (ERB). Ahmad Ibrahim has been instrumental in helping to pick up and set up these morning refreshments that everyone appreciates. Wednesday morning coffee and donuts has been a UW-ANS event since 2005 and UW-ANS would like to thank TomoTherapy Inc. for helping to continue the tradition this past year.

## **Breakfast at Mickies**

On Friday mornings at 7 A.M. UW-ANS student members, faculty and alumni meet at Mickies Dairy Bar for a social breakfast. All in attendance find that it is a great way to start off the last day of the week. Breakfast at Mickies is a UW-ANS tradition that dates back more than a decade.

## **8. Future of UW-ANS**

This year, we have seen a very strong showing of undergraduate students getting involved in UW-ANS. Several years ago, the majority of all executive positions consisted of graduate students, but next year all but one of the executive members will be an undergraduate. With a dedicated group of young students, they should have the ability to attract a younger crowd, which will be extremely beneficial to the future and health of our organization.

Another benefit of having a young executive group is that many of them will be around for several more years. Because of this and a strong turnover for next year, the members of UW-ANS are working on placing a bid for the 2013 Student Conference to be hosted here at UW - Madison. With a year of delicate planning, several brand new and high quality buildings on campus, and a dedicated group of students planning, we are hoping for the best with the following year's bid.

The core group of students and members of UW-ANS are also closely based with WiN and Alpha Nu Sigma. Though we have always coordinated well with them before on similar events, there has been some issues that have happened that have been problematic for both organizations, such as overlapping events. In order to offset this, along with appeal to all members of our base, there has been a stronger emphasis on collaboration between the two organizations for next year. The goal is to eventually lay the foundation of an "umbrella" group covering several of these organizations, while also keeping the individuality of each, which is on the drawing board for next year.

## 9. Conclusion

The University of Wisconsin - American Nuclear Society has always always had a rich tradition of active student involvement, extensive community outreach and public service, and being a healthy and fun student organization on campus. With several challenges facing us at the start of the year, from an executive committee with very little turnover, a new faculty advisor, and many members graduating and leaving the previous year, there was plenty of uncertainty facing UW-ANS this year of whether we could live up to our reputation.

Even with these challenges, we stepped up to the plate and were able to prove our organization was just as strong, if not stronger than it has been in the past. Starting off the year there was a strong showing of younger members and underclassmen in that became involved, some of whom were elected as executives the following semester. Speakers were arranged, outreach events were found, and volunteers were numerous and plentiful. Enthusiasm and commitment within UW-ANS was high, which was proven to our school and community by our organization winning Engineer's Week and having the best display at the Engineering Expo.

We were able to provide a great atmosphere for members of UW-ANS to develop, learn, socialize, and just have an overall great time with others. With a strong carry over of members and executives from this year to the next, it's clear that our organization will only get stronger in the next few years by building off what was learned this year. We would like to thank everyone who helped make our year successful, and wish the best for those who will continue to be a part of the University of Wisconsin - American Nuclear Society in the years to come.