2016 American Nuclear Society Student Conference Proposal

University of Wisconsin - Madison

February 26, 2015

Being a Critical Member of the Nuclear Industry

Presented by:

American Nuclear Society
Student Section
University of Wisconsin-Madison

Kazi Ahmed	Kelsey Amundson	Shyamal Anadkt
Kyle Anderson	Maddy Bouche	Xavier Durawa
AJ Gross	Virginia Haupt	Matthew Jasica
Kalin Kiesling	Jonathan King	Matt Kriete
Andrew Maile	Amber McCarthy	Drew Nigh
Ryan Norval	Juliana Pacheco Duarte	Zz Riford
Tony Silvidi	Huali Wu	Grant Zastrow

American Nuclear Society, UW-Madison Student Section
1550 Engineering Drive
Madison, WI 53706

March 1, 2015
Student Sections Committee
ANS Education and Training Division

Dear Members of the American Nuclear Society Student Sections Committee:

The American Nuclear Society, University of Wisconsin-Madison Student Section is pleased to resubmit their proposal to host the 2016 ANS Student Conference. We believe that given the strength and experience of our student section and the improvements made on our 2015 Student Conference proposal, that the UW-Madison Student Section is qualified and prepared to host a successful and engaging student conference.

The University of Wisconsin Student Section has been a very strong student section for over a decade. Dating back to the 2004 Student Conference hosted by UW-Madison, the student section has shown its strength both at the local and national level. For seven of the last ten years, the section has won the Samuel Glasstone Award for Best Section and additionally received honorable mention two other years. Over recent years our student section has become more involved in the ANS National Conferences by not only increasing our attendance at the student conferences but also increasing student participation at the winter and summer meetings as well.

With this proposal, we have taken into consideration the feedback from our 2015 proposal and have made some changes. Worth noting is that our chosen theme for this conference is *Being a Critical Member of the Nuclear Industry* which focuses on four different factors that will prepare student attendees for the many professional opportunities in the nuclear industry. Both the technical and non-technical programs for this conference proposal have been thoroughly developed to integrate each of the four factors of the theme into the workshops and panels series.

Other improvements made to the 2015 proposal take into account improvements upon the financial and program-related logistics of our proposal. These include an updated budget that accounts for tax and gratuity and a plan to gain tax-exempt status. Finally, we are proud to announce the addition of AJ Gross as a General Co-Chair to this year's proposal. We have many technical and non-technical events planned for this conference, and we believe that the addition of AJ as General Co-Chair will better enable each of us to give the level of attention demanded by each aspect of our proposed conference.

The University of Wisconsin - Madison is thrilled to have the opportunity once more to host the ANS Student Conference. We are very grateful to be considered to host the 2016 Student Conference and hope that you will find this proposal as strong and as engaging as our Student Section.

Sincerely,

Kalin Kiesling, Matthew Jasica, & AJ Gross
Conference Proposal General Co-Chairs
UW-Madison ANS Student Section

Contents

1 Being a Critical Member of the Nuclear Industry

The world of nuclear science and technology is driven by bright, enthusiastic minds. Like every field, success depends on both working together and individual strengths. Students in the industry can seek out opportunities to enrich themselves and contribute to the future of nuclear engineering, thus becoming critical members of the field. For this conference, we will explore the four factors that define what it takes to be a critical member of the nuclear industry:

η uclear Opportunities
f orming our Public Image
p rofessional Development
ϵ ntrepreneurship

η: From nuclear batteries to reactor thermal hydraulics, the nuclear field is diverse and filled with people of many different skill sets. At conferences, this diversity is naturally apparent in the variety of research presented, but we want to recognize it further with a series of technical panels focusing on the diverse nuclear opportunities available. We will encourage panelists who can share their experiences with nuclear technology advancements that are lesser-known, distinctive, or otherwise under-appreciated. Recognizing the diversity of nuclear applications can help one discover what they are most passionate about and where they can make the biggest difference.

f: Public opinion on nuclear technology has always been molded and shifted in all directions by new events and discoveries. Therefore, as members of the nuclear industry, we should always promote awareness and understanding of the field and uphold our public image. Furthermore, public outreach is the best way to express our passion for the field. With public outreach workshops, we can all explore the tools and methods which are best at captivating the public.

p: As with all conferences, honing professional interpersonal skills is an important goal for students. In addition to the career fair, this factor will be the theme of some non-technical workshops, which will focus on marketing one's skills and experience and will include a networking dinner.

ϵ: Although the nuclear industry is heavily tied to government regulation, individual businesses have also been crucial to its development. Entrepreneurship can mean more than just pursuing a good business idea, however. In a broader sense, it can mean finding a need and pursuing a solution. We should always ask ourselves: "How can I apply my knowledge in this situation in a new way to achieve a critical success?" This factor will be the theme of some technical panels and non-technical workshops. We will also encourage speakers and panelists to contribute stories about how their unique skills helped bolster their organization's success.

The University of Wisconsin-Madison would be proud to host the American Nuclear Society Student Conference in 2016. We want to bring students together, and with the help of professionals from around the country, help each other become critical members of the nuclear industry.

2 A Dose of Madison

Aerial view of downtown Madison with Lake Mendota to the north and Lake Monona to the south

2.1 The City of Madison

Madison, Wisconsin, is located on the isthmus between two scenic lakes, Mendota and Monona. Not only is Madison a historic center as the state capital, it is also a center for the arts featuring the Overture Center which hosts such shows such as Disney's Beauty and the Beast, the Blue Man Group, and Cats. Frank Lloyd Wright, a native Wisconsinite, designed the Monona Terrace perched on the shores of Lake Monona visually linking the lake to the nearby capitol building. State Street, located in downtown Madison, offers a variety of restaurants and shops for travelers to explore.

The capitol building and State Street at night

Accessibility

The Dane County Airport (MSN) is conveniently located minutes away from downtown Madison. This airport is serviced by four major airlines, including American, Delta, Frontier, and United. It hosts over 95 daily arrivals and departures with direct flights to 13 cities across the nation, including New York, Washington DC, Dallas/ Ft Worth, and Orlando. For the additional convenience of travelers, General Mitchell International Airport (MKE) and Chicago O'Hare International Airport (ORD) are only a 2 and 3 hour bus ride away from Madison, respectively.

Accommodations

The greater Madison area has over 9,000 overnight lodging rooms. With a large selection of hotels nestled in the downtown area, visitors can select the price range that works for them. For the traveler looking for the best experience at the conference, The Madison Concourse Hotel is the best choice. The Madison Concourse Hotel has been chosen as the meeting location which is offering us the use of 250 of their 350+ guest rooms in downtown Madison.

Weather

During spring, Madison experiences gorgeous weather as the chilly winter days diminish. In the month of April, the month of our first proposed conference date, Madison has an average daily high temperature of 287 K (58°F) with an average low of 274 K (35°F).

Memorial Union Terrace

Aerial view of the engineering campus

2.2 The University of Wisconsin - Madison

Just southwest of the Capitol Square and downtown Madison, rests the University of Wisconsin-Madison. Along the south shores of Lake Mendota sits the Wisconsin Memorial Union and famed outdoor Terrace bar, where from April through September, university students, faculty, and alumni enjoy the gorgeous lakeside view and partake in any number of activities, including sailing and SCUBA diving. Further west you will find the Union South, another hub of student activity that is host to an indoor rock climbing wall, bowling alleys, and the ever-popular student bar and restaurant, The Sett, which always has a wide variety of Wisconsin craft beers (among others) on draught. Just a block away from Union South and immediately south of the Engineering campus is Camp Randall, the 80,321 seat stadium that is home to the Wisconsin Badger Football team. Finally, no visit to our beloved university would be complete without tasting the Babcock Dairy ice cream, sold at 3 locations across campus, including the two student unions. All this and more welcome visitors to the University of Wisconsin-Madison.

UW-Madison continues to maintain a strong presence in the Midwest, earning itself the moniker "Public Ivy" school. As of 2014 the school features 132 majors and is home to 29,302 undergraduates, 9,203 graduate students, and 2,173 faculty members. The students take part in a variety of activities at UW-Madison, including over 800 professional and social student organizations and 25 NCAA Division 1 sports teams. The College of Engineering upholds this excellence, and is home to 8 degree-granting departments.

Department of Engineering Physics

The Department of Engineering Physics in the College of Engineering houses two graduate program: Nuclear Engineering & Engineering Physics (NEEP) and Engineering Mechanics (EM); and three undergraduate programs: Nuclear Engineering (NE), Engineering Physics (EP), and Engineering Mechanics & Astronautics (EMA). Undergraduate students in NE have two primary tracks for a degree in nuclear engineering: a power track that focuses on nuclear reactor systems and a radiation sciences track that focuses on non-power applications of radiation such as health physics. Undergraduates in EMA can focus on aerodynamics or astronautics, while students in EP have the option to focus on plasma science and engineering, nanoengineering, or scientific computing. The full department is home to 195 undergraduate students, 124 graduate students, and 27 faculty. Of the students approximately 90 are in the undergraduate NE program and another 90 in the graduate NEEP program. The Nuclear Engineering and Engineering Physics (NEEP) program at UW-Madison is one of the strongest nationwide. In 2014 the Nuclear Engineering & Engineering Physics Program was ranked third nationwide. The strong academics and research in the Department of Engineering Physics continues to keep the NEEP Program in the top ranks.

2.3 Research at UW-Madison

The Engineering Physics Department at UW-Madison is home to a variety of research groups in the fields of nuclear materials, fission engineering systems, and nuclear fusion. While not every research group is highlighted here, we hope these featured groups demonstrate the excellence in nuclear engineering research that occurs at

UW-Madison. Important to UW Madison is not only the quality of the individual research groups but the cross-curricular research culture that is fostered at the university.

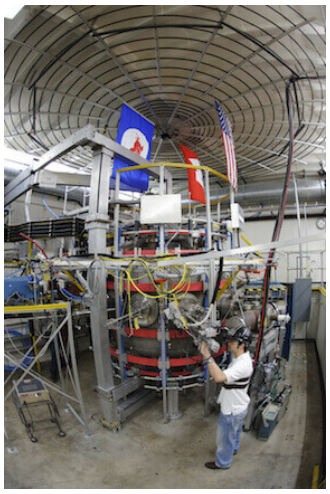
Nuclear Fusion Research

The University of Wisconsin Madison is proud to boast one of the strongest graduate fusion programs in the nation with research groups investigating experimental, computational, and theoretical problems. Among these is the Fusion Technology Institute, one of the leading research institutions for fusion research in the world, having graduated 163 Ph.D. students and having been awarded $70 million in research. The FTI focuses on technology issues beyond the ignition process, including tritium breeding, ion-surface interactions, system neutronics and more. This body provides a crossroads for the many experimental and computational fusion research endeavors across UW-Madison. In addition, the Center for Plasma Theory and Computation (CPTC) and Pegasus Toroidal Experiment examine fundamental plasma physics problems, including those critical to the success of magnetic fusion devices.

Fusion Experiments

The University of Wisconsin-Madison is home to not one, but four experimental research groups explicitly looking at nuclear fusion and the plasma physics behind it, including 3 distinct magnetic confinement plasma physics experiments:

- The Pegasus Toroidal Experiment is a spherical tokamak hosted by the EP department investigating high-energy plasma regimes in a low aspect ratio tokamak.
- The Helically Symmetric Experiment (HSX) is a modular coil stellerator hosted by the Electrical and Computer Engineering Department. It explores the unique physics of this alternative design to a tokamak.
- The Madison Symmetric Torus (MST) is a plasma research device based in the Physics Department. MST works toward three coupled goals: to advance the magnetic configuration known as the reversed field pinch, to investigate general fusion energy science issues, and to explore astrophysical plasma phenomena.
- The Inertial Electrostatic Confinement (IEC) Fusion group is hosted by the EP Department.The IEC group generates D-D and D-^{3}He fusion reactions using electric fields to study the physics of the fusion interaction as well as materials behaviors under fusion conditions in 4 operational tabletop fusion devices.



Pegasus Toroidal Experiment

Center for Plasma Theory and Computation

CPTC is a collaborative research group investigating theoretical problems in plasma physics. Research problems include macroscopic stability and transport in magnetically confined plasma, magnetic reconnection and relaxation in laboratory and space plasma, the feasibility of fusion energy, and plasma simulation via numerical computation.

Computational Nuclear Engineering Research Group

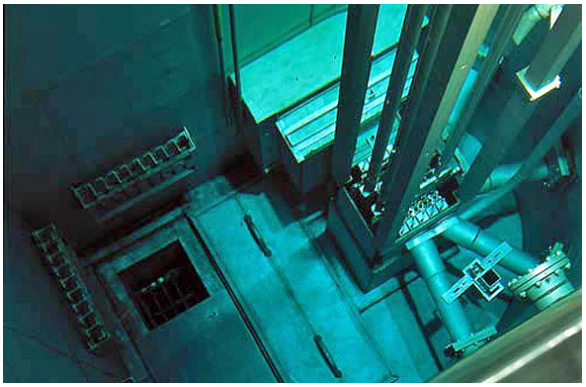
Abbreviated as CNERG and pronounced as “synergy”, the Computational Nuclear Engineering Research Group focuses on both nuclear engineering systems analysis and developing the software tools necessary to perform state-of-the-art computational analysis. Among its research focuses are neutronics and fuel cycle analysis. Using its own CAD-based Monte Carlo tools, CNERG is also part of a collaborative effort performing first wall and shielding analysis for the ITER project currently under construction in France.

University of Wisconsin Nuclear Reactor

Since first achieving criticality in 1961, the University of Wisconsin Nuclear Reactor (UWNR) is one of the nation's longest-running TRIGA test nuclear reactors. The UWNR provides numerous professional services to civilian and government entities alike, including:

- Medical isotope production
- Environmental assessment, including studying contaminants in ground water
- Neutron radiography imaging
- Trace element detection for quality control in high-performance materials
- Neutron activation analysis
- Advanced reactor design, specifically the behavior of advanced materials in a high-radiation environment

Along with its extensive research utilities and services, the UWNR is proud of its services and opportunities to the UW students and general public alike. Students in the NEEP program have the opportunity to use the reactor in two different laboratories, the Nuclear Instrumentation Laboratory and the Nuclear Reactor Laboratory, as well as a third class that trains students in the operation of the UWNR. Special outreach programs offered through the EP department and ANS allow for members of the public to visit the UWNR and learn about nuclear energy.



A look inside the UWNR

Fuel and Materials

Materials-focused research groups in the EP department investigate a wide variety of topics critical to nuclear engineering for both academic research and industry support. Among these is the EP Department's own student-operated Ion Beam Lab, featuring a 1.7 MeV tandem accelerator. Topics investigated include, but are not limited to:

- Nuclear fuel matrices and fuel liners
- The nuclear fuel cycle, including recycling and storage
- Corrosion in seawater, molten salts, and sodium
- Radiation damage in structural materials such as silicon carbide and steels

In addition, students doing materials research have access to the Materials Science Center. Here they may perform sophisticated analysis with state-of-the-art instruments, including scanning and transmission electron microscopes, x-ray diffraction, atomic force microscopy, ion mills, and more. Of particular repute is a Titan scanning transmission electron microscope (STEM) capable of resolving individual atoms. Not only is the MSC a user facility for UW research, but also serves universities in the nation as far as Puerto Rico.

Panoramic view of the UW Ion Beam assembly

Thermal Hydraulics Research

The thermal hydraulics research at UW-Madison investigates both improving the current generation of LWR's and developing the next generation of fission reactors. Students may perform experimental research at multiple labs on campus such as the Thermal Hydraulics Laboratory. Physical processes investigated include multiphase flow, heat transfer in reactor components and systems, critical heat flux, hydrogen formation, and molten fuel interactions. One LWR area of interest is critical heat flux, which can be a limiting factor in modular reactor operations. Another topic of interest is the Reactor Cavity Cooling System, which represents the next generation of safety systems and examines using natural convection to remove heat during loss of power incidents. A liquid water-cooled facility is currently in operation and an air-cooled facility is currently under construction. These facilities can be compared with other facilities at different scales as well as computer models, to perform and validate scaling analysis. Generation IV technologies under investigation include liquid salts, liquid sodium, and supercritical CO_2. UW-Madison has significant experience working with molten salt coolants, and in the past year additional work has started on freezing transients and scaled experiments with simulant fluids for molten salts. On the other side, computational efforts in thermal hydraulics look to further our understanding of LWR physics and investigate beyond-design-basis accidents. This research includes extensive use of RELAP and MELCOR codes to model transients ranging from natural circulation decay heat removal in advanced reactors to severe accidents with core melting.

Wisconsin Energy Institute

Located across from the Engineering campus, the Wisconsin Energy Institute (WEI) is a cross-campus collaborative forum for researchers of many disciplines investigating the large-scale energy challenges facing society. Significant research efforts include state-of-the-art electrical grid distribution technologies and the only DOE-funded bioenergy research center on an academic campus. In addition, the WEI also supports smaller university groups, including one Engineering Physics group investigating advances thermal cycles in power applications. The WEI is currently under the direction of Prof. Michael Corradini, Engineering Physics faculty member and former ANS President.

The UW Hospital

The UW Hospital works in close conjunction with the UW School of Medicine and Public Health on the cutting edge of basic, clinical, and public health science. The hospital boasts 1000 faculty across 25 departments and 18 institutions. Professors in the EP Department also collaborate about innovative health physics research, such as brachytherapy seeds that can provide highly-localized cancer treatment. EP Students may also continue on to pursue an advanced degree in health physics.

2.4 The American Nuclear Society, UW-Madison Student Section

Students, faculty and staff of the EP Department enjoying a successful Pic-Nuke in Fall 2014

The American Nuclear Society, UW-Madison Student Section (UW-ANS) was formed more than 50 years ago, in 1961. It culminates in the cross roads of medical physicists, nuclear power engineers, and radiation science engineers. With a range of 60 to 90 active members each semester from freshman undergraduates to graduate students, its members comprise a strong base of students willing to spread nuclear knowledge. The section participates in its main three divisions of activities: ANS service, outreach and community service, and professional development.

ANS Service

Under ANS service, members are encouraged to help out with the internal workings of the society. One such way that students help is by volunteering and earning money for the student org at the two College of Engineering Career Fairs each year. Other ways a student can provide service to ANS is by helping organize, set-up, or clean-up at events. Many students help out setting up, cooking, and cleaning-up at the semiannual Pic-Nuke, a picnic for all friends and family of students and faculty in the Department. Students may also serve on special committees, such as the Engineering Expo team which is planning the ANS exhibit for a three day college-wide educational event. Students can also advertise the UW-ANS essay contest to their high schools and help grade the submissions. Students may also create an entirely new group with ANS members, such as the nuclear battery team created this past year.

Outreach and Community Service

Outreach and community service aims to benefit the outlying community by informing others about nuclear science or by assisting the community. Over the summer, Camp Badger invites middle school to high school aged students to attend a camp that covers various educational disciplines across campus. On "Energy Days," the students come to an ANS presentation where they learn about radiation, half-lives, nuclear fission and fusion, and nuclear technology. In addition, UW-ANS visited Madison West High School, and taught a special "Demystifying Nuclear Power" lecture to three engineering classes. An event that spans the whole year is Science Olympiad. A few members drive to a local elementary school once a week and act as mentors and assistants to help the students compete in the district, regional, state, and possibly national, science and engineering competitions. Usually the ANS members enjoy it just as much as the elementary students. Another outreach event is a Boy Scout Nuclear Science Merit Badge Workshop. Held six times a year with an attendance of 60 boys scouts on average, UW-Madison helps see over 400 scouts and parents through a tour of the UW Nuclear Reactor, a radiation counting lab, a nuclear careers presentation, and a cloud chambers station. Finally, UW-ANS is frequently called to give presentations about radiation and nuclear power in local events such as Racine Day, Exploring Engineering Day, and the STEM Convention.

A scout at a merit badge workshop

One of the community service events is Highway Cleanup which is a biannual cleanup day where a group of dedicated ANS'ers walks a patch of local road and clean up debris. A second community service event done at least once per year is a visit to St. Vincent de Paul Food Pantry where students either stock the shelves with food or help families gather their groceries.

Professional Development

Our professional development activities encourage students to broaden their horizons in the fields in which they are interested. Students are encouraged to attend the ANS meetings of the ANS Local Section held on campus to listen to presentations of people from around the state as well as connect with these professionals. UW-ANS also hosts guest speakers from various disciplines from around the nation, including guest from Idaho National Laboratory, U.S. Navy, AREVA, Dominion, and more. Additionally, students have the opportunity to attend tours of research facilities or power plants. In the past, groups have driven to Argonne National Lab, La Salle Generating Station, Kewaunee Power Station (prior to its closing), and most recently, the Point Beach Nuclear Plant. This spring, UW-ANS is organizing visits to the decommissioned Kewaunee plant as well as Fermi National Accelerator Laboratory. Of course, UW-ANS is proud to have students represent the university presenting their cutting-edge research at both student and professional ANS conferences.

Socials

The UW-ANS Student Section aims to create a friendly environment and a lasting friendship that will benefit them for the rest of their lives. As a result, we have social events such as game night and movie night. To gain contact with faculty and staff and nuclear related personnel there are recruitment events and weekly "Coffee

and Donuts" and "Breakfast at Mickies" (a local restaurant). Undergraduates, graduates, and professors meet in a more informal setting too not only discuss nuclear science but anything else as well. High-energy socials are also a must: past and future events include paintball, softball, hockey, ice skating, a chili cook-off, and more. Finally, the UW-ANS Student Section is closely involved with other regional ANS Student Sections. Previously, Wisconsin, Purdue, and Illinois ANS Student Sections went on a trip together to the La Salle Generating Station in Marseilles, IL.

UW Students outside the Point Beach Energy Center

We believe that our student section embodies the excellence sought after in members of the nuclear industry. Through our student section, members develop leadership and networking skills as well as a sense of civic duty and civic pride. Our section has continued to demonstrate excellence, being honored as the winner of the Samuel Glasstone Award for ten of the past thirteen years, including an additional honorable mention status. Based on the size and strength of our student section, we believe that our section is able to go above and beyond what is needed to put on a successful and memorable 2016 student conference.

3 Conference Logistics

3.1 Selection of Conference Dates

We propose the following dates for hosting the 2016 ANS Student Conference. As is precedent, the conference will be held from Thursday through Sunday. Below are our first and second choice dates for the conference.

1. Thursday, March 31st-Sunday, April 3rd
2. Thursday, March 17th-Sunday, March 20th

We currently have the first set of dates reserved with the Madison Concourse Hotel, our first choice of venue (discussed in Section 3.2.1). While we have not entered into a contract with the Concourse Hotel, the hotel has agreed to reserve these dates on our behalf as a result of our previously existing relationship with them when hosting the 2004 ANS Student Conference in Madison. The following considerations in selecting these dates include, but are not limited to:

- Availability of the Madison Concourse Hotel
- School finals and as many spring breaks as possible are to be avoided.
- Easter occurs on Sunday, March 27th and is to be avoided.
- Passover begins on Wednesday, April 22nd and ends on Thursday, April 30th and is to be avoided.
- An event later in the semester is favored, as Madison weather becomes milder as summer approaches. While the cold and snow would certainly offer an authentic UW-Madison experience, we feel that the conference attendees would appreciate the milder April conditions.
- The NCAA Men's Basketball Final Four games are scheduled for Saturday, April 2nd. This has not proved problematic in the past, although some conference activities may be finishing up during one or both games.
- We hope that the occurrence of April Fool's Day during the conference will not result in too many shenanigans that detract from the professional environment of the conference.

A graphical calendar is provided in Appendix A detailing these dates and conflicts.

3.2 Conference Facilities

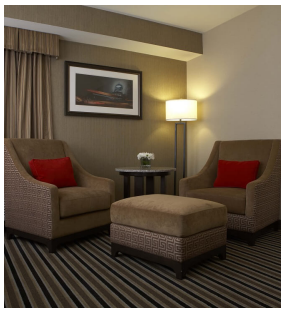
3.2.1 The Madison Concourse Hotel

Our primary selection for the site of the American Nuclear Society's Student Conference in 2016 is the Madison Concourse Hotel. The staff at the Madison Concourse Hotel have graciously offered us rental of all conference facilities free of charge due to our long-standing relationship with the hotel. Inside there is over 20,000 sq. ft. of meeting space on the 1st, 2nd, and 6th floors that the hotel has agreed to make available for us (see B.1). Because of this ample space, the majority of the conference would be held at the Concourse Hotel. Included in the conference space is the Grand Ballroom, which can be used for dinner and seats 1,000 people. In addition, the Concourse is a block away from Capitol Square and State Street, which hosts various restaurants and shops. Conference attendees wishing to stay at an alternative hotel have various choices that are within 0.5 miles from the Concourse Hotel (see Section 3.4).



Conference facilities at the Madison Concourse Hotel

The Concourse Hotel also offers numerous business services and other amenities, for example: a 24 hour business center with two computers, three printers, and a copy machine; complimentary wireless internet. Each room has a refrigerator, coffee maker, desk, and flat screen TV. The Concourse Hotel will be remodeling their lobby before our proposed conference dates, which will include adding a Starbucks just outside the lobby. Detailed floor plans of the conference facilities can be seen in Appendix B.


Guestrooms and amenities at the Madison Concourse Hotel

3.2.2 Monona Terrace

Monona Terrace and the Madison downtown skyline

Monona Terrace is a beautiful convention center that overlooks Lake Monona. The architect, Frank Lloyd Wright, wanted this facility to be a gathering place that linked the State Capitol to the shore of Lake Monona. With a beautiful view and premier facilities, this is the desired location for the Wisconsin-themed dinner and dance social on Friday night (Section 4.2.5). Half of Exhibition Hall seats 1,000 people and has wonderful acoustics.

Inside Monona Terrace

3.3 Facility Contingency Plan

The Madison Concourse Hotel has already graciously reserved the top choice of proposed dates for our use. In the very unlikely event that a conflict of reservations makes us unable to use the Concourse Hotel for any of our proposed dates, we have also considered hosting the event at the beautiful Monona Terrace. In this scenario, we are confident that the Monona Terrace will be able to hold the conference, which has more than enough space for all of the conference events. In anticipation of this contingency, our primary set of dates has also been penciled in at this location, giving us the right of first refusal for this set of dates. Since the Madison Concourse has offered us all conference space free of charge, being forced to go through the Monona Terrace would make us have to reconsider our current budget due to the increased cost to rent space.

3.4 Lodging Accommodations

The Madison Concourse Hotel has offered us 250 guestrooms, which can accommodate over 900 people, well above our expected attendance. The room rate is $139.00 plus tax per room per night. There are double queen rooms that can accommodate up to 4 people, king rooms that can accommodate 2 people or 3 people if a rollaway bed is added, and single rooms that can accommodate 1 or 2 people.

If a conference attendee does not wish to stay at the Concourse Hotel, there are many other hotels in the downtown Madison area. A comparison of the different hotels can be seen in Table 1 and locations can be seen on the map in Figure 1. Each of these hotels has confirmed their availability for the specified dates. Hilton Monona Terrace has an on-site convenience store and local transportation. Madison's Best Western Plus Inn on the Park has other amenities including complimentary airport shuttle service, business center, and dry cleaning. Doubletree by Hilton offers a free shuttle within 2 miles of the hotel and also has laundry and dry cleaning services. Hyatt place offers complimentary airport shuttle service and has complimentary breakfast. The Concourse is the most reasonably priced and has plenty of rooms available so it is recommended to stay there, but if attendees wish to get away from the business of the conference there are plenty of options available.

Table 1: Madison Area Hotels

Hotel	Location on Map	Distance from Concourse (mi)	Dates	Number of Rooms	Rates*	Rate per Person**
Concourse	15	0.0	3/31 - 4/3	250	$139	$34.75
			3/17 - 3/20	250	$139	$34.75
Hilton Madison Monona Terrace	8	0.5	3/31 - 4/3	150	$169	$42.25
			3/17 - 3/20	-	-	-
Best Western Plus Inn on the Park	2	0.3	3/31 - 4/3	100	$149	$37.25
			3/17 - 3/20	100	$149	$37.25
DoubleTree Madison	6	0.5	3/31 - 4/3	100	$149	$37.25
			3/17 - 3/20	-	-	-
Hyatt Place	13	0.4	3/31 - 4/3	25	$139	$34.75
			3/17 - 3/20	-	-	-

**Double room rate, **Assumes 4 people per room*

3.5 Travel and Transportation

3.5.1 Arrival by Vehicle

The Madison Concourse Hotel in Madison, WI, is located in southern Wisconsin making travel by vehicle an option for many student chapters located within the Midwest. The estimated travel time and fuel costs of student chapters located within 10 hours of driving time from the Madison Concourse Hotel are tabulated in Table 10 in Appendix C. Travel costs are approximated for one 20 MPG vehicle with fuel costs of $35.87 assuming a minimum of four students per vehicle.

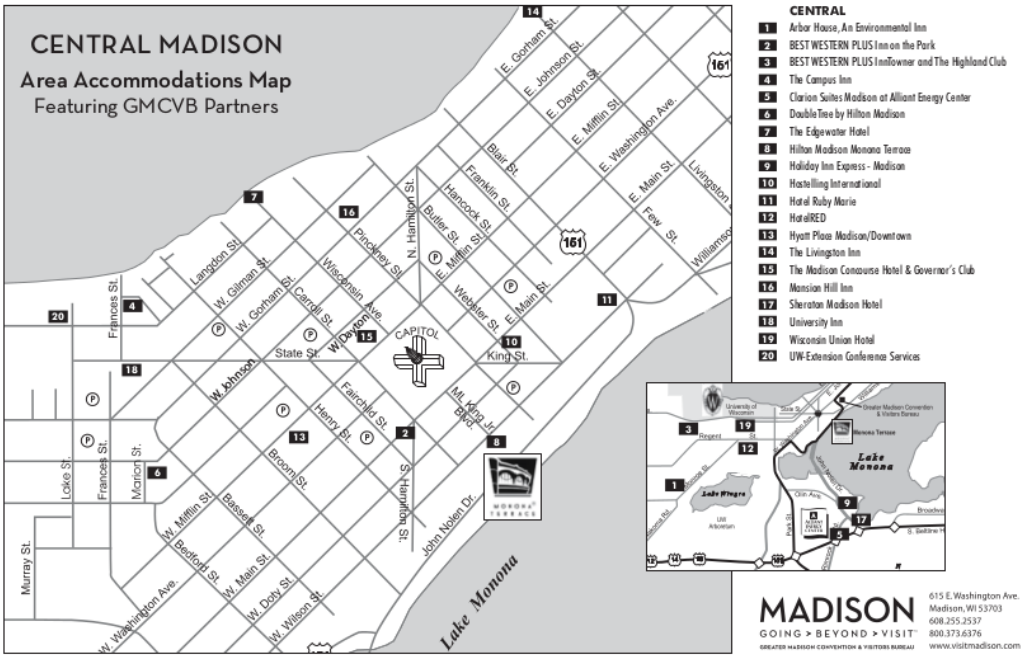


Figure 1: Map of hotels in downtown Madison

3.5.2 Arrival by Air

The Dane County Regional Airport (MSN) is the recommended and closest airport for arrival to the conference. There are more than 95 daily nonstop flights to 13 airports (see Figure 2). The Madison Concourse Hotel is located only 5.4 miles away from MSN and the Madison Concourse Hotel will provide a free shuttle from 11am-7pm. Attendees are encouraged to notify the Madison Concourse Hotel of their arrival time so the Madison Concourse Hotel is prepared for their pickup. If there are flights landing outside these hours, the Madison Concourse Hotel will pay for a taxi service, as long as we are given advanced notice and can arrange a pick-up time.

Figure 2: Nonstop flights to the Dane County Regional Airport

It is recommended for arrivals into Milwaukee's General Mitchell International Airport (MKE) and Chicago's O'Hare International Airport (ORD) to travel by bus to Madison. From General Mitchell International Airport it is recommended that conference attendees travel to Madison using the Badger Bus, which provides roundtrip travel for $45 with departures from MKE every 2 hours during the day. Travel duration from MKE to Madison through Badger Bus is approximately 1.5 hours depending upon traffic conditions. Tickets can be purchased

in advance at www.badgerbus.com. For conference attendees traveling through Chicago O'Hare International Airport, only 2.5 hours from Madison, the Van Galder Bus Company operated by Coach USA is recommended. The Van Galder Bus Company offers twelve departure times from Chicago O'Hare to Madison, WI for a cost of $60, tickets can be purchased from http://www.coachusa.com/vangalder/. Both the Badger Bus and Van Galder Coach USA drop off at the Chazen Museum located at 700 University Avenue in Madison. Travelers arriving at the Chazen Museum will have the option of either being picked up by the Madison Concourse Hotel shuttle or if preferred they may take the Madison Metro buses to the Madison Concourse Hotel (see Figure 3). If one would like to be adventurous and stretch their legs after traveling several hours by plan and bus, they may walk the 0.7 mile journey from the Chazen Museum to the Madison Concourse Hotel. Further busing information will be provided for travelers through these airports pertaining to bus departure locations, location of arrival in Madison, and travel to the Madison Concourse Hotel from the bus drop-off location. Group buses will not be organized due to logistical issues of arrival times at various airports.

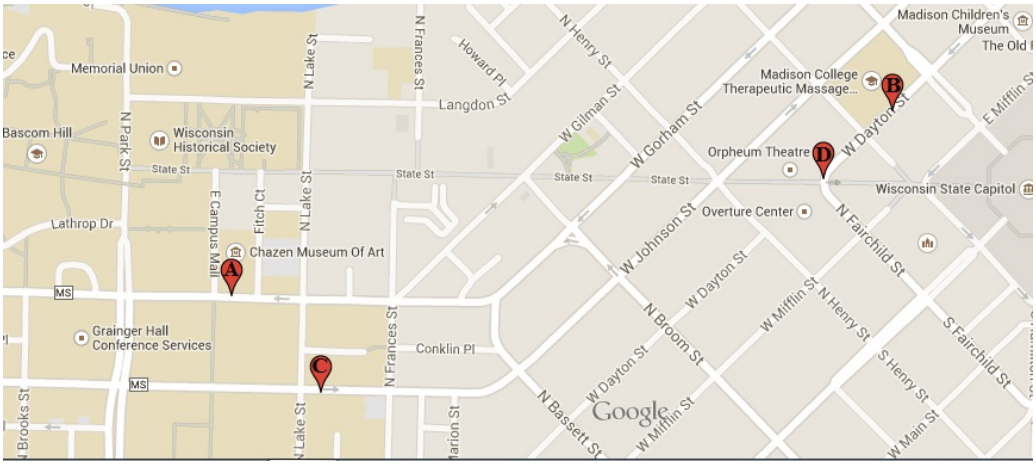


Figure 3: (A) Badger Bus/Van Galder/Coach bus stop; (B) Concourse Hotel; Recommended Madison Metro bus stops from campus (C) to the Concourse Hotel (D).

Taking into consideration the lowest airfare cost and bus costs for all three arrival airports, the average airfare cost to Madison, WI is $314 as shown in Table 9 in Appendix C. The average airfare and bus cost for arrivals into Dane County Regional Airport is $340, while General Mitchell International Airport is $381 and Chicago O'Hare International Airport is $349. In consideration of the airfare and bus costs, it is recommended that conference attendees either travel through Dane County Regional Airport in Madison, WI, or Chicago O'Hare International Airport depending upon the departure location.

3.5.3 Travel during Conference

Since the majority of the conference will be held at the Madison Concourse Hotel, transportation costs are greatly reduced. We will use passenger vans and buses provided free of charge by the Madison Concourse Hotel for tours located on the UW campus. Busing will be organized for the Monona Terrace dinner on Friday evening in case of inclement weather and for those who are unable to travel by foot. For other tours/events outside the Madison Concourse Hotel and UW campus, such as the Capital Brewery Tour, a busing company organized through the Madison Concourse Hotel will be used. The number of vehicles will be determined based on interest and the maximum capacity allowed by the facilities that are being toured. Information for the Madison Metro will be provided for attendees not staying at the Madison Concourse Hotel and attendees interested in traveling around Madison.

4 Conference Program

4.1 Technical Program

The technical program is the crux of the conference program. With abundant space at the Madison Concourse hotel, the program will feature student presentations, poster sessions, technical workshops and guest speakers throughout the three days of the conference.

4.1.1 Potential Speakers

Bryan Hanson is the President and Chief Nuclear Officer at Exelon Generation. Mr. Hanson graduated from the University of Wisconsin-Madison with a bachelor's degree in nuclear engineering and a Master of Business Administration from St. Ambrose University. At Exelon, Mr. Hanson is responsible for maintaining high levels of performance and safety for the largest nuclear fleet in the nation (23 reactors total). Outside of Exelon, Mr. Hanson serves on the University of Wisconsin Department of Engineering Physics Advisory Board, a board developed to guide the Department in improving the system. Such role involves meeting with students and faculty alike to discuss changes that should be made to the Department and improve the quality of education of the students. Due to his high involvement in Exelon and his high level of commitment to students and the University of Wisconsin, Bryan Hanson would be an excellent speaker on the topics of the value of education and professional development.

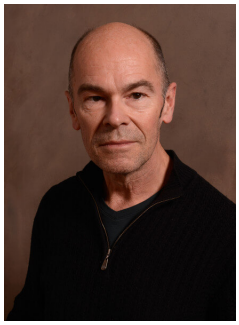
Joyce Connery is the Director of Nuclear Energy Policy within the Office of International Economics on the National Security Council. Previously, Ms. Connery served as Senior Policy Advisor to the Deputy Secretary of Energy and the Director for Threat Reduction and Nuclear Energy Cooperation under both the Bush and Obama Administrations, as well as various positions in the National Nuclear Security Administration. Ms. Connery earned a Bachelor's Degree in International relations and a Master's of Art in Law and Diplomacy, both from Tufts University. Ms. Connery has received numerous awards over the course of her career, including NNSA's Silver Medal and the Secretary of Energy's Distinguished Service Award and was a 2012 Service to America Medal finalist. She is the current Chair of the Arms Control and Nonproliferation Technical Division of the Institute of Nuclear Materials Management and active in the American Nuclear Society and Women in Nuclear. Ms. Connery has previously visited the University of Wisconsin and talked one on one with students about their studies and her own policy work. Ms. Connery's role in nuclear policy and her involvement with ANS and students show she would be an excellent speaker for the conference.

Dr. Rock Mackie is a medical physicist at the University of Wisconsin and holds emeritus professorship across a multitude of departments at the university: Medical Physics, Human Oncology, Biomedical Engineering, and Engineering Physics. Dr. Mackie is not only a well-published researcher with the Morgridge Institute for Research at UW-Madison where he researches the practices and technology for radiation medicine, but is also a well established entrepreneur. Dr. Mackie holds more than 40 patents and 170 peer-reviewed publications. He is a co-founder of Geometrics Corporation (the developer of the Pinnacle cancer treatment system), owner of Philips Medial Corporation, and a co-founder of TomoTherapy Inc. As Dr. Mackie continues to research, he also serves on the boards of start medical companies to share his entrepreneurial expertise. Rock Mackie is more than qualified to speak on topics such as medical physics research, identifying market needs, and entrepreneurship, all which are factors in being a critical member of the nuclear industry.

Bud Selig was the 9th commissioner of Major League Baseball from 1992 - 2015, considered to be the best commissioner in baseball history by many. Selig was born in Milwaukee and attended the University of Wisconsin - Madison and went on to become the owner of the Milwaukee Brewers. While Selig has no experience with anything nuclear, he has tremendous experience guiding a highly visible organization through a dangerous public relation crisis which made its way all the way to the congressional level (i.e. the steroid scandals). Through Bud's leadership, the MLB has seen improved ratings and greater popularity. Additionally, Bud Selig is still involved with his Alma Mater of UW-Madison. He currently holds the title of Honorary/Associate Fellow in the Department of History where he has, in recent years, given lectures. With his expertise in leadership and public image formation, Mr. Selig could provide a number of tools that conference attendees can apply both within and outside of the nuclear industry.

Dr. Patricia Dehmer is the current Deputy Director of Science Programs in the Office of Science at the U.S. Department of Energy. The Office of Science is the third-largest sponsor of basic research in the nation, being a supporter of many national labs as well as the Great Lakes Bioenergy Research Center at UW-Madison. Dr. Dehmer oversees six science programs (basic energy, biological & environmental, fusion energy, advance scientific computing, high energy physics, and nuclear physics), teacher and scientist workforce development, and construction project assessment. Prior to being appointed Deputy Director, she served as the Director of the Office of Basic Energy Sciences. At the time of her leadership, the budget more than doubled for basic science funding, and she oversaw the construction of the Spallation Neutron Source at Oak Ridge National Lab, among many other projects. Dr. Dehmer would be an excellent speaker on the topics of leadership and management in science and research.

Stewart Prager is Director of the Princeton Plasma Physics Lab (PPPL), one of the world's leading plasma research laboratories. He has been director of the lab since 2009, prior to which he spent 31 years at the University of Wisconsin. In fusion energy research funding is always tumultuous, and after Prager had assumed the leadership position in 2009 the DOE had just cut National Compact Stellarator Experiment funding part way through the project. In response he spearheaded an application process to win $94 million to upgrade the existing National Spherical Torus Experiment (NSTX). Prager could speak with insight on the role of government in science and the experience of directing a DOE research laboratory.



Robert Stone, a graduate of the University of Wisconsin-Madison, directed the 2013 documentary film Pandora's Promise. This documentary was shown at the Tales from Planet Earth festival in Madison, WI, and after the viewing, Robert Stone participated in a panel to debate nuclear technology. Robert Stone would be a great speaker on public image and perception of nuclear power and technology in today's world.

4.1.2 Technical Panels

Technical panels will consist of presentations and round table discussions that are important to the nuclear industry and the American Nuclear Society. Panels consisting of professionals from different sides of the industry will focus on one of the factors of *Being a Critical Member of the Nuclear Industry*. We plan to have two series of technical panels to focus on the factors of *ηuclear Opportunities* and *ϵntrepreneurship*.

ηuclear Opportunities Series

Medical Physics and Radiation Protection

Innovation in radiation science is occurring in several different aspects of the industry. This panel will feature scientists from government organizations, private companies, and academia who work

in the medical physics field. Some possible panelists include people who have spoken on campus in the past, like NASA's Kerry Lee who studies radiation protection in space, the Morgridge Institute for Discovery's and Medical Physic's Professor Bruce Thomadsen, and SHINE Medical Technology's Greg Pfeifer.

Nuclear Policy and Nonproliferation

In a field that centers around such powerful technology, government and regulation of the nuclear industry play a significant role in every aspect of the field. This panel will feature speakers who work on the regulation side of the industry. Some panelists could include past guests to UW, such as the US's Director of Nuclear Energy Policy Joyce Connery, NRC Commisioner William Ostendorff, and Director General of the IAEA Yukiya Amano.

Fusion and Plasmas

In the long-term, nuclear fusion aims to become a promising source of reliable electricity production. Currently, most of the work conducted in this field focuses on research, so the panel will consist of researchers from different areas of fusion and plasma research. Some possible panelists are the Director of Princeton Plasma Physics Lab Stewart Prager, Carl Sovinec of the UW-Madison Center for Plasma Theory, and Director of US ITER Ned Sauthoff.

Materials Science

As reactor technology advances, more advanced materials are required to withstand intense core environments. This panel will focus on the materials science side of the nuclear industry. Potential panelists include INL's Deputy Lab Director Todd Allen, nuclear fuels expert Donald Olander, or Los Alamos National Lab's John R. Phillips.

ϵntrepreneurship Panel Series

Taking an Idea from Academia to Start-up

With so much research in the nuclear industry being conducted at universities, many of the field's biggest innovations begin in academia. This panel will consist of industry professionals who have successfully taken their research from academia to a start-up company. Some panelists could be Jose Reyes of NuScale, Kirk Sorensen of Flibe Energy, and Ross Radel of Madison's own Phoenix Nuclear Labs.

Nuclear Science Meets the Market

Technology is advancing at a rapid pace, opening doors for those in the nuclear industry whose innovations can meet a market need. This panel will feature speakers who have used their scientific background to identify a market need that nuclear technology can solve in an economical way. Possible panelists include individuals such as SHINE Medical Technology's Greg Pfeiffer, TerraPower's John Gilleland, and MedTrak's Steve Hushek.

4.1.3 Technical Workshops

Our conference will provide a wide range of technical workshops where students will have the opportunity to enhance their skill set in a specific area through hands-on activities.

PyNE Tutorial

PyNE, short for Python for Nuclear Engineering, is a suite of open-source computational tools to aid in computational nuclear science and engineering. The purpose of PyNE is to serve as a toolkit to automatically perform repetitive or complex pre- and post-processing analysis tasks common in nuclear engineering. This workshop would serve as a hands-on tutorial on the use of PyNE and its applications. The CNERG research group at UW-Madison is a core founder and developer of these tools and would be able to provide instructors. This workshop would be aimed at students who can provided their own laptop and have a desire to improve their nuclear computational skills. The workshop would be approximately two hours of instruction at the Concourse Hotel.

Activation Analysis

The University of Wisconsin-Madison's on site neutron activation analysis station (conveniently located next to the UWNR) will provide an ideal location to teach students about the basics of nuclear forensics, including sample preparation, sample measurement, and analysis of data, as well as teaching students real-world applications of neutron activation analysis. Transportation to and from the facility will be provided, with two 1-hour tours with 25 people each.

Material Science Instrumentation

The University of Wisconsin-Madison facilities include numerous material science instruments used in nuclear materials research. Materials science instrument workshops include: X-Ray Diffraction, X-Ray Photoelectron Spectroscopy, Scanning Electron Microscopy, Atomic Force Microscopy, Raman Spectroscopy and Ion Beam Laboratory. Approximately 8-10 workshop participants could attend a 2 hour session per each of these facilities where they will receive hands-on instruction on the use of the machines. Transportation to and from these facilities will be included.

Core Thermal Hydraulics V&V

This workshop will present an overview of some of the key thermal-hydraulic methodologies for computer code verification and validation. Topics will address an overview of the separate effects test facility, the integral effects test facility and best estimate thermal-hydraulics codes and methodologies. The workshop would be approximately two hours long at the Concourse Hotel.

4.1.4 Facility Tours

A series of technical tours both on and off campus will be available to students. In all cases, transportation will be provided to and from the tour by the Madison Concourse Hotel.

Fusion & Plasma Facilities

The University of Wisconsin is home so some of the most innovative fusion and plasma research in the world. There are four fusion experiments and one plasma experiment housed on campus that conference attendees would be able to tour.

- Pegasus Toroidal Experiment
- Helically Symmetric Torus (HSX)
- Madison Symmetric Torus (MST)
- Inertial Electrostatic Confinement (IEC) Fusion Lab
- Madison Plasma Dynamo Experiment (MPDX)

The full tour would consist of 20 minute tours at each of the five facilities. Transportation from the hotel to campus will be provided but short walking will be required between the facilities. Including travel time between experiments, the full tour is expected to last approximately two hours including transportation and can accommodate up to 25 people.

The UW Nuclear Reactor

The UW Nuclear Reactor (UWNR) is a 1-MW TRIGA-fueled reactor used primarily to educate students and the public. It has been in operation since 1961. The tour will be offered two times. Each will be a 45 minute tour plus transportation time and can accommodate 20-25 people.

UW's Medical Physics Facilities at UW Hospital

The UW Hospital is home to numerous medical physics facilities utilizing nuclear science. These include the cyclotron for radioisotope production, the MRI center and the Nuclear Imaging and Positron Emission Tomography facilities. The full tour will last approximately an hour and a half plus transportation time.

SHINE Medical Technologies and Phoenix Nuclear Labs

Both SHINE and Phoenix Nuclear Labs (PNL) are local Madison-area startups located in Monona, WI, a near south suburb of Madison. SHINE Medical Laboratories is a local start up company by UW-Madison alumni utilizing a high-efficiency target system to mass-produce the medical isotope molybdenum-99. PNL, also founded by UW-Madison alumni, focuses on using nuclear technologies for practical applications, most notably their neutron generators. Currently, both companies are located in the same building and so this will be a combined tour. Tours will last approximately 1 hour each plus transportation.

Argonne National Laboratory

Argonne National Laboratory is a world-renowned national laboratory conveniently located in the Chicago greater metropolitan area. A tour of this facility will include a visit to the nuclear engineering exhibition and the Advanced Photon Source (APS). This will be a full day event to account for the travel time to and from the Chicago area. The tour should last approximately 2.5 hours. Boxed lunch will be provided. This tour will be available for 20-25 people.

Fermilab

Fermi National Accelerator Laboratory is another national laboratory located in the Chicago metropolitan area. This will be a full day event to account for the travel time to and from the Chicago area. Included in this tour will be a visit to the Linear Accelerator and the Main Control Room. The tour is expected to last about 2.5 hours. Boxed lunches will be provided for the 20-25 attendees on the tour.

Point Beach Nuclear Power Plant

Point Beach began operation by what is now NextEra in the 1970's in eastern Wisconsin on the shores of beautiful Lake Michigan. Visitors will be able to visit the Point Beach Energy Center and inside the plant itself while gazing across Lake Michigan. This will be a full day event to account for travel time but the tour will last approximately 3 hours. Lunch will be provided for the 20-25 attendees on the tour.

Point Beach on the shores of Lake Michigan (left) and Kewaunee (right)

Kewaunee Nuclear Power Station

Also located on the shores of Lake Michigan only miles from Point Beach is Kewaunee Power Plant which was operated by Dominion from the 1970's until 2013 when it began decommissioning. Attendees will be able to tour the full plant and see what a fully decommissioned nuclear power plant is like. This will be a full day event for 10-12 attendees to account for transportation. The tour will last approximately 3 hours and lunch will be provided.

Thermal Hydraulics Laboratory and Tantalus

UW-Madison has done a considerable amount of work researching advanced reactors, such as liquid salts reactors and supercritical gas-cooled reactors. The UW Thermal Hydraulics Laboratory and Tantalus facility

located in Stoughton, Wisconsin, a suburb of Madison, have a variety of experiments to study water cooled RCCS, supercritical CO_2, critical heat flux phenomena and so forth. Each tour in these facilities should last an hour and a half and can accommodate about 12 participants.

4.1.5 Technical Sessions

Technical sessions are an essential part of the conference for giving the students and professionals the opportunity to exchange their knowledge, experiences, results and concerns about their research and interests. Sessions will be held concurrently in 6 conference rooms at the Concourse Hotel, each with a capacity to hold up to 40 people. The rooms will be fully equipped with projectors, microphones, computers and podiums as well as other necessary equipment. Each presenter will be given 15 minutes to present and 5 minutes to answer any questions. Student volunteers will ensure a smooth operation of the presentations and the presenters will be judged on significance, originality, and overall presentation by a judge (a sample judging form can be seen in Appendix D.1). The technical sessions will be split up based on the ANS technical divisions. The divisions may include, but are not limited to the following:

- Accelerator Applications
- Aerospace Nuclear Science & Technology
- Computational Medical Physics
- Decommissioning & Environmental Sciences
- Education, Training & Workforce Development
- Fuel Cycle & Waste Management
- Fusion Energy
- Human Factors, Instrumentation & Control
- Isotopes & Radiation
- Materials Science & Technology
- Mathematics & Computation for Nuclear Engineering
- Next Generation Reactors & Advanced Reactors
- Nuclear Criticality Safety
- Nuclear Energy Applied to Biology & Medicine
- Nuclear Installations Safety
- Nuclear Nonproliferation
- Probabilistic Risk Analysis
- Operations & Power
- Radiation Protection & Shielding
- Reactor Physics
- Robotics & Remote Systems
- Thermal Hydraulics

A small practice room will be available for the students to prepare for their presentation. They may practice in front of other presenting students in a quiet area separated from the rest of the conference. A total of 48 technical sessions, each with 4 or 5 presenters, are expected during the ANS student conference.

4.1.6 Poster Session

The poster session will be held on Saturday in Senate Rooms A & B, totaling an 1800 ft^2 area. This will give students an opportunity to share their research in an open environment. Students will be given time to set up their posters in the morning. There will then be a viewing session in which the students will not be required to stand by the poster and a judging and Q&A session when the students will be required to stand by their poster (see judging form in Appendix D.2). The best poster will receive an award.

4.1.7 Career Fair

The career fair will take place on Friday from 8 am to 5 pm, and on Saturday from 8 am to 11:30 am. It will be held at the Concourse Hotel in the University Room. Standard 6 feet by 2.5 feet tables will be set up for recruiters to to display their material. Recruiters may mail bulky materials, such as large pop-up posters, to UW-ANS such that they arrive at the hotel on Thursday. They will be placed on the appropriate table, and recruiters will have a chance to unpack their material on Thursday from 4 pm to 6:30 pm, or Friday morning in the hour before the career fair begins.

All companies that sponsor the conference will be given a table at the career fair. Placement of each recruiter's table within the University Room will be decided by UW-ANS. Higher tier sponsors may receive multiple tables if there is extra space. Companies that are not sponsors may join the career fair after paying a $1,000 fee. Universities may freely request a table at the career fair.

Sponsors will have access to the Corporate Suite and Chairman's Suite, located on the 6^{th} floor, for use as private interview spaces. These interview rooms will be available Friday afternoon while the career fair is still ongoing, and all day Saturday. If the demand for interview rooms is high, the Alumni Suite can be made available on Saturday afternoon. All companies will be able to request use of the interview rooms.

4.2 Nontechnical Program

While the technical programming forms the backbone of conference content, the nontechnical programming aims to develop attendee's ability to capitalize on their technical knowledge, build a professional network, and enhance the conference experience. With the use of workshops, tours, socials, and competitions, students will have the ability to develop a variety of workforce skills and enjoy their time doing so. These skills include networking, cultivating innovation, entrepreneurial thought, interdisciplinary team work, and developing positive public image. These abilities are essential in developing the four factors that make up a critical member of the nuclear community.

4.2.1 Nontechnical Workshops

The nontechnical workshops will be divided up into three workshop "series". Each series will consist of two separate workshops with topics that compliment one another. The two focuses of these nontechnical workshops are to provide world class talks from experts and to develop interactive content that drives engagement and interest in the subject area. Each series will focus and elaborate on one of the four factors.

ϵntrepreneurship Workshop Series

One of the largest criticisms launched at the nuclear industry is the lack of innovation, competitiveness, and entrepreneurial drive. While this criticism certainly isn't always true, it is not without merits. Of course, with a wealth of bright minds in the industry, this problem is solvable. One of the conference's focuses will be encouraging and developing attendees to constructively break from conventional nuclear paradigms. The Innovation and Entrepreneurship Competition described in Section 4.2.2 will provide an opportunity that further develops the skills and topics presented during these workshops.

Innovation Workshop

The process of cultivating new ideas and shifting existing paradigms can be difficult yet it is often the element that breathes life into industries and keeps American businesses highly competitive. Pinning down exactly what characterizes great innovators is harder yet. Nevertheless, the innovation workshop will provide attendees the opportunity to hear from innovators and venture specialists about what sets certain ideas and innovators apart. Topics will also include cultivating one's own

innovative spirit and encouraging innovation in teams. A variety of possible speakers can be considered including Dr. Stuart Firestein of Columbia University, Steven Burrill of Burrill & Company, and Dr. Leslie Dewan of Transatomic Power. Dr. Firestein has long advocated for scientists to shift their paradigm by adapting the scientific method and exploring new creative ideas. As the CEO of Burrill & Company, Steven Burrill has tremendous experience in identifying promising business ideas with his experience in venture capital for biotech firms. Mr. Burrill and his company also support innovative business proposal competitions at numerous universities around the country including UW. Finally, Dr. Dewan has made a splash in the nuclear industry as the CEO and co-founder of Transatomic Power. Under her leadership and expertise, the company aims to reshape the nuclear industry with promising developments in molten salt reactors.

Entrepreneurship Workshop

The nuclear industry too often gets dismissed as an arena where only the massive international corporations hold influence. High barriers to entry can be harmful for the competitiveness of the industry and ultimately, hold back it's development. This workshops will emphasize entrepreneurial thinking to help bring ideas and research to commercial fruition. Speakers will demonstrate how to refine technological or service ideas into projects that attract funding. Topics will also include developing business structures that best position an idea to succeed. A variety of further resources will also be provided for all interested audience members. Director at Qualcomm Venture, Varsh Tagare, has 20 years of investing and venture capital experience in Silicon Valley, Mumbai, and elsewhere abroad. Additionally, Cagan Leigh and Carrie Thome hold leading position in the Entrepreneurons division of the Wisconsin Alumni Research Foundation (WARF). This organization provides business, legal, and patent support to interested students. With their expertise and close ties to UW, any of the aforementioned candidates would make for excellent speakers.

*f*orming our Public Image Series

Success in any realm is largely governed by how we shape our personality traits and adapt to and interact with the outside world. This is an area where the nuclear industry certainly has growing room. The public image and personal image series of workshops extend the notion of ethics, values and skills usually not explicitly discussed upon and shared in academic institutions. These workshops shall engage the audience in diverse interactions weaved in with the exposure to prominent speakers in such fields.

Public Image Workshop

Public image remains one of the largest obstacles for the growth of nuclear technology. Despite the US nuclear industry's great track record for safety and environmental considerations, significant public opposition persists. The task of rebuilding nuclear's image demands will rest largely on the industry's younger representatives. To address this need, a round-table discussion is planned where participants can engage with an expert in public relations and each other. Speakers such as Larry Spears, CEO of Larry C. Spears Center of Servant-Leadership Inc. or Buford Barr of UC Santa Cruz, can encourage discussion on a new set of leadership philosophies and tools to enhance public performance on several platforms. Alternatively, representatives from Potomac Communications – a firm specializing in public relations for nuclear and other energy clients - can speak about marketplace positioning, media outreach,and effective public communication. With guidance from an expert, the attendees at this series of workshops can divide into diverse groups to brainstorm ideas and initiatives and then brought back with them to campus. Also, to ensure that the ideas endure even outside the campus, a network shall be created to ensure continued support and follow up on their initiatives.

Ethics Workshop

Knowing and following ethical guidelines is crucial for everyone in the nuclear industry. This workshop will feature speakers who specialize in ethics like Boeing's Vice President of Ethics and Business Conduct, Ellen Martin, or professors Sarah Pfatteicher and Christina Matta from UW-Madison who teach the importance of ethics in science and engineering. On top of being a professor and an Associate Dean Sarah has also published the book Lessons amid the Rubble: an Introduction to Post-Disaster Engineering and Ethics. For the first half of the workshop the speaker will discuss how to be ethical while working in the nuclear industry. After the speaker is finished students will be broken up into small groups to complete ethics case studies. These case studies could include topics

like sustainability, safety standards and integrity. While the case studies are occurring the speaker will float around the room answering questions students have about ethics, along with looking over the solutions the students created for the case studies.

***p*rofessional Development Series**

Professional development is crucial for students entering into to the nuclear industry. It gives them tools that are needed in the workplace, but that are not necessarily taught in class. The workshop series will be split into two days with distinct themes for each day. The first day will focus on ethics in engineering while the second will focus on the importance of diversity in the fields of studies in engineering

Education Workshop

A college education is at the very core of our skills and knowledge. It forms the basis of our abilities during out early professional career. As such, it's essential that students get the most out of their time in college. With this in mind, its easy to see why engineering curriculum is such an important topic. For the most part though, scientific and engineering curricula have largely remained the same for the last 60 years. As the demands of the professional world change and education costs place greater challenges on colleges and students, it is necessary that teachers and departments adjust their subject material accordingly. Education experts like Dr. Alan Gomez (Chief Academic Officer of the STEM Academy) and Dr. Clifton Conrad (Distinguished Professor at UW) have new ideas detailing the changes needed in higher education to prepare 21st century students for the future. This workshop will develop some of these ideas and inform all students on methods to promote curricula improvements at their own institutions.

Interdisciplinary Studies Workshop

The problems of today and the future can only be solved through the work of a diverse groups of individuals. This workshop will begin with a speaker talking about how a team needs a group of individuals with varying backgrounds in order to successfully solve complex problems. Possible speakers are Robin Adams from Purdue University, who is interested in cross-disciplinary engineering, Donald Schramm from UW-Madison who is interested in helping engineers work in a global team setting or Jon McKenzie a UW-Madison professor who created StudioLab a workshop aimed at collaborative learning and intertwining techinical and social performance. Students will then be broken up into groups, and each person in the group will be given a role as a certain specialist in engineering. The groups will receive problems which require input from each student in order to be solved. The problems will emphasize the importance of diversity in team settings.

4.2.2 Innovation and Entrepreneurship Competition

In addition to various speakers from industry and academia, the workshops will also underpin an innovation competition where students get the opportunity to present proposals to researchers and venture capitalists. Such a competition makes use of Madison's budding venture capital scene which ranks in the top 20 nationally for venture activity per capita. A call for proposals before the conference will be used to gather written proposals and allow students to expose their ideas to researchers and venture capitalists. There will be both a competition to determine the best proposal and an opportunity for investors and researchers to provide support to any worthy proposal. The winner will be selected by a panel of 3 judges: one venture capitalist, one nuclear expert, and one patent expert. During conference, a winner will be determined and announced by the three judges and any proposals with interest from other investors or researchers will get the opportunity to meet their respective inquirer to discuss funding. All participants will receive feedback on their proposals so that they may continue to develop their ideas. Special care will be taken to ensure competition participants' ideas are protected.

In conjunction with the competition, we intend to use its name as a sponsorship opportunity with the hope of attracting a greater variety of sponsors. For example, if Gener8tor (a local startup accelerator company) sponsored the event, it may be called "The Gener8tor Innovation Competition". Sponsorship in the past has come largely from companies directly in the nuclear industry, but we feel that competitions like this can help draw in organizations beyond the scope of nuclear. However, due to the newness and uncertain nature of such a sponsorship, it was not included in the budget.

4.2.3 Mentor Lunch

ANS conferences always bring together individuals from a variety of backgrounds. To take advantage of this opportunity, a pool of mentors will be coordinated so that anybody seeking guidance in a particular subject of aspect of nuclear engineering can be paired with a knowledgeable professional. There will also be the option to form small mentor-mentee groups for those that are interested. This group setting would allow for additional networking and an expanded pool of expertise for mentees to draw from. Sign ups for this event will be included with registration up to 2 weeks before conference. Mentors and Mentees will be encouraged to provide field of expertise or interest information so that participants can be matched effectively. Lunch will be provided to all participants of this event.

4.2.4 Tours

University Tour

While the conference will focus largely on nuclear subjects, UW has many other top tier programs for those that are interested. The College of Engineering boasts three different engineering disciplines (nuclear, chemical, and geological) ranked in the top 3 nationally. The School of Business has top programs in real estate and actuarial science and the School of Education is consistently one of the best in the nation. A tour of the university will allow attendees to get comfortable with the campus and help determine if they are interested in pursuing further studies at UW. To show some of the "personality" of the campus the tour will include stops at facilities like the Babcock Dairy Plant. Due to the nature of the conference, special attention will be paid to the College of Engineering.

Bascom Hall on Campus

Camp Randall Stadium Tour

Aerial photo of Camp Randall

During the fall of each academic year, Camp Randall Stadium becomes the focal point of social life a UW. Seated right next to the College of Engineering, the historic Camp Randall Stadium - the home of the Wisconsin Badgers football team - has a very storied history. The stadium was used as a Union training base during the Civil War and was then converted into an athletic stadium in 1893. It remains the 4^{th} oldest football stadium in active use today and forms the crown jewel of UW's high performing Division I sports teams. Attendees of this tour will get the chance to learn about much of the history associated with the stadium and the football team. This tour is a must for any football fan.

State Capitol Tour

For over a century, Wisconsin has been notable for its rich political history. Ripon, WI was the birthplace of the Republican Party, Milwaukee, WI was the only major US city to have socialist mayors, and the infamous Joe McCarthy (instigator of the "Red Scare") was a Republican Senator from Wisconsin. At the center of all this is the Capitol in downtown Madison. During the last few years, it has been a hotbed of high profile protests involving national political issues such as union rights, education spending, and state budgeting. Recently, Wisconsin Senator Paul Ryan was the republican Vice Presidential candidate during the last election and Governor Scott Walker will likely be seeking the Republican Presidential nomination for 2016. Apart from politics, the building is quite beautiful and is the tallest and most predominant element of the Madison skyline. It is also conveniently located right next to the Madison Concourse Hotel.

Interior of the Wisconsin Capitol

Capital Brewery Tour

The Wisconsin countryside is home to countless renowned breweries. In the Madison area Capitol Brewery is arguably one of the best. The brewery recently won nine medals in the 2013 World Beer Championship,

receiving six gold and three silver medals for both its oldest and newest creations. The guided tour will last 45 minutes and includes various samples of the brewery's freshly made beer. The brewery is located in the suburb of Middleton, WI, only seven miles away. Transportation will be provided. Note this is a 21+ event.

4.2.5 Socials

Monona Terrace after Dinner Social

Offering a beautiful view of Madison, very convenient central location, and high quality catering services, the Monona Terrace is simply Madison's best place to host a large event. Dinner Friday night will highlight this venue with a catered dinner and drinks as well as music, dancing, and socializing to follow. Entertainment during dinner will include a keynote note that explores the theme and goals of the conference. The talk will look at the ways young individuals can develop and adapt the nuclear industry to meet today's challenges. To help end the night on a light hearted note, comedian Pat McCurdy will provide entertainment to end dinner. Following dinner, the hall will be opened up for dancing with a DJ accompanying. Additional cocktail tables will be available for further socializing throughout the night. Due to Monona Terrace being conveniently located just 15 minutes walking distance away from the Concourse, attendees can feel free to conclude the night whenever they like. Limited shuttles will be provided for those who require assistance, but students will be encouraged to walk (weather permitting).

Tour of Madison Nightlife

Interior of Madison's Piano Bar

Experiencing Madison isn't complete until you've had the opportunity to enjoy the city the way the UW students do: through the unique bars downtown. This social will start at the German-themed Essen Haus and will include appetizers and the opportunity to meet people in a fun and festive environment. For the 21+ attendees, Essen Haus sells boots of many of Wisconsin's finest beers along with many of the best beers internationally. After a healthy amount of polka dancing and all things German, the 21+ attendees will be headed to the Piano Bar to enjoy live music and an upbeat atmosphere. The Piano Bar features highly interactive live music on a nightly basis and enjoys a fantastic reputation among locals and students. Finally, for those hearty attendees that are still with us, the final stop will be to the quintessential college bar - Madhatters. This popular bar is a favorite among students and is guaranteed to be a good time for anybody between the ages of 21 and 25. All bars are within walking distance of the Concourse Hotel so attendees can feel to leave or rejoin the group as they please. *Please note that while the Essen Haus will be open to all ages, the Piano Bar and Madhatters will only allow individuals that are 21+.*

Movie Night

A movie night will be a great recreational and social activity to bring the guests together, encourage fellowship, and watch something with a purpose. The Madison Concourse Hotel will be an ideal place to arrange a movie night social for an expected audience of 50. The projector and other resources shall be arranged while the snacks— including popcorn, cookies and soda–will be provided by the hotel. The movie will naturally have nuclear technology as a theme. Possible selections are the powerful documentary "Pandora's Promise" a movie about the rethinking the nuclear power debate, and whose director is a possible speaker at the conference. Another possible selection is "The China Syndrome" a fictional thriller about a cover up at a nuclear power plant. Lastly a documentary about how the world was saved from nuclear war by only one man, Russian lieutenant colonel Stanislav Petrov, appropriately named "The Man Who Saved the World".

Ice Skating

Even though Madison's lakes *might* be thawed out during conference, the ice rink at UW-Madison's "Shell" will still be open. The Shell is an athletic facility attached to the famous Camp Randall. Camp Randall is not only huge but also historic. It was built originally as a civil war training camp, and is now home to a football stadium and multiple athletic facilities including the Shell. The Shell itself holds a large ice rink at its center which will allow us to skate indoors for an hour at night during open skate. The cost of the skates will be covered by the conference. Transportation will be provided to campus.

Early Morning Picnic Point Walk/Run

Downtown Madison is nestled between two beautiful lakes which form an inland isthmus where the Capitol resides. This provides a number of scenic trails for running and biking directly in the city. The Lakeshore Path is one such trail that follows the southern end of Lake Mendota and traverses the whole campus. An early morning run (or shorter walk) on this trail will be organized for anybody interested. Round trip, the path is 6 miles but because the path is very easy to follow, participants can run/walk as far as they please. Be sure to bring some warm clothing as the temperature will likely be quite brisk.

Lakeshore Path

4.3 Dining

Breakfast will be offered Thursday, Friday, Saturday, and Sunday morning from 7 am to 10 am. All breakfasts will include assorted pastries, yogurts, juices, coffee, and tea. After Breakfast, limited coffee and tea will be provided throughout the day.

Boxed lunches will be provided during the Mentor Luncheon and the SSC meeting. Lunch except for the ones listed above will not be provided since the Concourse Hotel is located a block away from State Street which is filled with unique Madison restaurants. Attendees are encouraged to visit some of Madison's unique local restaurants for lunch.

The opening dinner on Thursday evening will be held at the Concourse Hotel in the Grand Ballroom. Networking and Professional Development is the theme for this dinner. In addition to talks from the conference committee and the current ANS president, students will be encouraged to talk to recruiters. This will be made easier since we plan to organize the tables by company. Therefore, students can eat dinner with a recruiter from a company in a more informal setting. In addition, this will encourage companies to send more recruiters and increase in sponsorship, since the increase in sponsorship will lead to better table placement.

On Friday night the dinner is planned to be held at Monona Terrace. The theme for this dinner will be focusing on Wisconsin culture. Dairy farming is an extremely important business in this area and Wisconsin is known for its cheese (cheese is so important that Packer fans are commonly called cheese heads) and custard. Wisconsin also has a strong German and Scandinavian culture since these were the people that commonly immigrated to the area. Therefore, to incorporate Wisconsin's history and culture we plan to be serving food that are staples in Wisconsin such as macaroni and cheese, fried fish (Friday night fish fries are a long-honored tradition), sausage, and custard for dessert. Wisconsin is also home to many breweries and to recognize that part of our culture, a bar will be present and attendees over 21 will be given drink tickets. As long as the amount spent for this evening at the Monona Terrace exceeds a minimum of $22,000, we will be able to reserve Exhibition Hall A (see Appendix B.2) at no additional charge. Budget allowing, hors-d'oeuvres may be served before dinner to encourage networking and socializing.

The closing dinner on Saturday evening will be held at the Concourse Hotel in the Grand Ballroom. The speakers will be asked to talk about the importance of public image through their own life experiences. We hope that the final speech will provide ideas for better ways to promote nuclear science and technology through outreach events.

4.4 Conference Itinerary

Table 3 contains a detailed itinerary for conference events. The events are aimed to provide involvement and allow the students numerous options in their decisions of what to attend, as well as time to relax. A graphical schedule of the conference events is depicted in Appendix E. The graphical schedule of rooms and their logistics can be seen in Appendix F.

Table 3: Schedule of Events

		Thursday
Time	**Event**	**Location**

7:00 am - 10:00 am	Breakfast	Grand Ballroom
7:00 am - 5:00 pm	Registration & Information	Reception Area
8:00 am - 5:00 pm	Kewaunee Power Station Tour	Off site
8:00 am - 5:00 pm	Point Beach Nuclear Plant Tour	Off site
8:00 am - 5:00 pm	Fermilab Tour	Off site
8:00 am - 5:00 pm	Argonne National Laboratory Tour	Off site
9:00 am - 12:00 pm	Activation Analysis Workshop	Campus
9:00 am - 12:00 pm	Core Thermal Hydraulics V&V Workshop	University C&D
9:00 am - 11:00 am	Capital Brewery Tour	Off site
9:00 am - 12:00 pm	Fusion and Plasma Facilities Tours	Campus
9:00 am - 12:00 pm	UW Hospital Medical Physics Tour	Campus
1:00 pm - 4:00 pm	PyNE Workshop	Assembly
1:00 pm - 4:00 pm	Thermal Hydraulics Laboratory Tour	Off site
1:00 pm - 4:00 pm	Material Science Instrumentation Workshop	University C&D
1:00 pm - 4:00 pm	PNL/SHINE Tour	Off site
1:00 pm - 3:00 pm	State Capitol Tour	Capitol Building (Downtown)
5:00 pm - 6:00 pm	Meet & Greet Social	Senate Room A&B
6:00 pm - 8:00 pm	Networking Dinner	Grand Ballroom
8:00 pm - 11:00 pm	Ice Skating Social	Campus

Friday

Time	**Event**	**Location**
6:30 am - 7:30 am	Picnic Point Walk-Run	Campus
7:00 am - 10:00 am	Breakfast	Madison Ballroom
7:00 am - 5:00 pm	Registration & Information	Reception Area
8:00 am - 5:00 pm	Career Fair	University Rooms A-D
8:00 am - 9:30 am	Technical Sessions	Caucus & Conference I-V
9:45 am - 11:15 pm	Innovation Workshop	Assembly Room
9:45 am - 11:15 pm	Technical Sessions	Caucus & Conference I-V
10:00 am - 11:15 am	Nuclear Policy and Nonproliferation Panel	Capitol Ballrooms A&B
11:30 am - 1:30 pm	Student Sections Committee Meeting	Assembly Room
1:00 pm - 2:15 pm	Fusion and Plasmas Panel	Capitol Ballrooms A&B
1:45 pm - 3:15 pm	Technical Sessions	Caucus & Conference I-V
1:45 pm - 3:15 pm	Education Workshop	Assembly Room
2:30 pm - 3:45 pm	Materials Science Panel	Capitol Ballrooms A&B
3:30 pm - 5:00 pm	Technical Sessions	Caucus & Conference I-V
3:30 pm - 5:00 pm	Public Image Workshop	Assembly
4:00 pm - 5:15 pm	Nuclear Science Meets the Market Panel	Capitol Ballrooms A&B
6:00 pm - 8:00 pm	Wisconsin Themed Dinner	Monona Terrace Exhibition Hall
8:00 pm - 11:00 pm	After Dinner Dance Social	Monona Terrace Exhibition Hall

Saturday

Time	**Event**	**Location**
7:00 am - 10:00 am	Breakfast	Grand Ballroom
7:00 am - 5:00 pm	Registration & Information	Reception Area
8:00 am - 11:30 am	Career Fair	University Rooms A-D
8:00 am - 9:45 am	Poster Session Setup	Senate Room A&B
8:00 am - 9:30 am	Technical Sessions	Caucus & Conference I-V
8:00 am - 9:30 am	Ethics Workshop	Assembly Room
9:45 am - 1:30 pm	Poster Session Viewing	Senate Room A&B
9:45 am - 11:15 am	Technical Sessions	Caucus & Conference I-V
9:45 am - 11:15 am	Entrepreneurship Workshop	Assembly Room
11:30 am - 1:30 pm	Mentor Lunch	Assembly Room

1:30 pm - 4:15 pm	Poster Session Judging & Q&A	Senate Room A&B
1:45 pm - 3:15 pm	Interdisciplinary Studies Workshop	Assembly Room
1:45 pm - 3:15 pm	Technical Sessions	Caucus & Conference I-V
2:00 pm - 3:15 pm	Medical Physics and Radiation Protection Panel	University A&B
3:30 pm - 5:00 pm	Technical Sessions	Caucus & Conference I-V
3:30 pm - 4:45 pm	Taking an Idea from Academia to Start-Up Panel	University A&B
6:00 pm - 8:00 pm	Public Image Themed Dinner	Grand Ballroom
8:00 pm - 11:00 pm	Movie Night	University A-D
8:00 pm - 11:00 pm	Tour of Madison Nightlife	Downtown Madison

Sunday

Time	**Event**	**Location**
7:00 am - 10:00 am	Breakfast	Madison Ballroom
7:00 am - 12:00 pm	Registration & Information	Reception Area
9:00 am - 10:00 am	UW Nuclear Reactor Tour	Campus
10:30 am - 11:30 am	UW Nuclear Reactor Tour	Campus
9:00 am - 11:00 am	University Tour	Campus
9:00 am - 11:00 am	Camp Randall Stadium Tour	Campus

4.5 Exam Proctoring

Our own student section has encountered situations in past years with students wanting to attend conference but having to miss exams to do so. In some cases, professors allow those exams to be taken before leaving or when the students get back, but in other cases, the professors require that the exam be proctored by another professor during conference. In the event that students who wish to attend run into this situation, we will be offering a one-time exam session proctored by a professor of UW-Madison. This will be a 2-3 hour block of time either on Thursday or Friday depending on room availability and the number of students requiring a proctored exam. Due to logistics, we will not be able to accommodate requests by professors to have the exams on a specific day and time as it will be limited by room availability. Students and professors who wish to take advantage of this exam session will be asked to contact the General Co-Chairs two weeks in advance to make arrangements. Due to the uncertainty in the requirements of this session, there has been no day, room, or time assigned yet.

5 Finances

5.1 Projected Attendance

Our projection of 500 students and 150 professionals strikes a balance between historic trends and our Midwest location. The projection is based on previous conference attendances shown in Table 4. This is an improvement on the historic trend for conference proposals to under-predict student attendance and over-predict professional attendance. The geographical distance of Madison from other student sections was also taken into consideration.

By predicting higher student and lower professional attendance we account for higher costs brought by student participation, while conservatively estimating income generated by professional registration. Significant attendance above this projection will require us to make cuts to our budget, in order to account for the increased meal costs and travel reimbursements. In the case that there is lower than expected attendance, our revenue will be altered very little as student registration fees are a low percentage of our budget (5.5%). If there is lower student attendance, we will be able to spend more per student and increase the overall experience.

Table 4: Previous Conference Attendance (Initial Projections in Parentheses)

Host	**UW-Madison (2016)**	**TAMU (2015)**	**Penn State (2014)**	**MIT (2013)**	**UNLV (2012)**
Student	(500)	(500)	480 (400)	536 (420)	** (400)
Professional	(150)	(150)	120 (200)	101 (150)	** (200)

*** Actual numbers unknown*

5.2 Revenue

5.2.1 Registration

Matching this year's conference at Texas A&M, early member registration fees at the UW-Madison conference will be $35 per student and $250 per professional. With a projected attendance of 500 students and 150 professionals, revenue from registration is projected to total $55,000.

5.2.2 Fundraising Strategy

Upon the announcement that the 2016 ANS student conference is to be held in Madison, we will look towards meeting our revenue expectations through fundraising. Our first action will be to contact industry partners who have consistently supported past ANS conferences and our own ANS student section. Letters will be made detailing the conference's plan and the great opportunity they have to get involved. Financial contributions will receive different incentives based on donation amount, detailed in Section 5.2.3.

Two sources of support we already anticipate are from both the UW College of Engineering and the Engineering Physics department. We have spoken with one of the College of Engineering Deans and the Department Chair about our vision for the conference and their role in making this a reality. Beyond their written support (shown in Appendix G) they each are willing to sponsor at least $2,000 towards the conference. In addition, the EP department is willing to help us reach out to our extensive alumni network for financial support of this conference.

Conversations with previous conference hosts indicated the ANS divisions as another consistent source of support. Individual divisions give smaller donations, but as a whole they have consistently given $36,000 in total to student conferences in recent years. As such, their contributions will also be recognized in our program and in lists of conference sponsors.

In the past, local businesses have provided financial or other types of support for ANS student conferences. We will attempt to continue this trend and contact restaurants, for donations, either monetary or in the form of conference discounts. Due to the uncertain nature of these contributions, we have chosen to be safe and not include them in our revenue estimates.

5.2.3 Industry Tier Sponsorship System

In an effort to promote and increase sponsorship we plan on rewarding individual sponsors for higher donations. An individual sponsor's presence at conference will be bolstered by more than simply an acknowledgment in a conference program. We plan on incentivizing increased sponsorship by rewarding sponsors with greater presence and facilities at conference. All sponsors will be recognized on the sponsorship page of the conference program and will be given free attendance at the career fair. Additional benefits of sponsorship for each tier are as follows:

Supercritical: $30,000

The first sponsor to pledge $30,000 will be denoted the sponsor of the dinner at Monona Terrace. Along with the program and posters at the event signifying this sponsorship, the company will have the opportunity to choose an opening speaker for the dinner. This will be one of the few times all conference attendees will be present and alert, providing maximum visibility for the company. In addition to a dinner speaker, the company will be given multiple tables and the best (highest traffic) location at the career fair. They will also have access to a full room of interview space at the conference hotel. Finally, the company will be featured in the inside cover of the conference program and their logo will appear on the T-shirts handed out to all attendants. If feasible, we may also be able to offer advertising space on our conference website and app. In the fortunate event that two or more companies pledge this level of support, the companies will be offered speaker spots at the other conference dinners on a first come, first serve basis. Other benefits besides advertising space, which may be offered to any number of organizations, will also be limited in this way.

Critical: $20,000

The companies that donate at this level will receive the remaining speaker spots at the dinners held at the conference hotel. They will also be given preferential booth placement at the career fair and semi-private locations to hold interviews during the conference. A full page ad will be included in the conference program for each sponsor at this level, and, if possible, their logo will appear on other "swag" handed out to all conference attendees.

Fissile: $10,000

Third-tier sponsors will have the option to sponsor one of the many socials held during the conference, with this sponsorship mentioned in the program and on posters at the event. In addition, they will have slightly better booth placement at the career fair, a half-page ad in the conference program, and their logo on conference "swag", if possible.

Fissionable: $5,000

Sponsors at this tier will receive a quarter page of advertising space and a booth at the career fair. They will also be given the option to provide "swag" to add to the bag given to all conference participants.

Radioactive: $1,000

Fifth-tier sponsors will have a 1/8 page of advertising space and a booth at the career fair. This is the lowest level sponsor to receive a booth at the career fair. Any booth spaces leftover before the conference will be offered to universities at no charge.

5.2.4 Revenue Summary

The total income of this proposed conference is $250,000. This comes primarily from sponsorship and registration, but also accounts for smaller incomes such as the ANS seed money and ANS section donations. A summary of our total revenue projection is given in Table 5 on page 30.

5.3 Expenses

A breakdown of the conference expenses in shown in Table 6 on page 31. To reiterate, there will be no charge for room rentals at the Madison Concourse Hotel, nor will there be a rental cost at the Monona Terrace as long as we spend over $22,000 that night (both our planned and contingency dinner plans exceed this amount). Also, note that the meal costs have additional 5.5% tax and 20% gratuity charges that aren't reflected in the unit

Table 5: Revenue Summary

Item	Price per Unit	Expected Number	Total
Student Registration	$35	500	$17,500
Professional Registration	$250	150	$37,500
ANS National Seed	$5,000	1	$5,000
ANS Sections	$36,000	1	$36,000
Supercritical Tier Sponsorships	$30,000	1	$30,000
Critical Tier Sponsorships	$20,000	2	$40,000
Fissile Tier Sponsorships	$10,000	4	$40,000
Fissionable Tier Sponsorships	$5,000	7	$35,000
Radioactive Tier Sponsorships	$1,000	9	$9,000
		Total Projected Registration:	$55,000
		Total Projected Sponsorship:	$195,000
		Total:	$250,000

cost but are accounted for in the total cost. The necessity of each expense is classified as either operational, or discretionary I, II, or III. Operational expenses are necessary for the conference to be held and are not subject to cuts. Discretionary expenses may be cut if the revenue does not meet projections. Discretionary III expenses will be the first cut in such a scenario, while discretionary I will be the last cut. The total expenses are $228,874.68. Of this, $189,405.08 are operational expenses and $39,469.60 are discretionary expenses. The total expenses are below the projected $250,000 income, with a spending margin of $21,125.32, or 8%. The budget includes tax costs. However, we are seeking to obtain tax exempt status, as detailed in Section 5.6.

Assuming a maximum budget and including student travel reimbursements, this conference's average cost per student attending is $457.75. If we ignore the travel reimbursements and only consider event and meal expenses, the average cost per student is $277.75. Note that these estimates are slightly high, in that they also include the cost of the professional attendee's meals and gift bags.

5.4 Budget Contingency Plan

Our goal with our fundraising and budget is to have a 10%-15% spending margin after student reimbursement. Although our current projections are below this, our budget has plenty of margin for spending cuts. Depending on the necessity of the spending, the discretionary expenses are divided into three groups, described below. In the event that we raise more money than budgeted for, the first priority is to increase student travel reimbursement. Extra revenue will also be directed towards improved meals and entertainment, student awards, and improving the overall quality and feel of the conference.

5.4.1 Order of Budget Cuts

As our budget stands, there is plenty of room for cutting discretionary spending to improve our spending margin. The first tier of cuts includes costs for guest speaker gifts, hors d´ oeuvres, and small social expenses. The next tier of budget cuts include student awards, drink tickets for the Monona Terrace social, movie tickets for movie night, and iclickers for dinner games. Spending on equipment for workshops, transportation for on-campus and off-campus tours and associated lunches, buffet and dessert for Friday dinner, coffee/tea, social event, t-shirts and more-essential, less-costly gift bag items are the last items to be cut. In many of these cases, we will not have to cut the entire event, but may opt to substitute it with a cheaper one. Finally, as an absolute last-resort, we can reduce the travel reimbursements to a level matching previous years' conferences. Table 7 on page 31 summarizes the total amount saved by each assuming maximum cuts in each tier of discretionary spending. The details of the budget cuts are shown in Appendix H.

One event where we can make the most significant cuts is our Friday night dinner at the Monona Terrace. The first item to be cut will be the hors d'oeuvres, saving $8,932.46. We can also purchase a cheaper dessert option, saving us $1,427.56. Finally, we can purchase a cheaper dinner buffet option, saving us $4,078.75. All together, our contingency Friday dinner plan will save us $14,438.80.

Table 6: Expenses

Item Description	Necessity	Unit Cost	Quantity	Cost
Technical session projectors, screens, and computers	Operational	$50.00	12	$600.00
Technical session CDs	Operational	$1.00	200	$200.00
Technical session awards	Discretionary II	$12.95	50	$647.50
Panel projectors, screens, and microphones	Operational	$235.00	1	$235.00
Dinner projectors, screens, and microphones	Operational	$240.0	2	$480.00
Workshop projectors, screens, microphones, and Bandwidth	Operational	$80.00	5	$400.00
Materials Workshop	Discretionary I	$746.00	1	$746.00
Fermilab & ANL tour	Discretionary I	$1,620.00	1	$1,620.00
Point Beach & Kewaunee tour	Discretionary I	$620.00	1	$620.00
Room rental at Concourse	Operational	$0.00	1	$0.00
Breakfasts at Concourse	Operational	$11.00	1200	$16,566.00
Lunches at Concourse	Discretionary I	$17.00	150	$3,200.25
Dinners at Concourse	Operational	$25.00	1300	$40,787.50
Coffee and tea	Discretionary I	$27.00	60	$2,033.10
Room rental at Monona Terrace	Operational	$0.00	1	$0.00
Monona Terrace dinner	Operational	$54.15	650	$44,172.86
Monona Terrace social	Discretionary II	$7.33	800	$5,863.73
Brewery tour	Discretionary III	$16.00	25	$400.00
Movie night	Discretionary II	$500.00	1	$500.00
Ice skating	Discretionary III	$7.00	50	$350.00
Tour of Madison Nightlife (Essen Haus)	Discretionary III	$500.00	1	$500.00
Conference programs	Operational	$4,654.11	1	$4,654.41
Nametags and nametag ribbons	Operational	$0.77	700	$542.00
Lanyards	Operational	$0.64	700	$448.00
Room signs	Operational	$11.99	40	$479.60
Poster stands	Operational	$11.98	20	$239.60
Career fair tables	Operational	$40.00	32	$1,280.00
Drawstring bag	Operational	$1.25	650	$812.50
T-shirts	Discretionary I	$4.46	650	$2,900.63
Pens and booklets	Discretionary I	$0.20	650	$130.00
Gloves and umbrellas	Discretionary I	$5.39	650	$3,503.50
Playing cards, bottle openers, and koozies	Discretionary III	$4.25	650	$2,762.50
Student travel reimbursements	Operational	$200.00	450	$90,000.00
	Total expenses			$228,874.68

Table 7: Summary of Discretionary Budget Cuts

Level of cuts made	Amount Saved	Total Expenses	Spending Margin*
No cuts made	$0.00	$228,874.68	8.5%
All D3 cuts are made	$15,034.71	$213,839.96	14.5%
All D2 and D3 cuts are made	$25,588.52	$203,286.15	18.7%
All D1, D2 and D3 cuts are made	$43,418.23	$285,456.44	25.8%

**As compared to the maximum expected revenue*

5.5 Cost of Attendance & Student Reimbursements

5.5.1 Cost of Attendance

The cost of attending conference for a student consists of the registration fee, travel costs, and lodging. A $35 registration fee will apply to all students. As mentioned earlier the estimated travel costs for attendees is $244. Assuming four students per room, lodging is expected to cost an average of $104.25 per student for three nights at the Madison Concourse Hotel. This brings the total expected cost of attendance to $383.25. After taking into consideration the expected student travel reimbursement of $200 the estimated cost of attendance is $183.25.

5.5.2 Reimbursement Amount

The amount chosen for student travel reimbursement is $200. This amount was chosen based upon the airfare and bus costs of conference attendees flying into Madison, Milwaukee, and Chicago and traveling by ground to Madison. It is anticipated that conference attendees within 10 hours of drive time to Madison will drive instead of flying. Tables 9 and 10 in Appendix C show that the estimated average airfare and fuel costs of traveling to Madison are $314.28 and $35.87 respectively. It is expected that approximately 75% of attendees will fly and the other 25% will drive to Madison which makes the average travel cost $244. Sufficient funding is expected to provide the $200 travel cost reimbursement to every student attendee outside of UW-Madison.

5.5.3 Reimbursement Procedure

As to make the reimbursement process run smoothly, students will be told with ample time prior to the start of conference that all transportation receipts, must be saved as paper copies and turned in at the conference in order to receive travel reimbursement. Each student will be responsible for filling out an individual reimbursement form. Each student section will then be sent one check for the total amount based on the number of students attending and the average transportation cost. Please see Appendix D.3 for a sample Travel Reimbursement Form.

5.6 Banking & Financial Oversight

Banking

Our preferred banking method is to handle our conferences expenses using two accounts. One account will be the ANS National account, and the second will be a local conference-specific checking account through Associated Bank. Our student section currently maintains a checking account through Associated Bank and has established a working relationship with them. Unlike previous conferences, we would prefer the Associated Bank account, rather than the ANS National account be our primary account. Although this approach differs from recent years' conferences, we do believe that this plan can be successful if managed properly.

One significant advantage of this unorthodox plan is the ability to spend any funds in this account tax-exempt. Tax-exempt status in Wisconsin is, unfortunately, something unobtainable through ANS National, as discussed with Paula Cappelletti. As discussed with Associate Bank representatives, establishing 501(c) status in Wisconsin for this account is a simple enough matter and can occur immediately upon establishment of this account. As such, this would be one of our first official actions, should our bid be accepted. The more revenue that comes into this account, the more tax-exempt spending that can occur. At a tax rate of 5.5%, we could save up to $7,600 in this manner. This extra money could be directed to student travel reimbursements, increasing them by $17 per student. While this may not sound like a lot, as previous conference attendees we understand that every dollar helps. To be clear, while this account would also be held by our ANS chapter, access to this account would be restricted to an entirely different set of signatories (as discussed below).

We do realize that there are also disadvantages to this approach. Many sponsors have a well-established relationship working with ANS National, and ANS National is a significantly larger body that is more experienced in handling the large amounts of funds necessary for this conference. Both of these factors may lead sponsors to feel more comfortable donating to the ANS National account. We also know that funds from registration will be deposited into the ANS National account and that gifts from ANS Divisions will also most likely be deposited here. Should our bid be successful, we plan to immediately discuss this banking plan and financial oversight with ANS National and come to an agreement acceptable to both our section and them. At best, we hope to gain their support during the fundraising process in encouraging sponsors to directly contribute to our Associated Bank account.

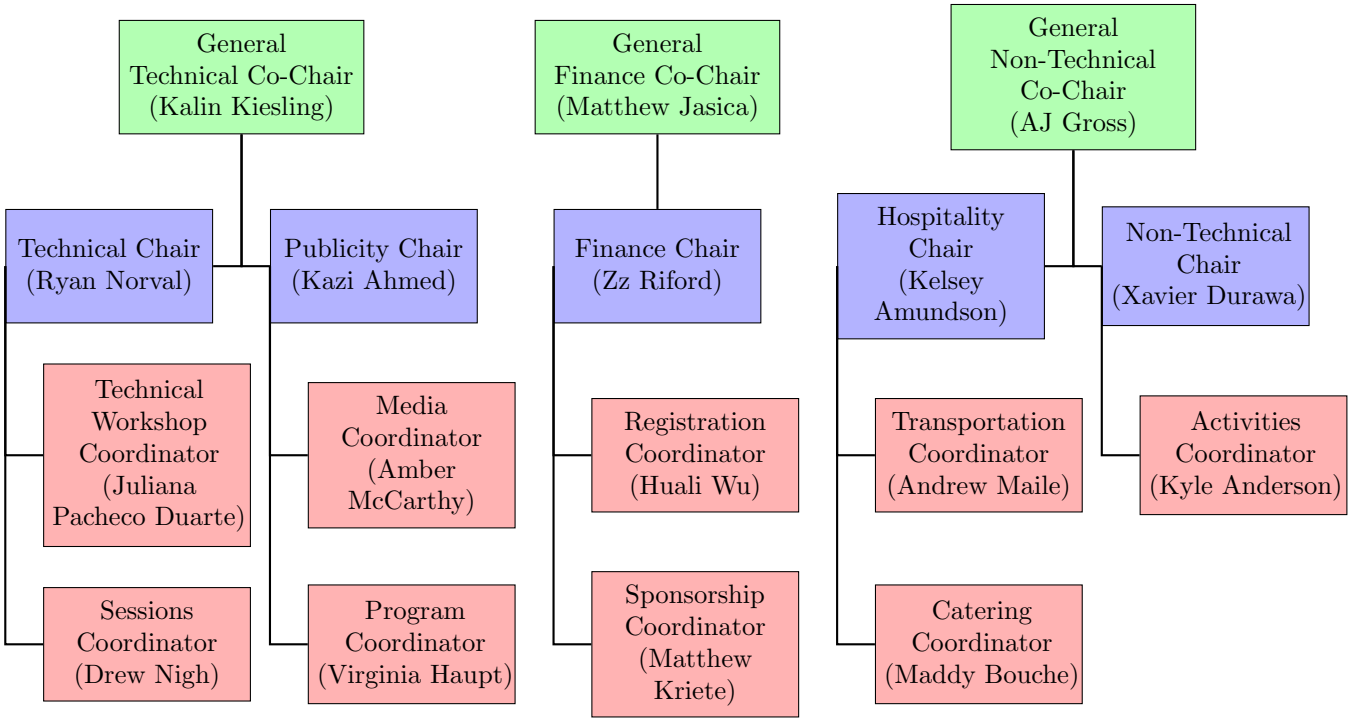
If, during our discussion, ANS National does not feel confident in our ability to practice sound financial oversight and accounting with funds of this magnitude, we are willing to return to the more traditional method of banking mostly through ANS National. We would still maintain an Associated Bank account as a secondary account for smaller gifts, such as those from our college and alumni.

Financial Oversight

Because of the magnitude of funds involved with this conference, strict financial oversight practices must be put in place. A formal request for any expenses, regardless of the account used, must be submitted to the general chairs for approval. Two of the three general chairs and the finance chair must sign off on this request. Accepted requests will then be documented and the transactions recorded by the financial chair. With respect to our Associated Bank account, we plan to name the three general chairs and each of the five subcommittee chairs as signatories with the authority to spend money in this account. Access to either the debit card or checkbook for this account by any member is subject to the aforementioned approval process.

6 The Conference Planning Committee

The Conference Planning Committee is organized into three levels: ***General Co-Chairs***, **Subcommittee Chairs**, and *Coordinators*. The General Co-Chairs will be responsible for keeping communication consistent and effective throughout the conference process while ensuring progress is made and that decisions are adequate. Subcommittee chairs will be in charge of making the proper decisions and plans in their special area. The coordinators help take some of the full responsibility load off of the subcommittee chairs and work in an even more specialized area. All of these positions have tentatively filled out as indicated below. Personal biographies can be seen Appendix K.



6.1 Position Responsibilities

- ***General Technical Co-Chair***
  - Oversees the direction and organization of entire committee
  - Works with the General Finance Co-Chair and General Non-Technical Co-Chair in many areas
    - Planning full committee meetings
    - Checking progress and setting deadlines
    - Interacting with business, sponsors, the university, and national ANS
    - Completing any remaining tasks
  - Oversees:
    - Technical Subcommittee
    - Publicity Subcommittee
- ***General Finance Co-Chair***
  - Oversees the direction and organization of entire committee
  - Works with the General Technical Co-Chair and General Non-Technical Co-Chair in many areas
    - Planning full committee meetings
    - Checking progress and setting deadlines
    - Interacting with business, sponsors, the university, and national ANS
    - Completing any remaining tasks

  - Oversees:
    - Finance Subcommittee

- ***General Non-Technical Co-Chair***
  - Oversees the direction and organization of entire committee
  - Works with the General Technical Co-Chair and General Finance Co-Chair in many areas
    - Planning full committee meetings
    - Checking progress and setting deadlines
    - Interacting with business, sponsors, the university, and national ANS
    - Completing any remaining tasks
  - Oversees:
    - Hospitality Subcommittee
    - Non-Technical Subcommittee

- **Technical Subcommittee Chair**
  - Processes and approves abstracts and presentations
  - Recruits judges & ensures judging criteria is understood
  - Organizes technical panels
  - Provides working A/V in each room
  - Arranges award ceremony
  - Oversees:
    - Workshop Coordinator
    - Sessions Coordinator

- *Workshop Coordinator*
  - Plans and arranges technical workshops
  - Assists in arranging technical sessions
  - Organizes technical tours
  - Communicates between attendees and conference committee about workshops and tours status

- *Sessions Coordinator*
  - Arranges poster session
  - Prepares room for poster session
  - Chooses topics for technical sessions
  - Organizes and prepares technical sessions
  - Communicates between attendees and conference committee about technical and poster session status

- **Publicity Subcommittee Chair**
  - Prepares media articles for National ANS
  - Prepares press release
  - Prepares announcements to other student sections and schools
  - Creates publicity campaign to gain support
  - Oversees development of conference theme
  - Communicates between all branches of the committee about theme progress
  - Oversees:
    - Website Coordinator
    - Program Coordinator

- *Media Coordinator*

- Designs and maintains conference website
- Manages conference registration
- Provides constant updates through social media
- Communicates with other committee members about information for website

- *Program Coordinator*
  - Plans and makes program for conference
  - Ensures that events have minimum overlap to maximize student involvement
  - Communicates between workshop and session organizers about schedule of events
  - Oversees development of the conference theme
  - Designs and purchases t-shirts for participants
  - Arranges gift bags for attendees

- **Finance Subcommittee Chair**
  - Negotiates banking process with National ANS and prepares account
  - Assists in obtaining sponsors
  - Maintains records of all transactions
  - Prepares financial report for National ANS
  - Creates and oversees budget for planning committee
  - Oversees:
    - Registration Coordinator
    - Sponsorship Coordinator

- *Registration Coordinator*
  - Organizes student registration and check-in
  - Communicates with participating students and universities about registration
  - Organizes professional registration and check-in
  - Organizes and distributes student reimbursements post conference

- *Sponsorship Coordinator*
  - Communicates with participating companies
  - Plans and manages career fair
  - Plans and manages interviews
  - Prepares sponsor recruitment packet

- **Hospitality Subcommittee Chair**
  - Reserves conference facilities, banquet spaces, and hotels
  - Reserves transportation in Madison
  - Organizes caterers
  - Oversees:
    - Transportation Coordinator
    - Catering Coordinator

- *Transportation Coordinator*
  - Coordinates travel to and from Madison, WI
  - Arrange transportation around Madison, WI and campus
  - Communicate between attendees and travel status

- *Catering Coordinator*

- Organizes food menu and meals
- Communicates between catering staff, conference committee, and attendees about meals

- **Non-Technical Subcommittee Chair**
  - Plans and arranges non-technical workshops
  - Plans mentor luncheon
  - Recruits students for volunteering and maintains volunteer schedule
  - Oversees:
    - Activities Coordinator

- *Activities Coordinator*
  - Plans and arranges non-technical tours
  - Plan social events
  - Communicates between tour facilities, attendees, and committee about tour status

In addition to the students on the committee, our ANS faculty advisor Professor Paul Wilson will serve as a mentor and answer our questions as need be. We will keep him informed on our progress and it is his duty to inform us when he sees major changes to be made. Paul Wilson will also work with us as a "mentor" to the evening dinner speakers to ensure that their speeches are original and align with the conference's goals.

6.2 Conflict Resolution

In the event of a conflict between members of the planning committee, a document for decision-making and conflict resolution has been drafted and approved by the general committee. All General Committee members are expected to abide by the resolution. Key points of the resolution are as follows:

1. Subcommittees are encouraged to operate as autonomous and democratic as possible; however, the General Co-Chairs reserve the rights to make all final decisions.
2. Conflicts between committee members are to be resolved outside of the committee. Should this begin to affect the work of these members, the General Co-Chairs may intervene.
3. Any cases of misconduct or negligence will be handled by the General Co-Chairs as necessary.
4. For extreme cases of misconduct or negligence, separate steps for the removal and replacement of a member are outlined for general members, Subcommittee Chairs, and General Co-Chairs. These include a discussion with the offending member, consultation of the Faculty Advisor, and a hearing with the General Committee to decide if removal is necessary.

6.3 Staffing Requirements

Volunteers and staffing for the socials, nontechnical workshops, and tours would likely be met within UW-Madison's own ANS student section. Our members have consistently demonstrated their willingness to volunteer at events such as Boy Scout workshops, career fairs, highway cleanups, and Engineering Expo, and we expect the conference will garner significant support from our own student section. Not only will it be a great professional development opportunity and a unique way to get involved in ANS, but it is also as a source of active member points that provide benefits for the members of our student section. Another way that we have considered increasing UW-ANS Student Section participation is by requiring a certain number of volunteer shifts in order to attend the conference, unless they are presenting research. This volunteer requirement will be established when the staffing needs for the conference are finalized. If we are unable to fill all volunteer slots from our own ANS Student Section then we can solicit the help of volunteers from the Engineering Physics Department. As can be seen in Appendix I, we have a lot support from our department's student body. Past engineering events such as Engineering Expo and career fairs have displayed a strong student volunteering presence across the entire College of Engineering so any additional staffing needs should be easily be met by expanding volunteer opportunities to the greater engineering student body. Volunteers will report to the student headquarters and will be directed by the Non-Technical Subcommittee Chair. There will also be a student break room available to all student volunteers. Day-to-day staffing needs can be found in Appendix J.

7 Liability

Concourse Hotel and Monona Terrace Facilities

- The Concourse Hotel and Monona Terrace staff are not responsible for lost, stolen, or damaged items not in the Hotels' control.
- If there is any damage done to the hotel guest rooms or public spaces individual people responsible will be charged.
- Liability of each facility is covered under their own insurance policies.

Dining

- Catering provided by the Concourse Hotel and Monona Terrace assumes all liability related to food (including food poisoning).
- Any restaurant associated with the conference assumes (such as the Essen Haus) assumes all food related liability.

Transportation

- Airport shuttles are covered under the Concourse Hotel's insurance policy.
- Larger scale transportation is covered by the busing company.
- The Conference is not responsible for missed bus transportation to/from airports other than Dane County Airport (Madison).

Alcohol

- Alcohol will only be served to students aged 21 years or older.
- All students at the time of check-in will receive drink tickets for each of the dinner socials. The Concourse Hotel and Monona Terrace will be serving the alcohol and will provide a person to check IDs. The hotels reserve the right to check any persons ID and/or refuse service to underage persons or intoxicated persons.
- Because both Concourse Hotel and Monona Terrace are licensed third party vendors with respect to the university, we are able to allow alcohol to be provided to students of legal age per regulations set forth by the UW-Madison Specific Alcohol Beverage Regulation.
- Alcohol served in bars (such as on the Tour of Madison Nightlife) is distributed by the bar establishment and therefore the Conference is not responsible.

On Campus Events

- Campus lab tours, such as the UWNR and fusion lab tours, are covered by the departments in which they are housed.
- UW-Madison Rec Sports will require official release waivers to be signed by the attendee before participating in the ice skating social at the Shell.

UW-ANS Event Insurance

- All else not covered by the aforementioned policies will need to be covered in another form. We will look into the possibility of coverage through ANS National. If that is not available, we will be able to purchase Special Event Insurance through a company provided by the Risk Management Department at UW-Madison.

8 Schedule of Milestones

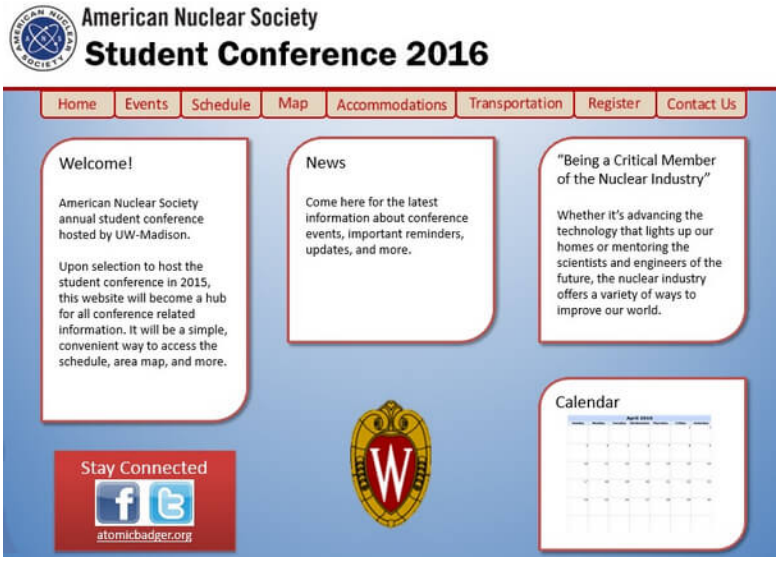
Deadline	Task	Responsibility
	April 2015	
4/13/2015	Finalize conference dates and reserve facilities	General
4/13/2015	Confirm conference committee	General
4/20/2015	Reserve all hotel guest rooms	Hospitality
4/27/2015	Prepare banking through ANS National	Finance
4/27/2015	Prepare banking through Associated Bank	Finance
	May 2015	
5/4/2015	Prepare conference website and social media	Publicity
5/11/2015	Create sponsor letters and contact	General
5/18/2015	Invite guest speakers	General
5/25/2015	Prepare tour opportunities	Non-Technical
	June 2015	
6/7/2015-6/11/2015	Send delegates to ANS Annual Meeting	ANS
6/23/2015	Make initial working budget	Finance
6/29/2015	Check sponsor status	General
	July 2015	
7/13/2015	Contact judges	Technical
7/27/2015	Follow up with sponsors	General
	August 2015	
8/3/2015	Begin conference program design	Publicity
8/17/2015	Finalize Technical categories	Technical
8/31/2015	Website up to date with call for abstracts	Publicity
8/31/2015	Follow up with sponsors	General
	September 2015	
9/14/2015	Inform SSC of current progress	General
9/29/2015	Follow up with sponsors	General
	October 2015	
10/26/2015	Have the registration page of website ready	Publicity
10/26/2015	Follow up with sponsors	General
	November 2015	
11/8/2015-11/12/2015	Send delegates to ANS Winter Meeting	ANS
11/23/2015	Registration begins	General
11/30/2015	Design T-shirts	Publicity
11/30/2015	Get ANS-HQ materials	Publicity
11/30/2015	Inform student sections of registration and deadlines	Publicity
11/30/2015	Follow up with sponsors	General
	December 2015	

12/14/2015	Determine all awards	Technical
12/28/2015	Follow up with sponsors	General
	January 2016	
1/4/2016	Inform the SCC of current progress	General
1/11/2016	Post tentative program to website	Publicity
1/11/2016	Finalize all tours	Technical and Non-Technical
1/11/2016	Finalize all workshops	Technical and Non-Technical
1/25/2016	Begin recruiting student volunteers	Non-Technical
	February 2016	
2/1/2016	Finalize catering menus	Hospitality
2/15/2016	Finalize all transportation	Hospitality
2/15/2016	Check all hotel reservations	Hospitality
2/22/2016	Buy supplies for "goody" bags	Publicity
2/29/2016	Abstract submission deadline	ANS
2/29/2016	Follow up with sponsors	General
2/29/2016	Finalize budget	Finance
	March 2016	
3/7/2016	Registration deadline	General
3/14/2016	Print tags, table cards, banners	Publicity
3/14/2016	Abstract Review	Technical
3/21/2016	Finalize staffing/volunteer schedule	Non-Technical
3/25/2016	Print conference programs	Publicity
3/25/2016	Assemble "goody" bags	Publicity
	April 2016	
	3/31/2016-4/3/2016: CONFERENCE!	
	May 2016	
5/2/2016	Send thank you letters	General and Publicity
5/16/2016	Send travel reimbursement	Finance
5/16/2016	Publish conference report to SSC	Committee
5/23/2016	Publish conference story to website	Publicity

9 Website and Social Media

9.1 Website

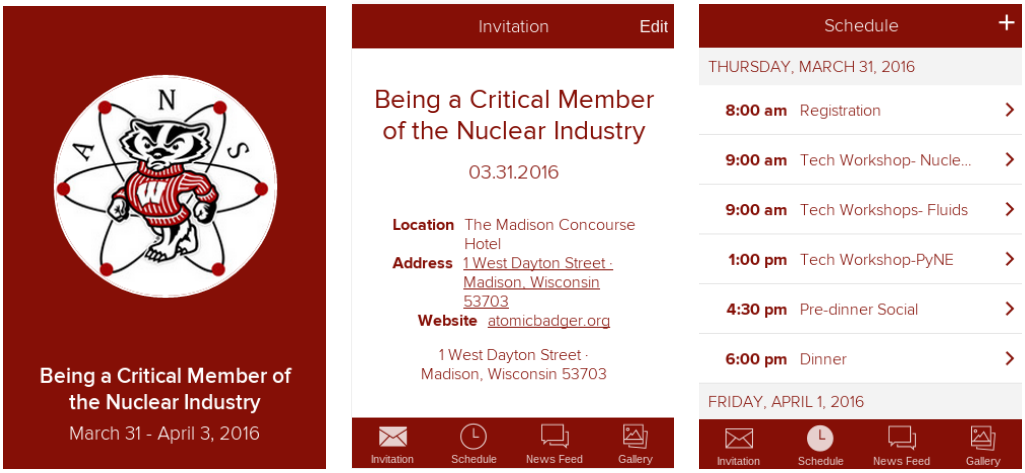
Our student section of ANS currently uses www.atomicbadger.org to host information about events and other resources. Upon selection to host the 2016 student conference, the student section will launch a new website for the conference which will host information relevant to all conference attendees. Potential website hosts include our current UW-Madison ANS page www.atomicbadger.org or Google Sites. Both options have minimum fees associated with launching and maintaining a new domain. Our goal is to create a simple, intuitive interface to distribute information to all conference attendees. The template shown below demonstrates this idea.



A sample conference website layout

9.2 Social Media

Furthermore, we plan on generating a conference app available free for both iOS and Android devices hosted by Yapp. There, conference events, schedules and updates will be easily accessible. A Facebook and Twitter page will also be created for those who prefer either form of communication. These, along with the conference website, will be coordinated with our local section website and department Facebook page to ensure optimal dissemination of information.



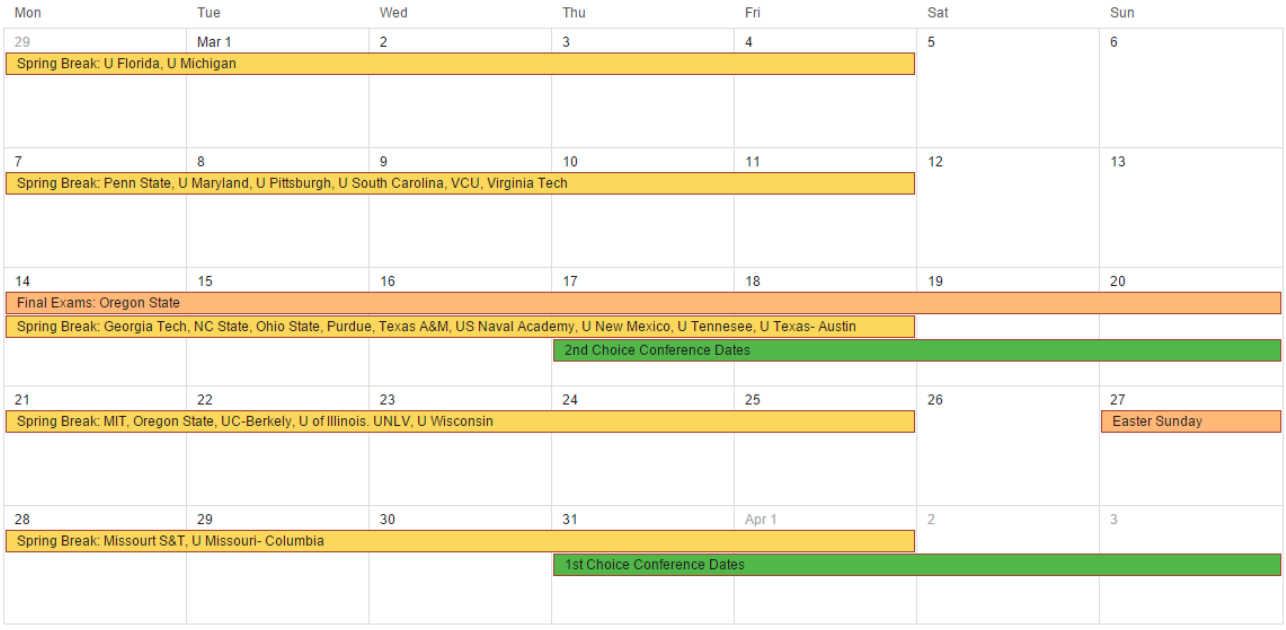
Screenshots from a potential mobile app

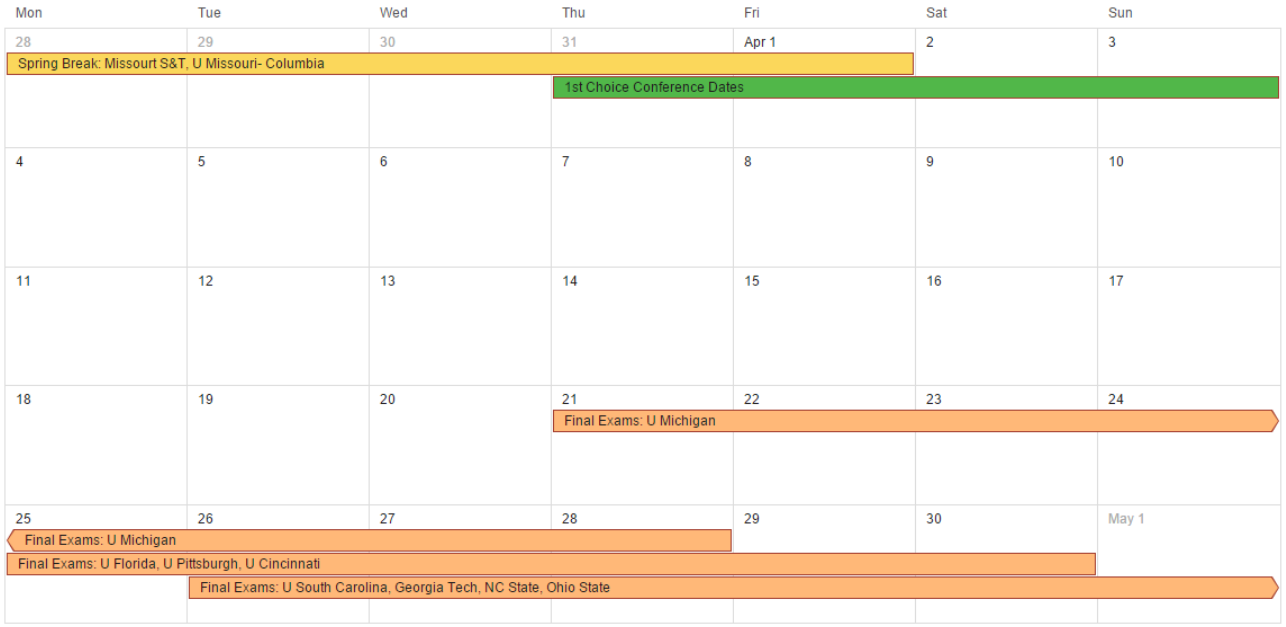
10 Conclusion

As can be seen by review of this proposal, we plan to host a conference that is full of not only technical material, but also engaging workshops and socials to create well-rounded critical members of the nuclear industry. We are fully aware that we have planned numerous amounts of events that may overlap with each other. Our goal is to make sure that every attendee will be able to attend an event interesting to them at every moment of the day. If the selections committee feels as though we have over-scheduled the conference, we are prepared to eliminate events as necessary. If chosen, the University of Wisconsin-Madison will be able to host a very enjoyable and educational 2016 ANS Student Conference.

A Calendar of Conflicts

Detailed calendars for March and April are provided below. Included are our first and second choices for conference dates along with the date conflicts for each month.

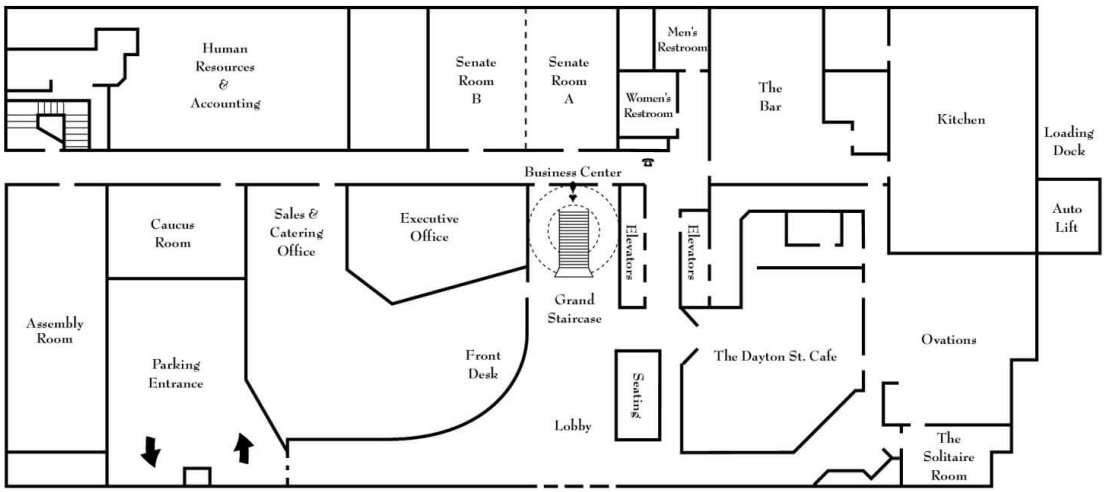




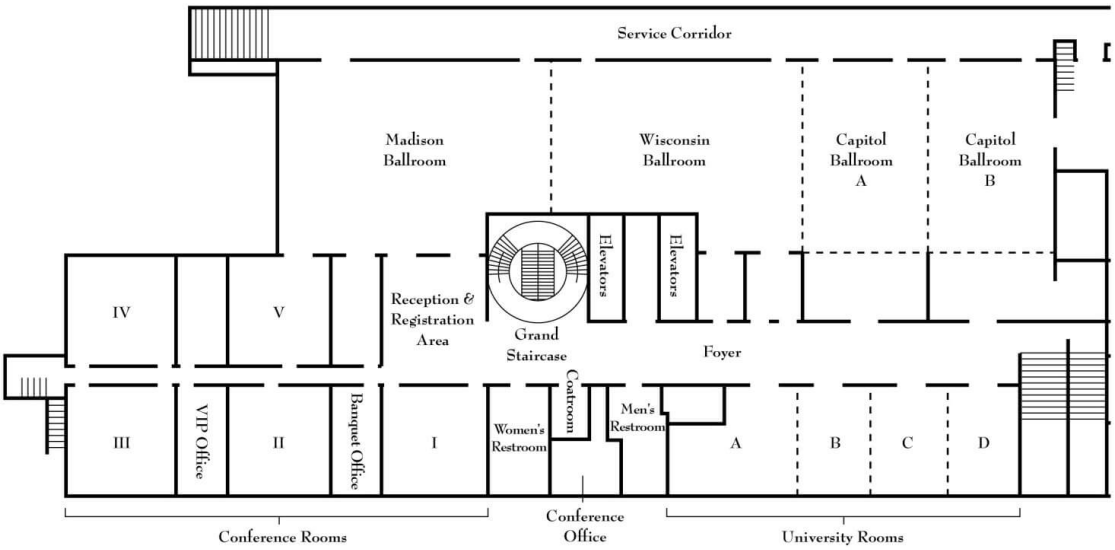
B Facility Maps and Capacities

B.1 Madison Concourse Hotel

1st Floor

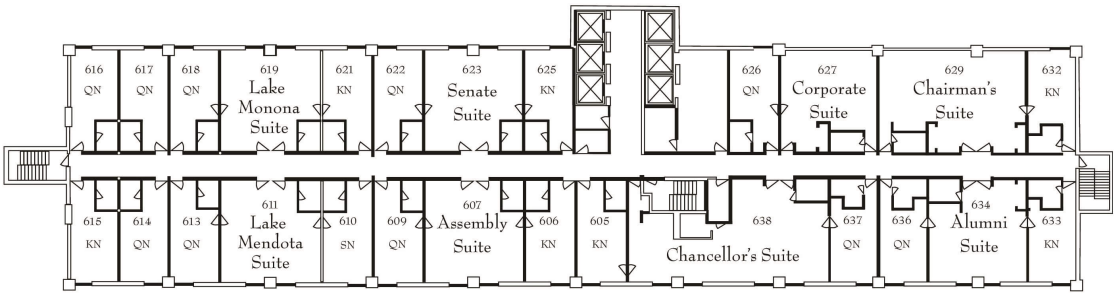


2nd Floor

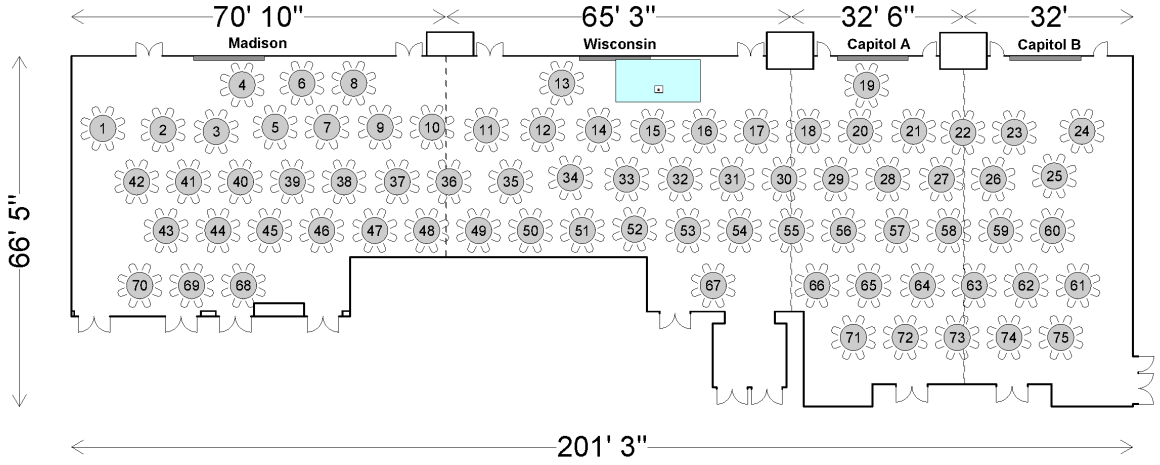


6th Floor

Capitol Side



Lake Side



GRAND BALLROOM

Meeting Space

Room	Size	Sq. Ft.	Theatre	Classroom	Conference	Ceiling	Reception	Banquet (rounds of 10)
Grand Ballroom	66x200	10,201	1,500	700		14'	1,800	1,000
Capitol Ballroom	66x64	4,075	400	240		14'	400	360
Capitol A Ballroom	66x32	2,032	200	120		14'	200	180
Capitol B Ballroom	66x32	2,043	200	120		14'	200	180
Wisconsin Ballroom	45x64	2,919	300	150		14'	300	260
Madison Ballroom	49x70	3,206	340	180		14'	350	300

Room	Size	Sq. Ft.	Theatre	Classroom	Conference	Ceiling	Reception	Banquet (rounds of 10)
University Room	28x89	2,265	210	100		8'	250	200
University A	28x34	786	60	30	35	8'	70	60
University B	28x19	531	50	25	20	8'	50	40
University C	28x18	507	50	25	20	8'	50	40
University D	28x17	448	40	24	20	8'	40	30

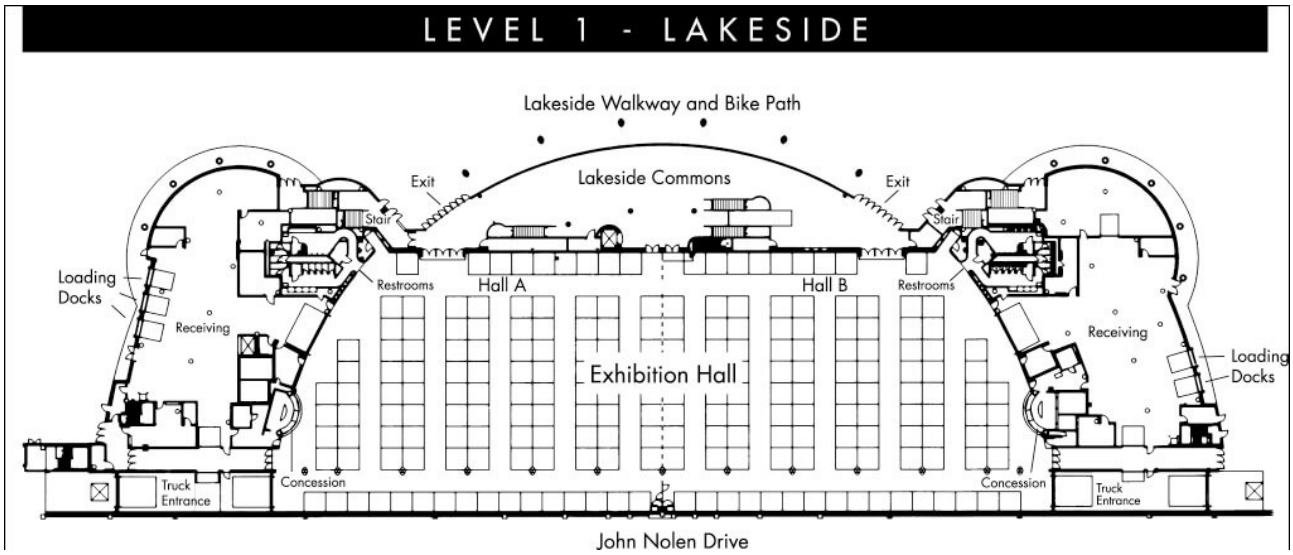
Room	Size	Sq. Ft.	Theatre	Classroom	Conference	Ceiling	Reception	Banquet (rounds of 10)
Conference I	26x25	604	40	24	24	8'	50	40
Conference II	27x26	628	40	24	24	8'	50	40
Conference III	25x25	585	40	24	24	8'	50	40
Conference IV	26x25	588	40	24	24	8'	50	40
Conference V	27x26	632	40	24	24	8'	50	40

Room	Size	Sq. Ft.	Theatre	Classroom	Conference	Ceiling	Reception	Banquet (rounds of 10)
Senate Room	36x51	1,811	150	70		8'	175	140
Senate A	36x25	886	70	32		8'	80	50
Senate B	36x25	924	80	32		8'	80	70

Room	Size	Sq. Ft.	Theatre	Classroom	Conference	Ceiling	Reception	Banquet (rounds of 10)
Assembly Room	71x26	1,648	150	80	45	8'	175	140
Caucus Room	18x32	579	40	24	25	8'	40	40

Hospitality Parlors	Size	Sq. Ft.	Theatre	Classroom	Conference	Ceiling	Reception
7 Parlors	26x19	494			25	8'	50
1 Parlor	36x27	972			35	8'	75
1 Parlor	48x27	1,296			30	8'	75

B.2 Monona Terrace



C Calculation of Travel Costs

Table 9: Cost of Airfare to Madison

Student Section	Departure Location	Arrival Location		
		Madison (MSN)	Milwaukee (MKE)	Chicago O'Hare (ORD)
University of California - Berkeley	San Francisco, CA (SFO)	**$307.20**	$353.20	$328.20
Colorado School of Mines	Denver, CO (DEN)	$270.70	$320.20	**$236.20**
Three Rivers Community College	Hartford, CT (BDL)	**$300.20**	$346.20	$403.20
University of Florida	Gainesville, FL (GNV)	$445.70	**$382.20**	$400.20
Georgia Institute of Technology	Atlanta, GA (ATL)	$332.20	$281.20	**$204.20**
Southern Polytechnic State University	Atlanta, GA (ATL)	$332.20	$281.20	**$204.20**
Idaho State University	Idaho Falls, ID (IDA)	**$381.20**	$589.20	$475.70
Louisiana State University	Baton Rouge, LA (BTR)	**$375.20**	$421.20	$412.20
United States Naval Academy	Hanover, MD (BWI)	**$245.20**	$291.20	$296.20
University of Maryland	Hanover, MD (BWI)	**$245.20**	$291.20	$296.20
Massachusetts Institute of Technology	Boston, MA (BOS)	**$193.20**	$239.20	$241.98
University of Massachusetts - Lowell	Boston, MA (BOS)	**$193.20**	$239.20	$241.98
University of Nevada - Las Vegas	Las Vegas, NV (LAS)	$327.20	$373.20	**$294.20**
University of New Mexico	Albuquerque, NM (ABQ)	**$327.20**	$429.20	$439.20
City College of New York	New York, NY (JFK)	**$256.20**	$285.20	$328.20
Excelsior College	Albany, NY (ALB)	**$325.20**	$371.20	$395.20
Rensselaer Polytechnic Institute	Albany, NY (ALB)	**$325.20**	$371.20	$395.20
United States Military Academy at West Point	New Windsor, NY (SWF)	$497.20	$489.20	**$426.19**
North Carolina State University	Morrisville, NC (RDU)	$342.20	$388.20	**$310.20**
Oregon State University	Portland, OR (PDX)	**$375.20**	$421.20	$422.80
Pennsylvania State University	Harrisburg, PA (MDT)	$327.20	$373.20	**$282.20**
University of Pittsburgh	Pittsburgh,PA (PIT)	$316.20	$362.20	**$282.20**
South Carolina State University	Columbia, SC (CAE)	**$435.20**	$489.20	$456.20
University of South Carolina	Columbia, SC (CAE)	**$435.20**	$489.20	$456.20
Chattanooga State Community College	Chattanooga, TN (CHA)	$401.20	$309.20	**$289.20**
University of Tennessee	Louisville,TN (TYS)	$415.20	$502.70	**$405.20**
Vanderbilt University	Nashville, TN (BNA)	$337.70	$383.70	**$307.70**
Texas A&M University	College Station, TX (CLL)	**$344.20**	$407.20	$350.20
University of Texas - Arlington	Dallas, TX (DFW)	$334.20	$400.19	**$256.20**
University of Texas - Austin	Austin, TX (AUS)	**$353.20**	$399.20	$401.70
Utah State University	Salt Lake City, UT (SLC)	$370.20	$420.20	**$344.20**
Virginia Commonwealth University	Richmond, VA (RIC)	**$320.70**	$366.70	$463.25
Virginia Polytechnic Institute and State University	Washington D.C. (DCA)	**$245.20**	$291.20	$332.20
University of Texas - Permian Basin	Midland, TX (MAF)	$526.20	$572.20	**$428.20**
University of Utah	Salt Lake City, UT (SLC)	$370.20	$420.20	**$344.20**
University of Washington	Seattle, WA (SEA)	**$334.20**	$380.20	$436.20
		Average Lowest Airfare:		***$314.28***

Lowest airfares for each student section are in ***bold***

Table 10: Drive Time and Fuel Costs of Driving to Madison

University	**Estimated Mileage (mi)**	**Driving Time (hrs)**	**Estimated Fuel Cost**	**Estimated Fuel Cost per Person***
University of Illinois Urbana-Champaign	252.6	3.8	$89.67	$22.42
Purdue University	269.8	4.3	$95.78	$23.94
Iowa State University	270	4.25	$95.85	$23.96
University of Michigan	392.1	6	$139.20	$34.80
University of Missouri- Columbia	423.4	6.78	$150.31	$37.58
University of Cincinnati	442.2	6.83	$156.98	$39.25
Missouri University of Science & Technology	463.6	6.83	$164.58	$41.14
Air Force Institute of Technology	452.6	7.08	$160.67	$40.17
Ohio State University	467.7	7.6	$166.03	$41.51
Kansas State University	607.2	9.85	$215.56	$53.89
Average:	***376.33***	***5.84***	***$143.46***	***$35.87***

** Assumed four people per vehicle*

D Supporting Conference Forms

D.1 Technical Session Evaluation Form

Technical Session _____

Name of presenter _____

Title of presentation _____

Name of judge _____

Category	Evaluation (1-5)	Rubric	Comments
Technical Content		5: Interesting and innovative 4: Clear conclusions and valid methods 3: This work's conclusion may be a jump from the results 2: Unclear conclusions drawn 1: This work may not be science	
Presentation		5: Talk was engaging 4: Clean and well organized 3: Single graphic may have issues talk 2: Font, images, or graphics confusing or obnoxious 1: No presentation accompanied talk	
Professionalism		5: Professional attire and confident voice 4: Confident and well dress, but may have stumbled in presentation 3: Presenter may have tripped up, unclean recovery 2: Mumbled, unclear, or inappropriate dress 1: Did not show up	

Total score: _____ /15

D.2 Technical Poster Evaluation Form

Name of presenter _____

Poster number _____

Title of poster _____

Name of judge _____

Category	Evaluation (1-5)	Rubric	Comments
Technical Content		5: Interesting and innovative 4: Clear conclusion and valid methods 3: No clear conclusions drawn 2: The point of the work is not obvious 1: This work may not be science	
Self-Contained		5: No outside explanation was needed to understand the main idea of the work 4: Clear, but reader has questions about methods/conclusions 3: The reader must assume a few things to understand the work 2: Reader requires a conversation with author to understand the poster 1: Work is vague, unclear what was done	
Readability		5: Clean and concise 4: Minor graphical details in cosmetics 3: Minor graphical details in the content 2: Font or images too large or too small 1: Poster is poorly constructed/formatted	
Professionalism		5: Professional attire and confident voice 4: Confident and well dress, but may have stumbled in presentation 3: Presenter may have tripped up, unclean recovery 2: Mumbled, unclear, or inappropriate dress 1: Did not show up	

Total score: _____ /20

D.3 Student Travel Reimbursement Form

Student Name:

University:

Email:

Section President Name:

President Email:

Item	Cost

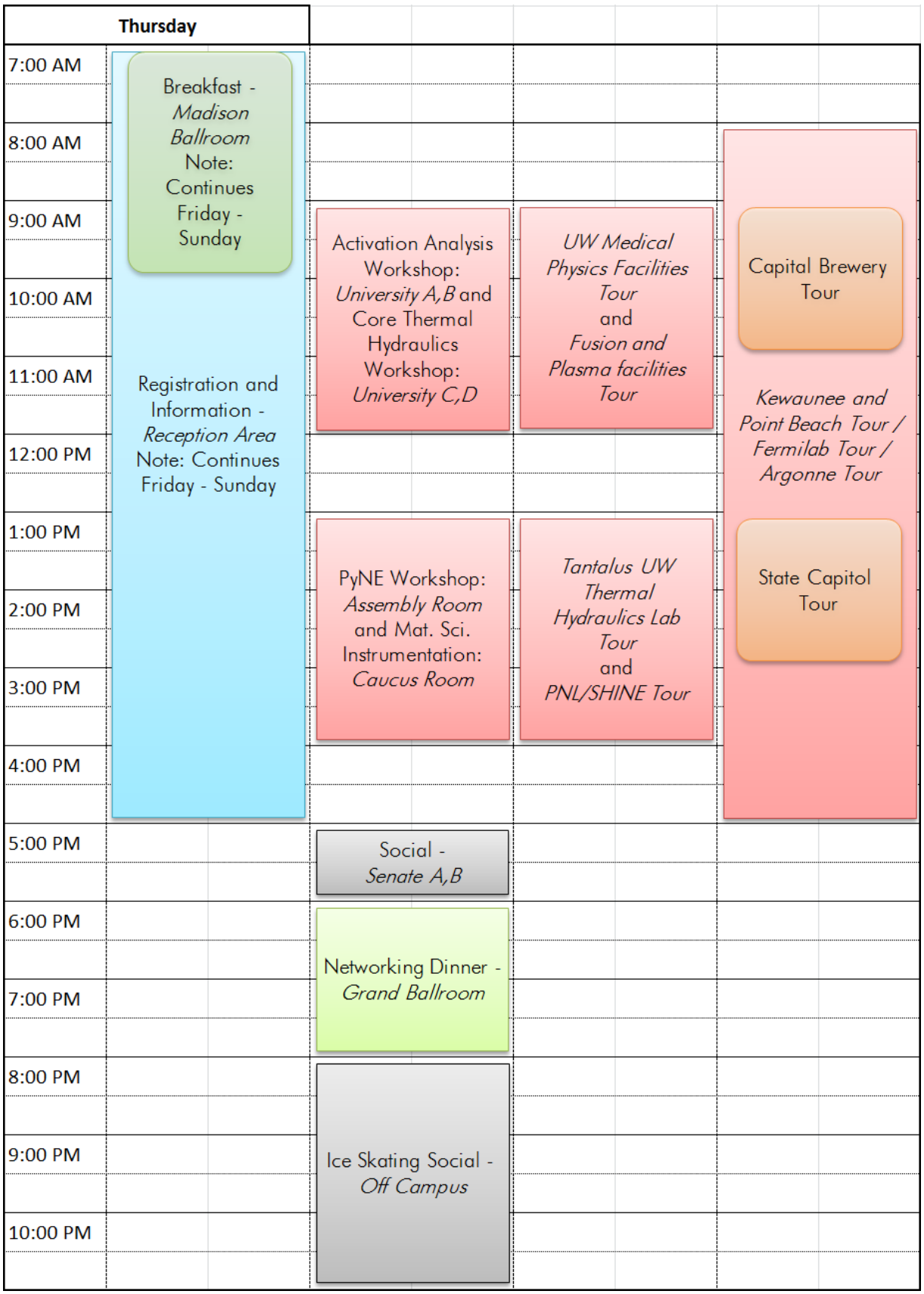
Total Cost:

Are you expecting to receive or have you received any additional travel funding? yes / no

If yes, how much?

Please staple ALL receipts to form and return to the Student Headquarters before Sunday at noon.

E Graphical Schedule of Events



Friday		Note: registration/information in reception area from 7:00AM to 5:00PM		
7:00 AM	Breakfast - *Madison Ballroom* Note: Continues Saturday and Sunday			Morning Run - (Starts at 6:30)
8:00 AM		Technical Sessions - *Conference I-V; Caucus Room*	Career Fair - *University A,B,C,D*	
9:00 AM				
10:00 AM	η Panel: Policy and Nonproliferation - *Capitol Ballroom*	Technical Sessions - *Conference I-V; Caucus Room*		ϵ Workshop: Innovation - *Assembly Room*
11:00 AM				
12:00 PM				SSC Meeting - *Assembly Room*
1:00 PM	η Panel Fusion and Plasmas - *Capitol Ballroom*			
2:00 PM		Technical Sessions - *Conference I-V; Caucus Room*	Interviews - *Senate A,B; 6th floor*	*p* Workshop: Education - Assembly Room
3:00 PM	η Panel: Materials Science - *Capitol Ballroom*			
4:00 PM	ϵ Panel: Nuclear Sci. meets Market - *Capitol Ballroom*	Technical Sessions - *Conference I-V; Caucus Room*		*f* Workshop: Public Image - *Assembly Room*
5:00 PM				
6:00 PM	Wisconsin Dinner, After Dinner Dance Social - *Monona Terrace, Exhibition Hall*			
7:00 PM				
8:00 PM				
9:00 PM				
10:00 PM				

Saturday	Note: registration/information in reception area from 7:00AM to 5:00PM, breakfast in Madison Ballroom from 7:00AM to 10:00AM		
7:00 AM			
8:00 AM	Technical Sessions - *Conference I-V; Caucus Room*	Poster Session Set Up - *Senate A,B*	*f* Workshop: Ethics - *Assembly Room*
9:00 AM			
10:00 AM	Technical Sessions - *Conference I-V; Caucus Room*	Poster Session Free Viewing - *Senate A,B*	ϵ Workshop: Entrepreneurship - *Assembly Room*
11:00 AM			
12:00 PM	Mentor Lunch - *Assembly Room*		
1:00 PM			
2:00 PM	Technical Sessions - *Conference I-V; Caucus Room*	Poster Session Judging - *Senate A,B*	*p* Workshop: Interdisciplinary Studies - *Assembly Room*
3:00 PM			
4:00 PM	Technical Sessions - *Conference I-V; Caucus Room*		
5:00 PM			
6:00 PM			
7:00 PM			
8:00 PM			
9:00 PM			
10:00 PM			

Career Fair - *University A,B,C,D*

Interviews - *6th floor*

η Panel: Med. Phys. & Rad. Protection - *University A,B*

ϵ Panel: Academia to Startup - *University A,B*

Public Image Dinner - *Grand Ballroom*

Movie Social - *University A,B,C,D*

Tour of Madison Nightlife - *Off Campus*

Sunday		Note: light breakfast in Madison Ballroom from 7:00AM to 10:00AM		
7:00 AM	Registration and Information - *Reception Area*			
8:00 AM				
9:00 AM		Camp Randall Stadium Tour	University Campus Tour	*UW Nuclear Reactor Tour*
10:00 AM				*UW Nuclear Reactor Tour*
11:00 AM				
12:00 PM				
1:00 PM				
2:00 PM				
3:00 PM				
4:00 PM				
5:00 PM				
6:00 PM				
7:00 PM				
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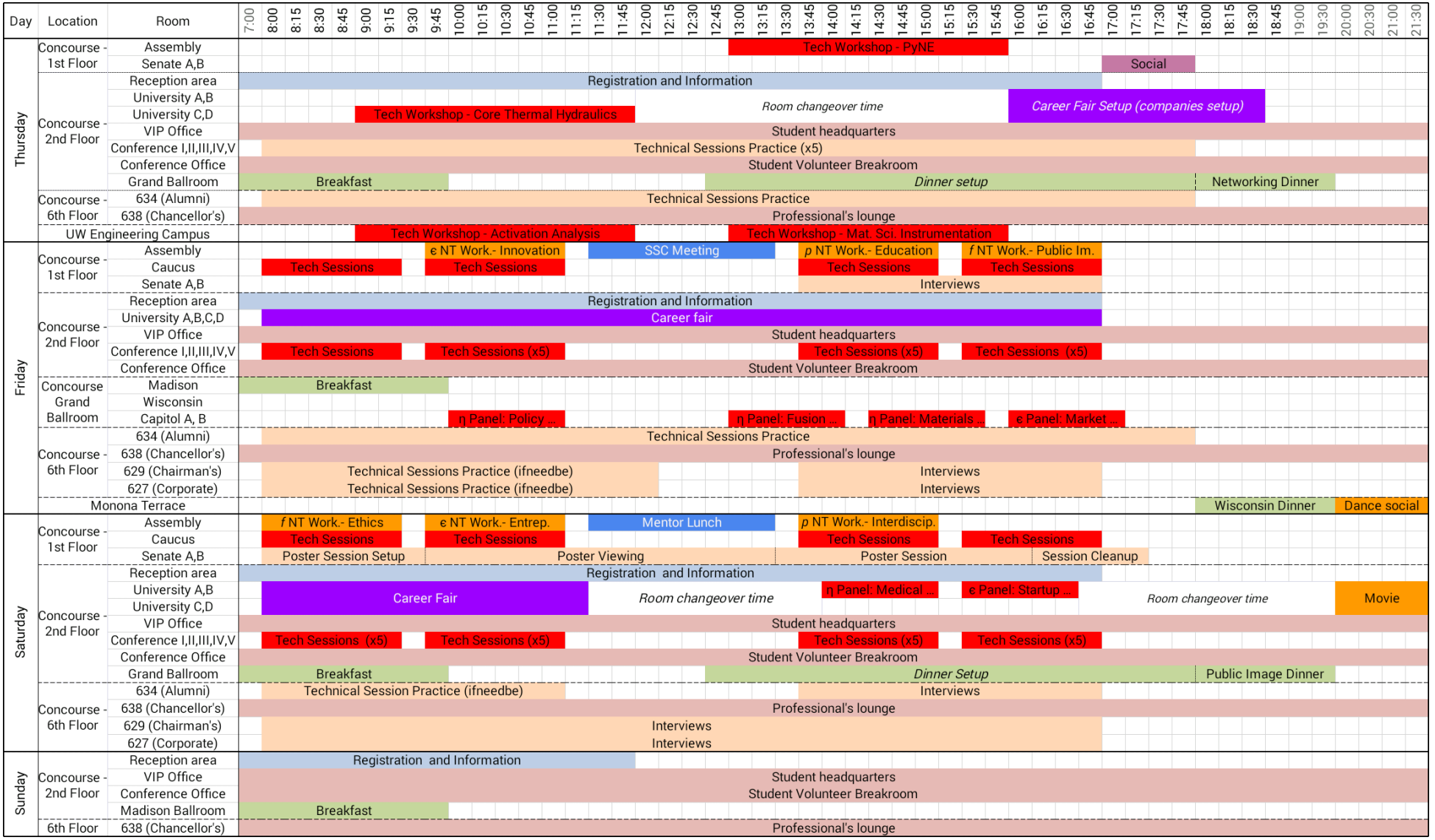
9:00 PM				
10:00 PM				

F Graphical Schedule of Rooms



G Letters of Support

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UNIVERSITY OF WISCONSIN-MADISON
STUDENT SECTION OF THE
AMERICAN NUCLEAR SOCIETY
1550 Engineering Dr
Madison, WI 53706

February 18, 2015

Student Conference Selection Committee
American Nuclear Society

Dear Student Conference Selection Committee,

It gives me great pleasure to offer my strong support for the University of Wisconsin American Nuclear Societys Student Section proposal to host the 2016 ANS Student Conference. I have been the Faculty Advisor of this section for over a decade, including a previous opportunity to host the ANS Student Conference, and am confident that the energy and abilities of this group of student leaders is up to the challenge of organizing and implementing a successful student conference. The UW-ANS Student Section has a long history of excellence and the organizers of this conference display all of the qualities that have led to this success in the past.

Having chosen the theme of "Being a Critical Member of the Nuclear Industry," the organizers have focused on what it means for a student to transition into a professional in today's industry, and the industry of the future. The UW-ANS last hosted the student conference in 2004 and it was judged by all to be a great success. While the then recently completed Engineering Centers Building offered a great home for that conference, the much larger student conferences of today require a larger venue. The team of students who have prepared this program have taken a very professional approach and worked with the citys visitors and convention bureau, capitalizing on their experience to identify the best plan for a meeting of this size in Madison. Madison and its downtown convention facilities are ideally suited to a meeting like this. Fortunately, downtown Madison is also adjacent to campus, so visitors will be able to enjoy the campus atmostphere as well as the excellent conference facilities.

I hope that the selection committees recognizes the merits of this proposal and selects the UW-Madison as the host of the 2016 ANS Student Conference, from among the many other strong proposals you are sure to receive.

Regards,

Paul P.H. Wilson
UW-ANS Faculty Advisor

WISCONSIN
UNIVERSITY OF WISCONSIN–MADISON

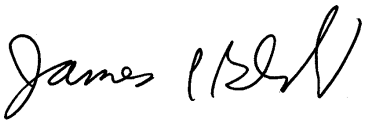
December 2, 2014

Student Sections Selections Committee,

I would like to express my support for the request from the University of Wisconsin – Madison's American Nuclear Society Student Chapter to host the 2016 ANS Student Conference. This Chapter has performed admirably for decades, despite constant turnover among the officers. They have developed a culture of quality and a tradition that ensures that all of their activities are carried out at a high level. This culture should serve them well if they are selected to host the Student Conference and I would fully expect them to do an outstanding job.

I wholeheartedly support this request.

Sincerely,



Jake Blanchard
Chair of Engineering Physics
blanchard@engr.wisc.edu

Engineering Physics
University of Wisconsin-Madison 1500 Engineering Dr. Madison, Wisconsin 53706
608/263-0391 blanchard@engr.wisc.edu http://www.engr.wisc.edu/ep/

College of Engineering
UNIVERSITY OF WISCONSIN-MADISON

December 5, 2014

Dear ANS Student Sections Committee Members,

I am writing to express my support for the proposal from the University of Wisconsin-Madison's ANS Student Chapter to host the 2016 ANS Student Conference. This chapter has an outstanding record of high quality activities, including outreach to the local community and schools, tours of power plants and other facilities, and professional development for our students. Their strong performance is exemplified by their selection as winners of the Samuel Glasstone Award for the top student chapter in the country in seven of the last ten years. I fully expect them to continue this level of performance if they are chosen to host the 2016 conference.

In short, I enthusiastically support this proposal and am confident that the 2016 Student Conference will be a great success if held here in Madison.

Sincerely,

Ian M. Robertson, Dean

College of Engineering
Office of the Dean 2610 Engineering Hall 1415 Engineering Drive Madison, WI 53706

H Budget Contingency Plan

Presented in Table 11 are the planned tiers for cutting discretionary spending as discussed in 5.4.1. To reiterate, D3 represents our first level of cuts, D2 represents our second level of cuts, and D1 represents items that we will cut as a last resort.

Table 11: Discretionary Spending Cuts

Category	Item	Cost	# of items	# of days	Total cost
D3	Monona Terrace Hors dóeuvres	$10.95	650	1	$8,932.46
	Brewery Tour- Tickets	$8.00	37	1	$296.00
	Brewery Tour- Busing	$304.75	1	1	$304.75
	Movie Night- Snacks	$7.45	50	1	$374.50
	Ice Skating- Tickets	$7.00	50	1	$350.00
	Essen Haus- Minimum Spending	$500.00	1	1	$500.00
	Gift Bag- Premium	$6.58	650.00	1	$4,277.00
			Total saved by D3 Expenses:		$15,034.71
D2	Alternate Monona Terrace Dinner Savings	$6.27	650	1	$4,078.75
	Alternate Monona Terrace Dessert Savings	$2.20	650	1	$1,427.56
	Student Awards	$12.95	50	1	$647.50
	Monona Terrace Social- Drink Tickets	$4.50	800	1	$3,600.00
	Movie Night- License	$500.00	1	1	$500.00
	iClickers	$5.00	60	1	$300.00
			Total saved by D2 expenses:		$10,553.81
D1	Monona Terrace Social- Entertainment	$2,263.73	1	1	$2,263.73
	Coffee&Tea	$27.00	30	2	$2,033.10
	Lunch- Madison Concourse Hotel	$17.00	75	2	$3,200.25
	T-shirts	$4.46	650	1	$2,900.63
	Gift Bags- Basic	$6.84	650	1	$4,446.00
	Materials Workshop- Machine time	$746.00	1	1	$746.00
	Off-Campus Tours- Transportation	$1,250.00	1	1	$1,250.00
	Off-Campus Tours- Lunch	$990.00	1	1	$990.00
			Total saved by D1 expenses:		$17,829.71
			Total saved by all discretionary expenses:		$43,418.23

I Student and Faculty Support

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Colin Huffer	
Sindhura M.	
Reid Carlson	
Marian Matchinets	
MATTHEW WEATHERED	
Joshua Herzog	
Xiaorui Cui	
Congli Sun	
ZIYI YAN	
Wei Wei	
Chenyu Zhang	
LAURA HASBURGH	
Zach Rueger	
Jacob Ratzlaff	
Evan Zeitchick	
Torrin Bechtel	
Brian Cornille	
ARJUN KALRA	12-4-14
Richard Bisson	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Nathan Tripp	
Alex V. Bar	
KEVIN PALLAGI	
Alexander Svensson	
Alex Gross	
Craig LeRoy	
JORDAN REIN	
Jennie Aylyng	
Lindsay Boelart	
Madelynn Bouche	
Matt Glatfelder	
Jessica Rubio	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Max Kraft	
Garrett Ollmann	
Andrew Villagran	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Katin Kiesling	
Elliott Biondo	
Andrew Davis	
Chelsea D'Angelo	
Patrick Shriwise	
PAUL WILSON	
Lucas Jacobson	
Julie Zachman	
Ryan Pease	
Jagresh Bakshi	
JAE JOON OH	
Edward Hurt	
Juliana Pacheco Duarte	
David Adam	
Michael Jones	
Grant Zastrow	
RYAN FINN	
Michael Gionet	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
David Cinquegrani	David Cinquegrani
Ian Waters	Ian
Aiden McHugh	aiden
Tyler Cote	
NICOLETTA FARABULLINI	Nicoletta Farabullini
Eissa AlKindi	
Thierry Kremeyer	
Victoria Winters	Victoria Winters
Kathreen Thome	
Grant Bodner	Grant Bodner
Sultan Al Aleeli	
Casey Tompkins	
JOSHUA HANERTAPÉ	
Lucas Zachow	
Nick Dollard	
Jesse Metcalf	
Morgan Schneider	Morgan Schneider
Richard Rolland	
Kazi Ahmed	
Ian Jentz	
ARRIELLE OPOTOWSKY	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
JOHN SANTARIUS	
Brandon Tudisco	
Ben Heikkinen	
Moataz Harb	
Luke VandenLangenberg	
Caleb Rich	
Matthew Rich	
Nisarg Patel	
Jarett Kallas	
Jason Wolff	
Eissa Alkindi	
Raluca Scarlat	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
John Murphy	
Ashley Arbour	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
DREW L NIGH	
Xavier Durenwa	
Jee-Hoon Kim	
Braden Lenz	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Zach Williams	
EMILY LICHKE	
Rianna Preston	
Tom Dobbins	
Kurt Flesch	
Phillip Bonofiglo	
Steph Kubala	
Ethan Peterson	
Aaron Fancher	
Takashi Nishizawa	
Justin Walker	
LAURIE RILEY	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Julia Ziegler Malyshev	
Beau Herron	
Dylan Vosser	
Mark Garrison	
Ken Zander	
Pat Crane	
Michael Warren	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Kieran Dolan "K-Money"	
Francesco Coratti	
Riley Hoffman	
Dongho Choi	
Lauren Riford	
Jack Bredamus	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Ben Hauch	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Marcia G A. Meireles	
Andrew Maile	
Kelsey Amundson	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Jonathan Green	
Eugenia Carreras Zamora	
Zachary LaMere	
Muhammet Nazim Arik	
Nathan Cudworth	
DEAF INTERPRETER	

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Riley Benson	Riley Benson
Zach Fiscus	[illegible]
Madison Richter	[illegible]
Matthew Worzala	[illegible]
BEN MOLDENHAUER	[illegible]
Anthony Schroeder	[illegible]
[illegible]	[illegible] Jewell

I pledge my support to the American Nuclear Society, University of Wisconsin-Madison Student Section in hosting the National 2016 ANS Student Conference.

NAME	SIGNATURE
Jacob D Nesbit	[illegible]
Tianheng Li	[illegible]
Jordan Entwisle	Jordan Entwisle
Calvin Parkin	[illegible]
Prof Gregory Moses	Gregory Moses

J Staffing Requirements

Event	Description	Volunteers Required
	Thursday	
Registration	3 per shift, 5 2-hour shifts	15
Student Headquarters	Man the student headquarters	5
Campus & Facility Tours	Lead tours off campus & various research facilities	12
Off Campus Tours	Tours to a nuclear power plants & national labs	4
Workshops	4 workshops, 2 volunteers each	8
Career Fair Setup	Guide sponsors on where to setup	2
Dinner	All purpose volunteers	2
Ice Skating Social	Chaperone the social	2
	Thursday Total:	*45*
	Friday	
Registration	2 per shift, 5 2-hour shifts	10
Student Headquarters	Man the student headquarters	5
Professional Break Room	Man the professional break room	5
Career Fair	All purpose volunteers, 1 per 2-hour shift	5
Technical Sessions	Proctor technical sessions	24
Panels	All purpose student volunteers	5
Workshops	All purpose student volunteers	3
Dinner	Escort attendees to the Monona Terrace	4
Social	All purpose student volunteers	2
	Friday Total:	*63*
	Saturday	
Registration	2 per shift, 5 2-hour shifts	10
Student Headquarters	Man the student headquarters	5
Professional Break Room	Man the professional break room	5
Career Fair	All-purpose volunteers, 1 per 2-hour shift	2
Technical Sessions	Proctor technical sessions	24
Panels	All-purpose student volunteers	2
Poster Session	All-purpose volunteers, one per 2 hour shift	4
Mentor Lunch	All-purpose volunteers	2
Workshops	All-purpose volunteers	3
Dinner	All-purpose volunteers	2
Tour of Madison Nightlife	Escorts	4
Movie Social	All-purpose volunteers	2
	Saturday Total:	*65*
	Sunday	
Registration	2 per shift, 2 2-hour shifts	4
Student Headquarters	Man the student headquarters	2
Professional Break Room	Man the professional break room	2
Campus & Facility Tours	Lead tours of campus and various research facilities	6
	Sunday Total:	*14*

K Committee Biographies

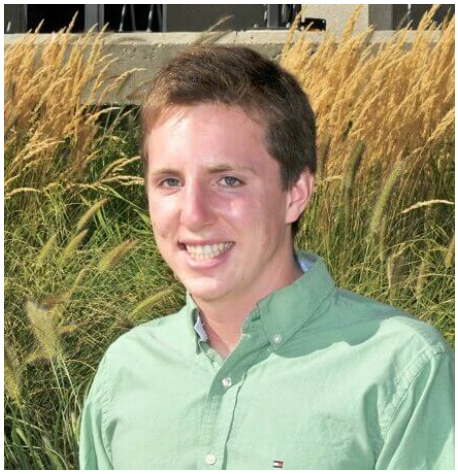
Kalin Kiesling (General Technical Co-Chair) is a first year graduate student pursuing a PhD in Nuclear Engineering & Engineering Physics. She also did her undergraduate work in nuclear engineering at UW-Madison and simultaneously completed a B.S. in Spanish Language and a Certificate in International Engineering. Since the start of her involvement with ANS freshman year, Kalin has served as both the President and Communications Officer for the UW student section and has recently become more involved at the national level with the SSC as the appointed chair for the SSC Commendations in Student Leadership and Service. Kalin has attended the 2013 and 2014 ANS Student conferences, the 2013 and 2014 ANS Winter Meetings, and plans to attend the 2015 ANS Student Conference and 2015 ANS Annual Meeting. Outside of ANS, Kalin works as a research assistant in the Computational Nuclear Engineering Research Group (CNERG) on software development for ITER analysis and has interned at Argonne National Laboratory.

Matt Jasica (General Finance Co-Chair) is a 3rd year Ph.D. candidate in the Engineering Physics department. He is currently a member of the Inertial Electrostatic Confinement (IEC) fusion research group researching plasma-surface interactions in fusion materials. Matt graduated from the University of Illinois, Urbana-Champaign with a B.S. in Nuclear, Plasma, and Radiological Engineering. Matt has served as the Vice-President of the UW student section and continues to serve as the Boy Scout Coordinator. He has attended the 2013 and 2014 ANS Student conferences, the 2013 and 2014 ANS Winter Meetings, plans to attend the 2015 ANS Student Conference, and has presented at the 2014 US-Japan IEC workshop. When he manages to find spare time Matt is an avid music enthusiast and musician who loves to jam out to progressive rock and play the French horn, electric bass, and keyboard.

AJ Gross (General Non-Technical Co-Chair) is a third year undergraduate, originally from Brainerd, MN, majoring in nuclear engineering at UW-Madison with certificates in mathematics and thermal energy systems. AJ has served as governor and co-chair of the engineering expo committee for the UW-Madison Student Section, along with working closely on the bids for the 2015 and 2016 ANS Student Conferences, and AJ has attended the 2014 ANS Student Conference and plans to attend the 2015 ANS Student Conference. AJ works at the University of Wisconsin Nuclear Reactor, where he is a licensed reactor operator. In his free time AJ enjoys snowmobiling, swing dancing, hunting, and all things car-related.

Ryan Norval (Technical Chair) is a third year graduate student in the Engineering Physics department at UW-Madison. Currently he studies the plasma edge, over on MST in the Physics Department. He fell to the dark side of Nuclear Engineering and began studying plasma and fusion 4 years ago. A summer internship at Princeton Plasma Physics Lab had solidified his interests in plasma 3 summers ago. Ryan completed his undergraduate degree in Nuclear Engineering at Rensselaer Polytechnic Institute. Ryan had previously served as Treasurer of RPI's ANS Student Section. Outside of the lab/office Ryan likes to help out with various outreach events including ANS's Boy Scout Nuclear Merit Badge Workshops and The Wonder's of Physics: Plasma Expos. Ryan's conference experience includes the recent APS-DPP conference in New Orleans and the not-so-recent ANS Student Conference at UNLV.

Juliana P. Duarte (Technical Workshop Coordinator) is a first year graduate student at UW-Madison. She studied nuclear engineering at the Federal University of Rio de Janeiro (UFRJ) and, in 2013, she became the first nuclear engineering graduate in Brazil. In 2014, she got her M.S. degree in electrical engineering at the University of São Paulo (USP), Brazil, where she had the opportunity to work with senior engineers from the Nuclear Engineering Program in the Brazilian Navy. In the same year, she moved to Madison where she is pursuing a PhD in nuclear engineering. She is interested in nuclear reactor thermal-hydraulics and safety and is currently working on critical heat flux experiments for small modular reactors. Juliana was the chair of the first Academic Week on Nuclear Engineering at UFRJ in 2011. During the last four years, she participated as an author in several conferences, as the International Conference on Nuclear Engineering – ICONE 22 and the European Safety and Reliability Conference – ESREL 2014.



Drew Nigh (Sessions Coordinator) is a senior undergraduate pursuing his B.S. and M.S. in nuclear engineering. After attending the University of Minnesota his freshman year, Drew's involvement with the UW ANS Student Section began sophomore year. He has served as the Communications officer and now as the Section's Vice President, where he most enjoys planning social events for members to form connections in a less professional setting. Drew attended the 2013 and 2014 Student Conferences, the 2014 Utility Working Conference, and hopes to attend the 2015 Student Conference this spring. Outside of ANS, he has interned at Franklin Energy Services in Madison, WI and now works part-time as a customer service representative at Riley's Wines of the World, where he is able to recommend his favorite beers to customers.

Kazi Ahmed (Publicity Chair) is an undergraduate at UW-Madison pursuing a B.S. and M.S. degree in Nuclear Engineering. A native of Utah, he moved to Madison from the Wild West for his education. He has interned for Idaho National Laboratory, SHINE Medical Technologies, and Phoenix Nuclear Labs. Kazi's favorite recreational activities are hiking, climbing, and geocaching. In his free time, he enjoys watching movies, gaming with friends, and reading. He has been particularly active in public outreach and community service events for UW-ANS and currently serves as President. Kazi has publicity and website management experience from his high school robotics team, and experience with two student conferences and one winter conference.

Amber McCarthy (Media Coordinator) is a third year undergraduate student pursuing a B.S in Nuclear Engineering. She became an active ANS member in 2014 and joined the Conference Planning Committee this year. She is eager to attend the 2015 Student Conference in Texas as it will be her first ANS National Conference. At the University of Wisconsin - Madison, she has worked extensively for the College of Engineering as a new student peer advisor, engineering ambassador, and as a Physics 202 Supplemental Instructor for the Undergraduate Learning Center. Beyond academics, Amber has a love for art and often enjoys drawing and painting in her free time.

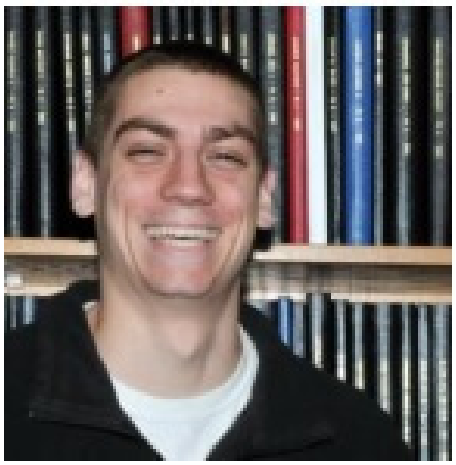
Virginia Haupt (Program Coordinator) is a second year undergraduate student pursuing a B.S. in nuclear engineering. She has been involved with the Madison Student Section since her first semester on campus and is the acting Communications Officer for the section. She attended the 2014 ANS Student Conference and plans to attend the ANS Student Conference in 2015. Outside of ANS, Virginia has interned at Exelon Generation in BWR design. In her free time, Virginia enjoys trampoline dodgeball and playing viola.

Zeke "Zz" Riford (Finance Chair) is a first year graduate student and research assistant in the Center for Plasma Theory and Computation. Zz received undergraduate degrees from Lehigh University in Physics and Asian Studies and is originally from Kaneohe, HI. Though new to ANS, Zz has been to several academic conferences and had work presented at the 2012 APS conference (only a hurricane could prevent his attendance). Zz also plans to attend the 2015 ANS student conference and future conferences. In his spare time, Zz enjoys hiking, biking, and coming up with new answers to the common question, "Why would you ever move to Wisconsin from Hawai'i?!".

Huali Wu (Registration Coordinator) is a first year graduate student studying nuclear engineering in University of Wisconsin-Madison. She's doing research in the heat and mass transfer lab. She received her B.S. from Harbin Engineering University in China and M.S from Texas A&M University. She became interested and got involved in ANS activities in her first semester at UW and then she decided to jump in with the scene with the ANS student conference planning committee. Huali is planning to attend the 2015 Texas A&M ANS Student Conference.

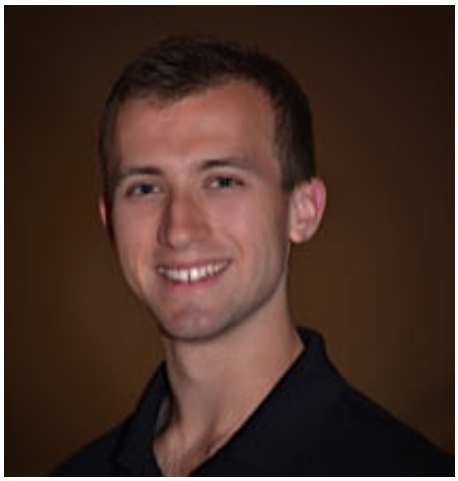
Matt Kriete (Sponsorship Coordinator) is a first year graduate student pursuing a PhD in the Engineering Physics department. Matt works for the Pegasus Toroidal Experiment, researching the physics at the edge of high confinement mode plasmas. Matt graduated from Virginia Tech with degrees in mechanical engineering, physics, and mathematics. While an undergrad, Matt interned at Jefferson Lab and the DIII-D tokamak at General Atomics. Matt was active in the Virginia Tech ANS student section, attended the 2014 ANS student conference, and plans to attend the 2015 ANS student conference. Matt is an avid runner, and in his free time enjoys reading modern fantasy novels.

Kelsey Amundson (Hospitality Chair) is a junior studying nuclear engineering. Currently, she is the Public Information Officer for the Madison Student Section and the president of UW's section of Women in Nuclear. In the past she has been a Governor and the Communications Officer for the Student Section. Kelsey has attended the ANS student conference at Pennsylvania State, the 2014 ANS Winter Meeting, and is planning on attending the ANS student conference in Texas. In addition to her involvement in ANS, she works in the Engineering Physics Ion Beam lab as an undergraduate research intern and previously had an internship at Knolls Atomic Power Laboratory.



Andrew Maile (Transportation Coordinator) is a fourth year undergraduate student studying nuclear engineering. Previously Andrew had worked on the 2015 ANS Student Conference Bid and was a member of the 2013 Engineering Expo committee for the University of Wisconsin-Madison ANS student chapter. Andrew plans to attend the 2015 ANS Student Conference at Texas A&M University. Outside of ANS, Andrew currently works at the University of Wisconsin Nuclear Reactor Laboratory as a licensed nuclear reactor operator and has previously worked as an undergraduate research assistant in the Thermal Hydraulics Laboratory on campus.

Madelynn (Maddy) Bouche (Catering Coordinator) is a junior in the Nuclear Engineering department. As a Wisconsin native she is super excited to host conference and show others the great programs we have here. Apart from the committee, Madelynn has helped out with Boy Scout days with ANS and is involved in other STEM outreach outside of ANS. Madelynn has experience working in hospitality at a four diamond resort and has been behind the scenes at large conferences held there. She has also attended three regional conferences with the Society of Women Engineers and helped judge conference proposals there.



Xavier Durawa (Non-Technical Chair) is a senior pursuing a B.S. and M.S. in nuclear engineering with a minor in business and mathematics. He has been a member of ANS for two years during which time he kick-started and led a nuclear battery research project and attended the 2014 ANS Student Conference at Penn State and the 2014 Winter Conference. His academic interests include computer modeling of numerical systems, neutronics, and nuclear project financing. During his undergraduate studies he has worked with ASME automation at Hitachi-GE in Japan. He is also a chair of UW's largest outreach event - Engineering Expo. This biannual event draws in over 10,000 student of all ages from Wisconsin and other nearby states. Outside of school, Xavier enjoys hobbies including cycling, motorcycling, and the occasional game of recreational footbag.

Kyle Anderson (Activities Coordinator) is a first year undergraduate studying nuclear engineering. He plans on attending the 2015 student conference and many after that. Along with ANS he has also joined Engineers Without Borders his first year at UW. Before coming to UW he worked at Black & Veatch as an Engineer Technician. Outside of school he enjoys both soccer and swimming.

L Letter of Endorsement

American Nuclear Society, UW-Madison Student Section
1550 Engineering Drive
Madison, WI 53706

March 01, 2015
Student Sections Committee
ANS Education and Training Division

Dear Members of the American Nuclear Society Student Sections committee:

We are very excited about the many changes to this year's proposal to host the 2016 ANS Student Conference. One of the most significant changes to our committee was the promotion of AJ Gross to a third General Chair position. Our two general chairs responsible for last year's proposal, Kalin Kiesling and Matthew Jasica, do intend to stay on as general chairs, as well. The ANS student conference continues to grow, and the responsibilities associated with hosting a conference have grown with this. From our experiences with submitting our proposal last year and from our discussions with previous conference hosts, it became evident to us that the planning and execution of the conference would greatly benefit from a third general chair. The purpose of this letter is to demonstrate our confidence in AJ Gross in sharing the responsibilities of the general chairs.

AJ was an ideal candidate for this position as he was highly-involved in last year's bid as a member of our hospitality subcommittee. He was well-acquainted with the planning process and our objectives from the previous conference and came in understanding the weaknesses of our previous bid and how to improve upon them. While there were other candidates for the position, what convinced us to promote AJ was his previous dedication to our ANS Chapter, how he efficiently handled his duties as a hospitality subcommittee member during the 2015 Bid Committee, and his willingness to put in extra time during the summer to prepare for this year's proposal effort.

Over the past 8 months AJ has worked closely with Kalin and Matt in developing and modifying this year's bid. From the beginning, he took part in reaching out to the conference facilities to lay the groundwork for their role in the 2016 bid. He has overseen the hospitality and non-technical subcommittees, ensuring that their roles fit with the theme of the conference and augment the technical events planned. Other responsibilities have included helping lead committee meetings and collaborating with the other chairs on executive decisions and policies.

Outside of the Conference Bid Committee, AJ has been an active member of ANS. He has served as Governor during the spring 2014 semester. Currently he is also serving as the ANS Engineering Expo Co-Chair, one of the largest outreach events in the UW College of Engineering. Beyond ANS, he works part-time as a licensed operator at the University of Wisconsin Nuclear Reactor, is active with the Madison Swing Club and the Lutheran Campus Center, where he has served as Social Activities Chair since May 2014. Although each of these activities puts a demand on his time, AJ has already demonstrated his ability to manage his time effectively and give the 2016 Bid Committee the attention demanded of a general chair.

In short, we consider AJ to be a critical member of this committee and enthusiastically support him as a general chair for our proposed 2016 ANS Student Conference.

Sincerely,

Matthew Jasica
2016 General Finance Co-Chair
UW-Madison ANS Student Section

Kalin Kiesling
2016 General Technical Co-Chair
UW-Madison ANS Student Section

Paul Wilson
Faculty Advisor
UW-Madison ANS Student Section