

# 2012 American Nuclear Society Student Conference Proposal



“Nuclear Science and Technology:  
Past, Present and Future”

Submitted by:

University of Nevada, Las Vegas

ANS Student Section

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February 6, 2011

Student Sections Committee  
ANS Education and Training Division

Dear American Nuclear Society Student Sections Committee,

The ANS Student Section at the University of Nevada, Las Vegas is pleased to submit a proposal to host the 2012 ANS Student Conference in fabulous Las Vegas, Nevada! Building upon experiences from submitting our first ever student conference proposal last year, we are sure that we will deliver an exciting and technically diverse conference that should not be missed!

The University of Nevada, Las Vegas offers three prestigious and fast growing nuclear based programs; mechanical and nuclear engineering (M.S.), radiochemistry (Ph.D.), and health physics (B.S. and M.S.). While the nuclear programs at UNLV are relatively new, the fast growing nature and dedication of professors and professionals in the field in and near Las Vegas are giving new life to the nuclear industry.

Las Vegas offers a rare perspective on nuclear science and technology with points of interest such as the Nevada National Security Site (formerly the Nevada Test Site), the Remote Sensing Laboratory, the Atomic Testing Museum and Varian, all within less than 65 miles of the main conference events. Hosting the ANS Student Conference would give many nuclear science and engineering students their first opportunity to experience these unique facilities.

Last of all, we feel that we can offer an unbeatable conference package with a record high \$200 travel reimbursement, a well-rounded technical program and exciting tours and social events. Furthermore, we have meeting space and hotel rooms on a complimentary hold, essentially securing our preferred conference dates and allowing us to hit the ground running should we win the conference bid.

We hope you enjoy our proposal and we thank you for considering UNLV to host the 2012 American Nuclear Society Student Conference!

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry Faye".

Sherry Faye  
General Chair, Logistics

A handwritten signature in black ink, appearing to read "Vanessa Sanders".

Vanessa Sanders  
General Chair, Program

A handwritten signature in black ink, appearing to read "Audrey Roman".

Audrey Roman  
ANS Student Section Chair

## Destination: Las Vegas!



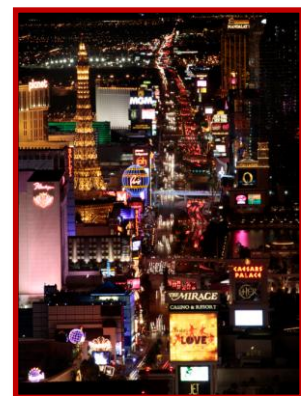
The city of Las Vegas prides itself on being the number one city to host conferences and meetings. From the extremely easy accessibility to the gorgeous weather, the vast hotel and meeting space to the sparkle of the strip at night, Las Vegas offers a destination that's one of a kind! The Las Vegas Convention and Visitors Authority has shown that when conferences rotate into Las Vegas, attendance increases by 13 % on average and attendees spend more time in meetings. Below are some of the best reasons for hosting a conference in fabulous Las Vegas, Nevada!

### Accessibility and Cost

The conveniently located McCarran airport is the 7<sup>th</sup> busiest U.S. airport and is located only one mile from the Las Vegas Strip. McCarran offers over 900 affordable daily flights with nonstop service from 130+ cities. **The average roundtrip airfare to Las Vegas from ANS student sections is just \$302!**

### Meeting Space and Hotel Rooms

With 10.5 million square feet of meeting and exhibit space and nearly 150,000 hotel rooms, Las Vegas has the right fit for meetings of any size and shape. Las Vegas hosts more than 19,000 meetings annually ranging in size from 10 to over 100,000 attendees. When it comes to meetings and conferences, Las Vegas knows how to get it done right! On top of all that, we're offering **room rates of just \$79/night!**



### Weather

Las Vegas experiences gorgeous weather with average daily high temperatures of 67°F, 320 days of sunshine and less than five inches of rain annually. April, the month of our first proposed conference date, is the second driest month of the year and offers an average daily high of 78°F!

### Past, Present and Future of Nuclear in Las Vegas

Referred to in the past as "Atomic City," Las Vegas is well known for its nuclear history during the atomic testing era. Presently, many changes are taking place including renaming the Nevada Test Site to the Nevada National Security Site to signify a site that will focus more on applications of national security. Finally, the future lies in the hands of the students enrolled in the nuclear programs at UNLV. With groundbreaking research being conducted in the areas of nuclear forensics, the advanced fuel cycle and waste forms, graduates are sure to offer a bright outlook on the future of nuclear in Nevada and around the world!

## UNLV ANS Student Section

The UNLV ANS Student Section was founded in 2003 as the university was starting up its nuclear engineering and radiochemistry programs. Since then, the student section has grown to over 35 active members from the departments of radiochemistry, engineering and health physics. The composition of student members from three degree programs gives the UNLV ANS student section its diversity and unique resources that make it so awesome! The UNLV student section offers several activities in the areas of outreach, social events and travel opportunities. Some of our most recent events are highlighted below:

### 2011 National Nuclear Science Week

This year the ANS student section offered events for each day of NNSW. The week started off with nuclear jeopardy and wrapped up with a tour of Varian. Two panels were offered, one for careers in nuclear in which professors and professionals offered advice on careers and one for nuclear safety which included safety stories and advice from a health physics professor, the UNLV RSO and the US Environmental Protection Agency radiation safety officer.



### Nuclear Science Merit Badge



Offered twice yearly, the nuclear science merit badge has become extremely popular in the past few years, often filling all 40 spots. Lectures are hosted at the Atomic Testing Museum in the morning and after lunch the scouts head over to the UNLV campus for lab tours, a cloud chamber experiment and a session on nuclear forensics and spectroscopy.

### Radiation Protection and Shielding Division Topical Meeting 2010

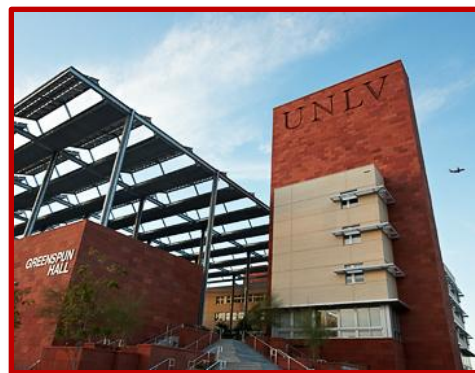
Over 20 student section members volunteered at the Radiation Protection and Shielding Division Topical Meeting in Las Vegas in April 2010. Volunteers were required to work anywhere between three and eight hours in order to be granted free registration to the meeting.

#### Other events include:

- Atomic movie night
- Participation in UNLV involvement fairs
- Travel to ANS meetings/conferences
- Nevada regional science bowl
- ANS/HPS/ASME/AACE winter dinner
- Tours of local industry

## The University of Nevada, Las Vegas

UNLV is a comprehensive research university of approximately 28,000 students and 3,300 faculty and staff dedicated to teaching, research, and service. The university is located on a 332-acre main campus and two satellite campuses in dynamic Southern Nevada. UNLV offers over 220 undergraduate, masters and doctoral degree programs, all accredited by the Northwest Commission on Colleges and Universities. Furthermore, UNLV has internationally recognized programs in hotel administration and creative writing; professional degrees in law, architecture, and dental medicine; and leading programs in fine arts, sciences and education.



Here are some fun facts about UNLV (from “UNLV 101”):

- According to a study by the National Science Foundation, UNLV is the fourth fastest growing university in the nation in output of articles in the science and engineering fields.
- Traci Newton (Civil Engineering '94 and Mechanical Engineering '99) was among a team of nuclear safeguards inspectors at the International Atomic Energy Agency who share a Nobel Peace Prize for working toward the peaceful use of nuclear energy.
- The National Security Agency and Department of Homeland Security designated UNLV as a Center of Academic Excellence in Information Assurance Education.
- The Howard R. Hughes College of Engineering received several U.S. Army grants totaling \$6 million to design vehicle technologies that can help save soldiers' lives by protecting them from deadly roadside blasts.
- The Institute for Security Studies coordinates research requested by local and federal agencies on homeland security issues, including detection of weapons of mass destruction, decomposition of explosives and digital forensics.
- More than 100 faculty and students are conducting over 25 alternative energy research projects in partnership with many public and private entities, funded by \$55 million in federal grants.

### Nuclear Science and Engineering at UNLV

Nuclear science education started at UNLV with the health physics program in 1990. In 2001, the nuclear science and technology division (NSTD) was formed. The NSTD houses a multi-disciplinary team with extensive expertise in radiochemistry, nuclear engineering, radioactive waste management, radiation detection and measurement, geology, environmental chemistry, risk assessment, and public communication. The division has state-of-the-art facilities including radiochemistry, radiation detection, transmission electron microscopy and a host of other analytical laboratories. The division also supports two academic programs: the Ph.D. program in Radiochemistry and the M.S. program in Materials & Nuclear Engineering.



## Health Physics and Diagnostic Sciences

The Health Physics and Diagnostic Sciences Department was founded in 1990. Several degree programs are offered, including a B.S. and M.S. in Health Physics, a B.S. in Nuclear Medicine, a B.S. in Comprehensive Medical Imaging, a Certificate in Radiography and a PhD in Radiochemistry (offered jointly with the department of chemistry). The M.S. in Health Physics Program was established in 1995 and includes medical and environmental health physics tracks. The program received its first ABET accreditation in 2003 and was the first health physics program to be reviewed and accredited by ABET.



In 2008, Health Physics professor Dr. Patton was awarded the Elda E. Anderson award. The award honors the memory of Elda E. Anderson, a pioneer in the field of health physics and a founding member of HPS. It is given to an HPS member 40 years of age or younger in recognition of excellence in research or development, discovery or invention, devotion to health physics, and/or significant contributions to the profession of health physics.

## Environmental Health Physics

Research in environmental health physics at UNLV currently focuses on the study of radionuclide behavior and transport in the environment, the development of radioanalytical methods for environmental monitoring and emergency response as well as research in the areas of nuclear safeguards and radioactive waste management. The program maintains close collaborations with researchers at several national laboratories as well as the Environmental Protection Agency and the National Institute of Standards and Technology.

## Medical Health Physics

Medical health physics research at UNLV concentrates on diagnostic and therapeutic medical physics. The department maintains strong collaborations with the University of Florida for skeletal dosimetry. Additionally, the program has affiliation agreements with local radiation oncology facilities including the Nevada Cancer Institute and Comprehensive Cancer Centers of Nevada. The program also has an agreement which allows faculty and students to use Varian's training facilities.

## Nuclear Medicine

The Nuclear Medicine Program at UNLV is fully accredited by the Joint Review Committee on Education in Nuclear Medicine. The mission of the program is to provide a high-quality undergraduate education experience for students in the diagnostic and therapeutic applications of nuclear medicine. The education experience is accomplished through rigorous classroom instruction, clinical experiences at local imaging facilities, and mentoring.



## Comprehensive Medical Imaging

The comprehensive medical imaging program at UNLV is an innovative academic program designed to educate students in the applied science of diagnostic imaging. The program currently offers theoretical and clinical course work in the advanced level modalities of Computed Tomography, Magnetic Resonance Imaging and Ultrasound.

## Radiography

Radiography program administration, faculty and staff provide didactic and clinical education opportunities, which adhere to recognized standards, to all eligible students. The program is committed to graduating students who are prepared to become practicing radiography professionals. The goals of the program are to produce students with technical skills to perform as entry-level radiographers proficient in radiation safety practices, who will be successful in passing the American Registry of Radiologic Technologists.

## Health Physics and Diagnostic Sciences Laboratory Facilities

The laboratories in health physics offer approximately 2,400 square feet of space for low and medium level research contained in two buildings on campus. These facilities include two cell culture laboratories, counting laboratories and chemistry laboratories with the resources suitable for work with HF and perchloric acid.

Counting equipment:

- 7 HPGe detectors (efficiency 30-60 %)
- 3 gas proportional counters
- Alpha spectroscopy (18 chambers)
- Scintillation counting
- Thermoluminescence dosimetry

Analytical equipment:

- UV/Vis spectroscopy
- FT-IR spectroscopy
- Ion chromatography
- Autoradiography

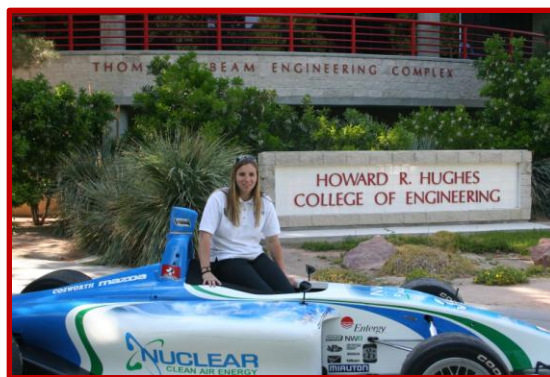
Clinical Equipment:

- Gamma camera
- X-ray equipment
- Ultrasound equipment



## Materials and Nuclear Engineering

The Master of Science in Materials and Nuclear Engineering degree program (M.S.M.N.E.) was approved by the Board of Regents in 2005, with the first student graduating that year. The program is intended to provide the student with a solid background either in applied nuclear science and engineering, with an emphasis in used fuel management, criticality safety, or radiation detection; or in materials science and engineering, with an emphasis in materials performance. In addition, nuclear engineering courses are offered for undergraduate students, and several doctoral students focus on nuclear science and engineering while enrolled in the Engineering or Mechanical Engineering Ph.D. programs.



Nuclear engineering faculty, staff, and students collaborate with many local institutions, such as NSTec/Nevada National Security Site (formerly the Nevada Test Site), the DOE Remote Sensing Laboratory (nuclear emergency response) at Nellis Air Force Base, the Los Alamos National Laboratory Criticality Experiments Facility at NNSS, and Varian Medical and Security Systems.

At the ANS Winter Meeting in November of 2010, Dr. Beller was awarded the Landis Communication award. The award was given "in recognition of outstanding personal effort in furthering public understanding of the peaceful applications of nuclear science and technology" for his innovative outreach efforts focused on public communications through nontraditional venues.



Although only a master's degree is offered at this time, several undergraduate students in the mechanical engineering department have worked with Dr. Beller for their senior design competition, often winning awards for their work. UNLV BSME students Alexander Lui and Tyler Stalbaum won a 1st place award for their Scanning Alpha Particle Spectrometer, which they designed, procured, constructed, and programmed. UNLV BSME/NE option students Brice Howard, Timothy Beller, and Ryan LeCounte placed first in the Mechanical Engineering Sr. Design competition after designing, fabricating, assembling, and testing a water-cooled high-power neutron generating electron accelerator target. The target was designed for use with the High Power phase of the DOE/NE Reactor Accelerator Coupling Experiments Project.



## Materials and Nuclear Engineering Laboratory Facilities

### *Target Complex 1 (TC-1) Lead-Bismuth Test Loop*

The Russian-built TC-1 lead-bismuth loop was installed at the UNLV Howard Hughes College of Engineering in 2004. It was employed to support international efforts to develop accelerator-driven spallation systems for nuclear transmutation and other applications. The lead calibration stand (LCS) can be used to develop and test materials in flowing lead (Pb) at near prototypic temperature and flow conditions for Lead Fast Reactor (LFR) core structures and fuel cladding. The TC-1 loop is used to extend research in experimental thermal hydraulics, oxygen control against corrosion, high-temperature heat exchange, and oxygen sensor development. Development of the TC-1 research plan involves close collaboration between the UNLV and Los Alamos National Laboratory lead-bismuth coolant loop research teams.



### *Nuclear Engineering Radiation Detection Laboratory*

The NE Radiation Detection Laboratory includes a Neutron Multiplicity Detector System with 64  $^3\text{He}$  tubes all multiplexed to produce time-sequenced detection from individual multi-neutron generating events. This laboratory also includes a Scanning Alpha-Particle Spectrometer for assaying high-purity actinide foils to be used in neutron detection research as well as cross section measurement. Another system in this lab is a remote-sensing, aerial qualified gamma-ray spectrometer manufactured by Exploranium. It includes 3 large crystals for remote sensing plus one facing “up” for background cancellation.





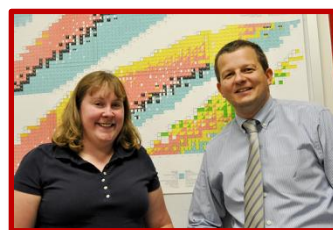
## Radiochemistry

The radiochemistry program began in 2004 and has since grown to include nearly 30 graduate students, 3 post doctoral researchers, 2 research professors and 3 professors. The program is rapidly growing and has been recognized by a variety of sources as a center of excellence for fundamental nuclear science, advanced fuel cycle and nuclear forensics research. Primary

research areas include chemistry of technetium and the actinides in solids, solutions, the environment, and chemical syntheses. The academic and research efforts of the radiochemistry program make it the largest program of its kind in the United States. The Radiochemistry Program is a nexus of international, industrial, and national laboratory scientific research that provides outstanding educational and career opportunities for UNLV students. Internships are also a large part of the radiochemistry program with students participating at national labs including Argonne National Lab, Pacific Northwest National Lab, Idaho National Lab, Lawrence Livermore National Lab, and Los Alamos National Lab.



The year 2010 was especially exciting for the radiochemistry program with graduate student Megan Bennett and her advisor Dr. Ralf Sudowe as co-authors on a paper for the discovery of element 117. Megan travelled to Russia to participate in experiments that led to the element discovery. The discovery was a joint effort by LLNL, ORNL, Research Institute of Atomic Reactors (Dimitrovgrad), Vanderbilt, UNLV and the Joint Institute for Nuclear Research (Dubna, Russia).



The radiochemistry program hosted two summer schools for the first time in 2010. The Nuclear Forensics Summer School was attended by ten students from throughout the United States for a six week long summer school highlighting the field of nuclear forensics. They attended classes taught by some of the most elite scientists in the field and were able to get in the laboratories and get hands-on experience. Their knowledge was further deepened by traveling to Los Alamos National Laboratory to see some research being done first hand.

The nuclear fuel cycle summer school hosted twelve students. Students visited San Onofre, General Atomics, and the Nevada National Security Site as well as learning about the fuel cycle from visiting and UNLV professors.

During the last three weeks of the summer school, the students had the opportunity to work one-on-one with radiochemistry graduate students on research projects directly related to the fuel cycle.

## Radiochemistry Laboratory Facilities

The radiochemistry program boasts outstanding laboratory facilities with over 2500 square feet of space capable of handling a range of activities. These facilities contain a host of experimental equipment for use in research projects.

### *Laboratory Equipment:*

- Furnaces
  - 6 total
  - Reach temperatures of 2000 °C
  - Include box and tube furnaces
- Glove boxes
  - Under argon
  - 1 Attached solvent purification system
  - 1 Built in heater
- Freeze drier
- Contactors
- Arc melter
- Schlenk line
- Ozone generator
- Ball mill
- Pellet press
- Hoods
  - 7 HEPA filter
  - 1 HF
  - 2 perchloric acid
- Surface polishers
- Density meter
- Pressure meter
- Rotovap
- Titrator



### *Instruments:*

- Radionuclide counting
  - Gamma spectrometers
  - 3 liquid scintillation counters
  - Alpha/beta counters
- Spectroscopy
  - Fourier transform infrared spectrometer
  - UV-Vis
  - Laser fluorescence
  - Electron energy loss
- X-ray diffraction
  - Powder
  - Single crystal
- Analytical
  - ICP-Atomic emission
  - ICP-Mass spectrometer
  - Laser ablation ICP-MS
  - Electrospray mass spectrometer
  - Ion chromatograph
  - High purity liquid chromatography



## Other Laboratory Facilities

### Nuclear Magnetic Resonance (NMR) Laboratory

The NMR lab houses equipment (the 400-MHz NMR) that is used for a wide variety of chemical investigations. NMR has been used to investigate the structure of organic matter in the environment, to characterize newly developed materials, as well as organic materials of biological interest. It has been used for real-time measurement of chemical reactions and biological reactions in intact cells.

### Imaging and Electron Microanalysis Suite

Electron microscopy is one of the most widely applied analytical techniques used in science and engineering. This facility is a multiple-instrument complex that includes an electron probe microanalyser, three scanning electron microscopes, a confocal microscope, and optical microscopes with digital image analysis computer systems. Users of the facility include faculty and students from geoscience, life sciences, engineering, and radiochemistry, as well as academic researchers from other institutions and private industry.



### X-Ray Fluorescence (XRF)

X-ray fluorescence spectrometry is based on the emission of characteristic secondary or fluorescent X-rays from a material that has been excited by bombarding with high-energy X-rays and is commonly used for elemental chemical analysis particularly in the investigation of geological materials, metals, glass, and ceramics. The PANalytical Axios is an advanced sequential wavelength dispersive X-ray fluorescence spectrometer and is perfectly suited to quantitatively perform major and trace elemental analysis, especially for silicates-based rocks and minerals.

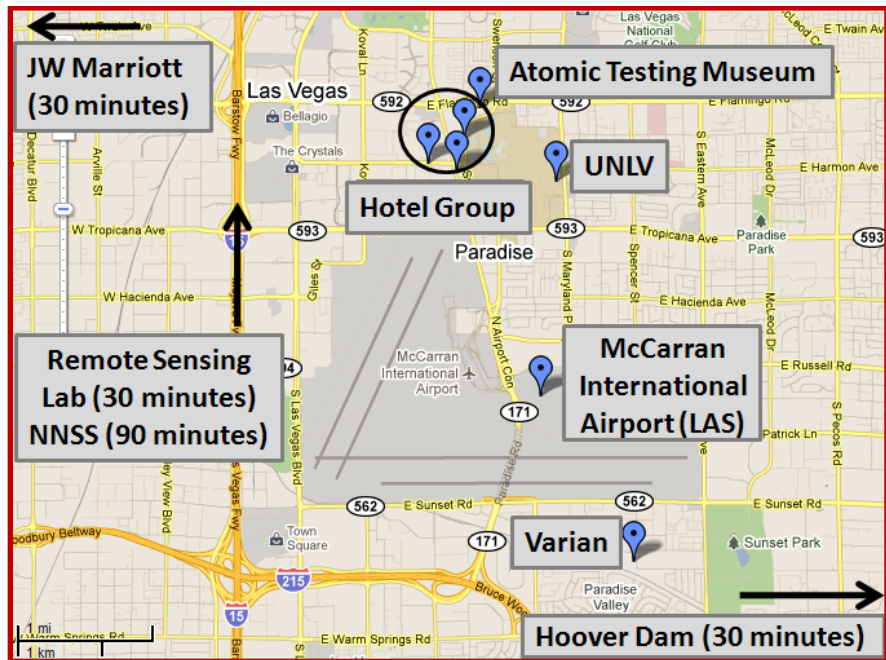
### Transmission Electron Microscopy Lab

The Transmission Electron Microscopy (TEM) User Facility at the Harry Reid Center provides researchers at UNLV with the ability to characterize ceramics, metals, polymers, and biological materials at atomic-scale resolution. The TEM is used to perform nano-probing on prospective contaminant-metal bearing host to spatial resolution of several nanometers. Chemical gradients can be determined within fuel phases, in precipitation layers and in new phase formations by energy-dispersive X-ray spectroscopy (EDX). Using the TEM as electron probe nano-analyzer will provide users with immensely important data to assess the behavior of the actinide metals in fresh fuel with unmatched spatial resolution.



## Conference Plan

The conference planning committee understands the convenience of conference events being grouped in close proximity to each other. Main conference events will be hosted at UNLV which offers several choices for accommodations directly adjacent to the campus. These locations as well as the airport and other conference points of interest are shown on the map below.



Careful thought was given to site selection due to concerns of separating an intense technical program from the lure of the Las Vegas strip. We have made every effort to contain the main conference events at non-gaming facilities away from the strip which will allow attendees to concentrate on the technical aspects of the conference.

## Proposed Dates

Dates for the conference are proposed to avoid the spring breaks and final exam schedules for universities with active ANS student sections, other ANS conferences and large conventions in Las Vegas that have potential to drastically affect room rates and space availability. Easter is another consideration; in 2012, Easter occurs in the second week of April (Easter falls on Sunday, April 8th). The following are the dates proposed in order of preference:

- April 12<sup>th</sup> -15<sup>th</sup> (no conflicts)
- March 1<sup>st</sup>-4<sup>th</sup> (overlaps with first weekend of University of Florida, Penn State, Vanderbilt, and Virginia Tech breaks)
- February 23<sup>rd</sup>-26<sup>th</sup> (first weekend of University of Michigan spring break)

Appendix C shows conflicts such as university spring breaks, holidays and other conferences.



## Projected Attendance

A number of factors were considered when estimating the projected attendance including attendance history from past ANS student conferences, UNLV student section size relative to past host schools and the ease of travel to Las Vegas. The table below shows actual and projected attendance numbers from past and upcoming student conferences. On average, 184 professionals attended past ANS student conferences. Taking into account the 13% attendance increase by hosting the conference in Las Vegas, we have set our projected professional attendance at 200. The average ratio of student to professional attendance at past conferences has been calculated as 2:1. With that said, we have projected the student attendance at 400, bringing the total attendance for the 2012 ANS Student Conference to 600.

School	Year	Students	Professionals
Texas A&M	2008	375	175
Florida	2009	335	193
Michigan	2010	482	183
Georgia Tech	2011 (projected)	425	150
UNLV	2012 (projected)	400	200

## Contingency Plan for High or Low Attendance

Since final attendance numbers will not be known until a few weeks to a month before the conference, we have made every effort to make sure the conference is planned to be as flexible as possible, especially in the areas of finances and meeting space. In case of low attendance, food and beverage minimums have been set low and the host hotel has offered 20 % attrition with a one week cut-off date. If attendance is higher than expected, we have made sure to reserve spaces, especially ballrooms, large enough to hold well over the expected 600 people. We also have created a large enough buffer in our budget to cover for higher than expected attendance.

## Accommodations

The host hotel for the conference will be the Alexis Park Resort. The property is a non-gaming, all suite resort on lushly landscaped grounds with 3 sparkling pools and 50,000 square feet of convention space. Alexis Park is the only non-gaming resort in town capable of hosting the student conference.

Alexis Park has offered us a rate of **\$79 per night** which is almost unheard of for weekend dates in Las Vegas! Approximately 250 of the 500 rooms offer a 450 to 625 square foot floor plan including two double beds, a kitchen and a living room with a pull out couch. This allows the option for three students to comfortably share a room, bringing total lodging costs to students to only \$79 each for a three night stay.



On top of the great rate and very close proximity to UNLV, Alexis Park has also offered the following concessions:

- Group rate 3 days pre and post event
- No resort fee
- 1 week cut-off date
- 20 % attrition
- 1 free room per 40 booked



### *Alternate Hotels*

There are several hotels within walking distance of Alexis Park, including major chain hotels. The alternate hotels below are directly adjacent to UNLV and have both been contracted by UNLV in the past.

Hyatt Place is located 0.2 miles down the street from Alexis Park and is directly adjacent to UNLV. The hotel offers 200 guest rooms with many complimentary amenities including wireless internet, continental breakfast, on-site parking, an airport shuttle and no resort fee. The hotel can offer a maximum room block of 65 rooms per night at a rate of \$99/night.



Embassy Suites is located around the corner from Alexis Park, also within walking distance (0.4 miles). The hotel offers 220 guest suites that include complimentary cooked to order breakfast, free wireless internet and parking. The hotel can accommodate a maximum room block of 50 rooms at a rate of \$99/night.

### **Backup Hotel**

In the case the availability of Alexis Park changes between proposal submission and awarding of the conference bid, we have arranged a backup room block at Planet Hollywood. The 2600 room hotel is located just one mile from UNLV and has offered to hold a room block (free of charge with no contract) for our preferred date at a rate of just \$89/night. Planet Hollywood offers 450 square foot rooms with the choice of one king or two queen beds, a 42" plasma television, oversized bathrooms and different movie memorabilia in each room. Since the hotel is in close proximity to the preferred hotel group, the alternate hotels will remain the same.



## Travel

### Driving

Driving to Las Vegas is easy with I-15 running straight through the middle of the city. The highway continues north through Utah and Idaho, as well as travelling south as far as San Diego. Other interstates and highways connect for easy access to I-15 including I-40 from Arizona and I-5, the major north-south route in California.

### Flying

McCarran International Airport (LAS) is the main airport in Las Vegas and is located just minutes from popular destinations in the valley. It is 1.8 miles from UNLV, 2 miles from the host hotel Alexis Park, and less than three miles from the heart of the world famous Las Vegas strip. Southwest airlines operates the most flights out of McCarran International Airport, however the airport is also home to 35 other airlines. Having this variety along with the fact that Las Vegas is a popular travel destination allows convenient and accessible travel to UNLV.

A list of airfare estimates for the nearest airports of many of the student sections we expect to attend is shown on the following page. Prices are based on a round-trip fare, with departure on a Thursday and return on a Sunday, booked three months in advance of the dates of travel. The average ticket price is estimated to be \$302, based on prices found online for April 14-17, 2011. The prices listed include all taxes and fees charged for the booking.

A complimentary shuttle will be provided to/from the airport on Thursday and Sunday. Shuttles will run every 30 minutes and transfer guests safely between the airport and hotel in less than 10 minutes. A schedule of shuttle times will be created based on flight arrival and departure information that will be collected from registration forms. An alternative option for conference attendees is to use one of the many taxi cab services at the airport. The approximate cost for this service would be \$12 per trip from the airport with most cabs allowing up to 5 passengers.

### Travel around Las Vegas

Transportation between the hotel and conference facilities will be provided for all conference attendees. Shuttles will run all day, with more shuttles offered at peak times. This will allow conference attendees the option to head back to their room during down time to freshen up or put the final touches on their presentation. In addition to daily shuttles, transportation will be provided for all off site events such as socials and the awards banquet.

More details on transportation costs and schedules are shown in Appendix D.

	Departure City	Student Section	Airfare	Airline
EAST	Orlando	University of Florida	291	Delta
	Columbus, OH	Ohio State	328	Southwest
	Cincinnati, OH	University of Cincinnati	384	Delta
	University Park, PA	Penn. State	485	United
	Albany	RPI	398	Southwest
	JFK	West Point	309	Delta
	Boston	MIT	378	Southwest
	Raleigh-Durham	North Carolina State	358	Southwest
	Knoxville	Tennessee	384	Delta
	Charlotte	Tennessee	348	Delta
	Nashville	Vanderbilt	327	Southwest
	Columbia, SC	South Carolina State	477	Delta
	Atlanta	Georgia Tech	324	Delta
	<b>AVERAGE</b>		369	

MID-WEST	Austin, TX	University of Texas at Austin	258	Southwest
	Houston	Texas A&M	345	Delta
	Kansas City	Kansas State	294	Delta
	Madison, WI	University of Wisconsin	398	United
	Chicago	University of Illinois	410	Southwest
	Indianapolis	Purdue	288	Southwest
	Detroit	University of Michigan	305	Spirit
	<b>AVERAGE</b>		328	

WEST	San Francisco	UC Berkeley	152	Southwest
	Portland, OR	Oregon State	275	American
	Tucson, AZ	Arizona	155	Southwest
	Albuquerque	University of New Mexico	261	Multiple
	Boise	University of Idaho	260	Southwest
	Salt Lake City	University of Utah	155	Southwest
	<b>AVERAGE</b>		210	

## Conference Facilities

### UNLV Facilities

The University of Nevada, Las Vegas has several meeting spaces, classrooms, auditoriums and a 10,000 square foot ballroom all within a very close proximity to each other. These facilities will be used to house the conference events on Friday and Saturday. UNLV does not hold classes on Friday so the facilities will be free from campus traffic. Holding the conference events on campus offers many advantages including more economical food and beverage prices, free wireless internet, exposure for the university and of course, a location free from gambling and the allure of the strip so the attendees can concentrate on technical aspects of the conference. UNLV Student Union and Event Services (SUES) also offers the convenience of all reservations and charges being grouped into one contract, simplifying reservations, operations and billing. Furthermore, student organizations can reserve space free of charge and receive a 75 % discount on all A/V equipment. Due to the size and importance of the possibility of hosting the ANS Student Conference on campus, SUES has allowed us to reserve the entire student union for our first two preferred dates before reservations are opened up to other student organizations.

#### *Student Union*

The UNLV Student Union has 135,000 square feet of space including great conference facilities that will be able to host the conference. The meeting space includes a large meeting room with two air walls, five medium meeting rooms for technical sessions, four small meeting rooms for interviews, a 10,000 square foot ballroom for meals and a foyer with more than enough space for meeting registration/information desk. Since all of the meeting space is reserved in advance, private conference events will be guaranteed.



The first floor of the student union houses a food court including Metro Pizza, Taco Bell, Panda Express, Jamba Juice and Starbucks. There is also a game room, convenience store, a 300 seat theatre and a green room located on the first floor. Both the game room and theatre can be reserved by student organizations free of charge.

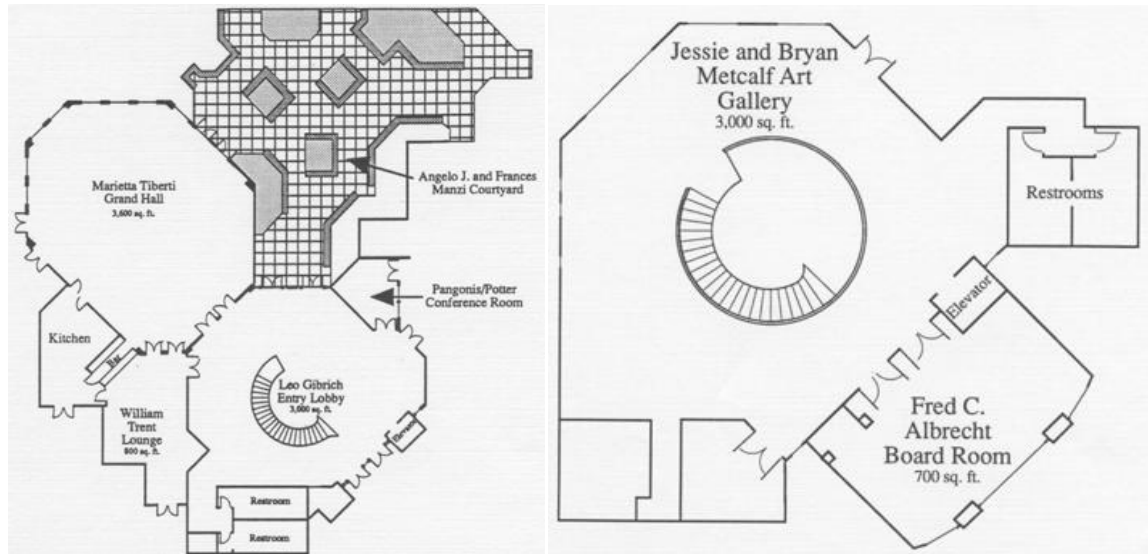
The floor plan for the student union is shown on page 20.





### *Richard Tam Alumni Center*

The Richard Tam Alumni Center is a perfect location for the poster session and it is located just 100 yards from the student union. The building includes a 3,600 square foot ballroom and a 3,000 square foot art gallery. In addition, the building contains an 800 square foot lounge that could be used for serving refreshments during the poster session.



### *Greenspun Hall*

Greenspun Hall is located directly next to the student union and contains several classrooms that would be capable of holding workshops. The building also includes an auditorium that seats 200 people.

### *Wright Hall, Beam Hall*

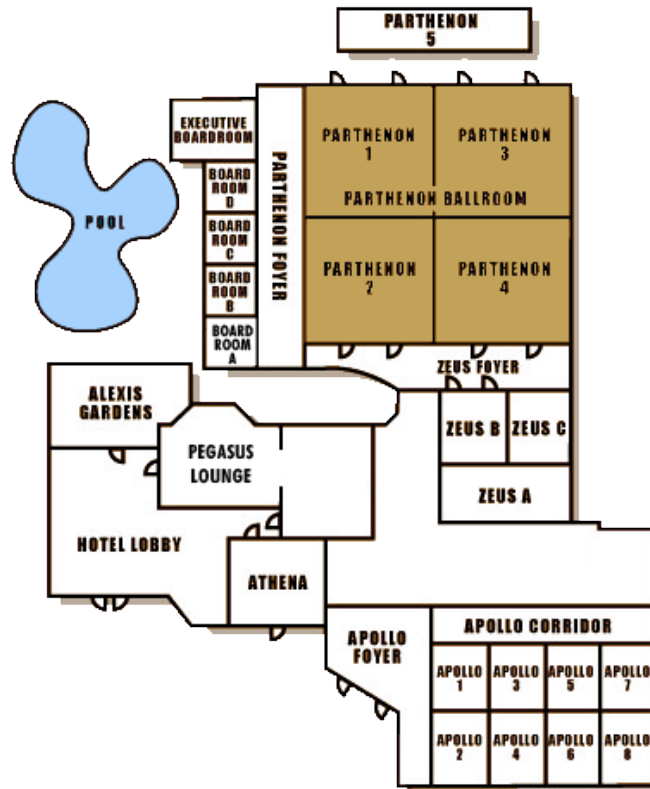
Wright Hall and Beam Hall are located next to the student union and offer more space in the form of classrooms, computer labs and auditoriums.





## Alexis Park Facilities

Alexis Park Resort offers 50,000 square feet of meeting space including a unique rooftop venue. The meeting space can be used in conjunction with the university meeting space and can accommodate such events as the judge's breakfast, workshops on Thursday and evening social events. A floor plan of the conference facilities is shown below.



The rooftop of Alexis Park Resort functions as a unique venue offering unparalleled panoramic views of the Las Vegas Strip. We plan to use this venue, which can accommodate up to 1,000 seated guests, for the Thursday night opening reception. The option of hosting the opening reception at the host hotel is a huge convenience, as has been demonstrated by previous student conferences. In the rare case of inclement weather, Alexis Park will offer the ballroom directly below the rooftop, which has a banquet capacity of up to 1,200.

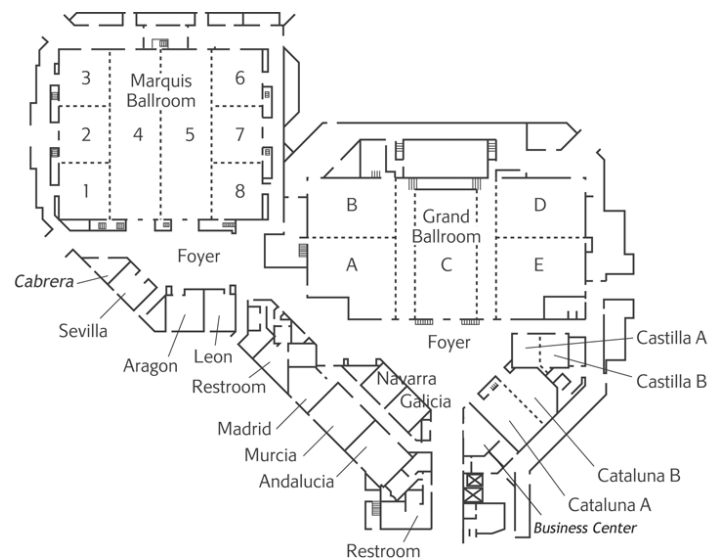


## Saturday Night Awards Dinner

The awards banquet on Saturday night will be held at the classy JW Marriott Resort in Summerlin. Just a quick 30 minute drive from UNLV and the strip, Summerlin feels like a whole different world. The community offers hotels, shopping, golf and residential housing all centered around a private golf course. The JW Marriott Resort will offer an upscale awards dinner event that will not be soon forgotten.



The night will start in the gardens where guests will be able to mingle and enjoy stunning views of the strip during a cocktail hour that will include butler passed hors d' oeuvres and drinks. Following a gorgeous sunset, guests will enter the Marquis Ballroom to be seated for the awards dinner. The 14,000 square foot ballroom can seat up to 980 people in rounds of 10 and can also be divided in smaller sections, if need be.



## Conference Plan

### Conference Schedule

Shown below is a graphical representation of the schedule of events at the conference, followed by the conference itinerary. The conference events are designed to maximize technical participation, while at the same time allowing attendees a choice in which events to attend.

	Thursday	Friday			Saturday			Sunday			
8:00	Registration	Registration/Information	Breakfast			Breakfast			Breakfast		
8:30			Registration/Information	Sessions	Career Fair and Interviews	Workshop	Sessions	Career Fair and Interviews	Workshop	Hoover Dam Tour	Remote Sensing Lab Tours
9:00											
9:30											
10:00											
10:30											
11:00											
11:30											
12:00											
12:30											
1:00											
1:30											
2:00	Workshops	Lunch	Mentor Lunch	SSC Meeting	Conference Lunch						
2:30	Varian Tours	Sessions	Career Fair and Interviews	UNLV Tours	Sessions	Poster Session					
3:00	Atomic Testing Museum Tours						Break				
3:30	Break										
4:00	Registration	Registration/Information	Sessions	Career Fair and Interviews	UNLV Tours	Sessions	Poster Session	N2S2 Tour	Hoover Dam Tour	Remote Sensing Lab Tours	
4:30											
5:00											
5:30											
6:00											
6:30											
7:00											
7:30											
8:00											
8:30											
9:00											
9:30											
	Opening Reception	Dinner at UNLV			Awards Banquet						
	"Atomic Cocktail Party" Social	Movie Night/Game Night Social			Awards Banquet						

### Itinerary

The following is a brief description and timeline of events that will take place at the conference. Logistical details are presented including A/V needs, room setup and catering. More logistical information is also shown in the conference room space schedule in Appendix E. The events specifics section provides more detail on many events such as workshops, technical sessions and tours.

### *Thursday*

- 8:00 am – 10:00 pm     **Registration** – Conference attendees will be able to check in and receive name badges, welcome bags and conference programs. Thursday registration will take place in the lobby of the Alexis Park Resort.
- 1:00 pm – 5:00 pm     **Varian Tour** – Take a short ride to Varian to tour their facilities including medical systems and security applications. Learn about their collaborations with UNLV. Two 2 hour time slots will be available for tours.
- 1:00 pm – 5:00 pm     **Atomic Testing Museum Tour** – Just a quick drive from Alexis Park and UNLV is the atomic testing museum. Visit the museum and walk through at your leisure. Shuttles will be running between the hotel and the museum for the entire four hour block.
- Workshops** – Several workshops can be offered throughout the day in any of the conference rooms at Alexis Park. Technical and non-technical workshops can be arranged.
- 6:00 pm – 8:00 pm     **Welcome Dinner and Opening Plenary** – Join us for a relaxing evening after a day of travel as you are treated to a sit down dinner on the gorgeous roof top venue at Alexis Park. Watch the sun set and the Las Vegas strip light up for the night! A plenary talk will focus on Nevada’s unique nuclear history.
- 8:00 pm – 10:00 pm     **“Atomic Cocktail Party” Social** – Stay on the roof top to enjoy the views or head down to the pool for a relaxing evening. Meet up with old friends or make new contacts during this first night of the conference.

### *Friday*

- 8:00 am – 9:00 am     **Breakfast** – Start your morning off right with a breakfast including miniature muffins, danish, croissants and bagels with a variety of spreads, fresh seasonal sliced fruit, coffee, tea and fresh juice.
- 9:00 am – 12:30 pm     **Sessions** – A variety of technical and non-technical session tracks will be offered in two sessions during the morning with a break at 10:45 am. Topics for the sessions are discussed in more detail later in this section. Presenters will be given 20 minutes total, which includes 15 minutes for the presentation and 5 minutes for questions. Each session room will be equipped with a projector, screen and podium. A student volunteer will be available in each room to assist with any needs.

- 9:00 am – 12:30 pm      **Career Fair and Interviews** – Professionals representing various companies in nuclear industry will be available to meet with students. Interview rooms will be available to higher level sponsors participating in the career fair.
- Workshop** – A technical or non-technical workshop can be offered during this time. Details on possible workshop topics are discussed later in this section.
- 12:30 pm – 1:30 pm      **Lunch** – Assorted mini sandwiches, side salads, chips, cookies and beverages will be provided for all conference attendees. Attendees will have a choice of two to three guest speakers to attend during the lunch break.
- Mentor Lunch** – Students will have the opportunity to be paired with a mentor at the professional level or with a UNLV graduate student to discuss opportunities for their future in nuclear science and engineering.
- SSC Meeting** – A separate room will be available for the student sections committee meeting.
- 1:30 pm – 5:00 pm      **Sessions** - A variety of technical and non-technical session tracks will be offered in two sessions during the afternoon with a break at 3:15 pm.
- Career Fair and Interviews**
- UNLV Tours** – Attendees will have the option of taking short campus tours during this time.
- 6:00 pm – 8:00 pm      **Dinner and Plenary** – Join back up with your friends in the student union ballroom for an Italian feast including mixed greens, rotini marinara, green beans gremolata, focaccia sticks, potato crusted salmon with ratatouille, parmesan crusted chicken, and cannoli. Assorted rolls with butter, ice water and iced tea will also be offered. A plenary talk will be given on the present state of nuclear science and technology.
- 8:00 pm – 10:00 pm      **Movie Night and Game Night Social** – Join the UNLV ANS student chapter in some of our more popular social events, movie night and game night! Events will be held in the student union directly following the dinner.

### *Saturday*

- 8:00 am – 9:00 am      **Breakfast** - Start your morning off right with a breakfast including individual cereal cups, milk, assorted pastries, ripe bananas, individual yogurt cups, coffee, tea and juice.

9:00 am – 12:30 pm	<p><b>Sessions</b></p> <p><b>Career Fair and Interviews</b></p> <p><b>Workshop</b></p>
12:30 pm – 1:30 pm	<p><b>Lunch</b> – Attendees will assemble in the student union ballroom for a plenary speaker and lunch including wraps of grilled chicken with tarragon spread; ham, apple and honey mustard; squash slaw and hummus; tuna, vegetable and pesto. Lunch will also include salad, potato chips, a pickle, condiments, cookies and assorted beverages.</p>
1:30 pm – 4:00 pm	<p><b>Sessions</b></p> <p><b>Poster Session</b> – Poster presentations will be given between 2:00 and 4:00 pm. The career fair is set to end early so interested participants can attend the poster session.</p>
5:30 pm – 10:00 pm	<p><b>Awards Banquet</b> – Conference attendees can relax and celebrate a successful conference at the awards banquet, hosted at a very special location! A plenary session will be offered on the future of nuclear science and technology before the floor is opened up to the awards ceremony.</p>

### *Sunday*

8:00 am – 9:00 am	<p><b>Breakfast</b> – Conference attendees can grab a quick bite to eat before heading back home or out on one of the tours. Breakfast will be located at Alexis Park.</p>
8:00 am – 5:00 pm	<p><b>Nevada National Security Site Tour</b> – Wake up bright and early to take a tour of the Nevada National Security Site (formerly Nevada Test Site). Box lunches will be provided for tour attendees. A tour description is found later in this section.</p>
9:00 am – 1:00 pm	<p><b>Remote Sensing Laboratory Tour</b> – Board a bus for a quick 30 minute ride for a tour of the remote sensing laboratory. A tour description is found later in this section.</p>
9:00 am – 1:00 pm	<p><b>Hoover Dam Tour</b> – Take a short ride to Boulder City to visit the Hoover Dam and view the new Mike O’Callaghan – Pat Tillman Memorial Bridge, both engineering marvels in their own right. A tour description is found later in this section.</p>



## Event Specifics

### Technical Sessions

Technical sessions are one of the main components of the student conference. Five to six sessions will run concurrently in separate rooms in the student union. Rooms will be equipped with screens, projectors and podiums and will be arranged to accommodate up to 65 people each. Presentations will last 15 minutes with an additional 5 minutes for questions. Each presentation will be judged on originality, significance and relevance by a judge. A student volunteer will be present in each room to assist in making the session run smoothly.

Abstracts will be solicited in areas based off of ANS technical divisions. The technical tracks listed below are preliminary and chosen for guidance in abstract submission. Final technical session tracks will be determined by actual abstract submission.

#### Nuclear Engineering

- Reactor physics and operations
- Thermal hydraulics
- Criticality safety
- Aerospace applications
- Decommissioning
- Materials science and fuels
- Computation

#### Radiochemistry

- Nuclear forensics
- Nonproliferation and safeguards
- Environmental remediation

#### Fuel Cycle

- Advanced separations
- Waste management

#### Nuclear Science

- Isotopes and radiation
- Biology and medicine applications
- Detection and measurements
- Protection and shielding
- Decontamination

#### Policy

- Education and training
- Nonproliferation and safeguards

#### Other

- Accelerators
- Fusion

#### Non-technical

- Outreach
- Student section activities

### Workshops

The conference schedule allows for at least three workshops, with the option of adding more than one workshop on Thursday afternoon. At least one technical and one non-technical workshop will be offered. Ideas for technical workshops include SLAC/Geant4, ATR, nuclear safeguards and nuclear forensics. Ideas for non-technical workshops include effective communications using social media and a nuclear science merit badge workshop, for student sections to share ideas for hosting merit badge activities for potential future nuclear science and engineering students!



## Guest Speakers

Members of the UNLV ANS student chapter have been very active in internships and collaborations with companies and national laboratories from across the country so we can offer a bevy of interesting, relevant and impressive speakers. We plan to offer plenary sessions with technical speakers such as Mr. Troy Wade, Dr. Siegfried Hecker and Dr. Steven Younger. In addition, we will offer plenary talks to interested sponsors at the \$25,000+ level. This will allow the most serious sponsors to give presentations while ensuring the attention of the entire conference audience.

### Mr. Troy Wade – “Nevada’s Unique Nuclear History”



Mr. Wade's career in the nuclear field is as extensive and far reaching as could be imagined in any industry. His résumé is far too extensive to detail here. In summary, Mr. Wade has more than 40 years in all aspects of U. S. Nuclear Programs. Most recently he was appointed by Senate Majority Leader Harry Reid to a new national commission on intelligence. Mr. Wade has served as a DOE representative in the U.S. International Arms Control activities, the 1998 Moscow Summit and the Nuclear Weapons Council. He has also served as the assistant secretary of energy for defense programs, director of the Idaho National Engineering Laboratory, senior intelligence officer of the DOE and a member of the Interagency Group on Terrorism. Furthermore, Mr. Wade was the founder of the U.S. Nuclear Emergency

Search Team.

### Dr. Siegfried Hecker – “The Present State of Nuclear Counter-Terrorism”



Siegfried Hecker is a research professor in the Department of Management Science and Engineering, a senior fellow at FSI, and co-director of CISAC. He is also an emeritus director of Los Alamos National Laboratory. Dr. Hecker's research interests include plutonium science, nuclear weapon policy and international security, nuclear security (including nonproliferation and counter terrorism), and cooperative nuclear threat reduction. Over the past 15 years, he has fostered cooperation with the Russian nuclear laboratories to secure and safeguard the vast stockpile of ex-Soviet fissile materials. His current interests include the challenges of nuclear India, Pakistan, North Korea, and the nuclear aspirations of Iran. Dr. Hecker works closely with the Russian

Academy of Sciences and is actively involved with the U.S. National Academies, serving as a member of the National Academies Committee on International Security and Arms Control Nonproliferation Panel.

## Dr. Steven Younger – “The Future of Nuclear Science and Technology in Nevada and Beyond”



Stephen M. Younger, PhD, is the president of National Security Technologies, LLC. He is also a senior policy scholar at the Woodrow Wilson International Center for Scholars. He recently retired as a senior fellow at Los Alamos National Laboratory, where he was in charge of nuclear weapons research and development and was responsible for assuring the safety and reliability of most of the nation's nuclear arsenal. From 2001 to 2004, he was director of the Defense Threat Reduction Agency at the U.S. Department of Defense. Dr. Younger lives in Las Vegas, Nevada.

### Career Fair

The career fair will take place all day Friday and on Saturday morning. Students will have the option to stop by the career fair to visit with several companies representing various areas in the nuclear field. Exhibit type and space will depend on the level of company sponsorship. In addition, companies with the highest level of sponsorship will be provided with private interview rooms. The cost of the career fair will be offset by the company registration fees.

### Mentoring Lunch

Students will have the opportunity to be paired with a mentor at the professional level or with a UNLV graduate student to discuss opportunities for their future in nuclear science and engineering. Pre-registration will be required in order to assist in student/mentor pairing. Students will have the opportunity to interact with mentors in a quieter environment during this lunch.

### Oral History Room

The Nevada Test Site Oral History Project is a collection dedicated to documenting, preserving and disseminating the remembered past of people affiliated and affected by the Nevada Test Site during nuclear testing. The collection includes numerous interview transcripts, videos and supporting information and won the 2010 Public History Project Award. A screening room will be set up in the student union theatre which will loop media on a large screen so students can stop by, relax and take in a little history during their down time.

### Speaker Practice Room

A new addition to the ANS student conference is the speaker practice room. This room will be dedicated to students who wish to practice their presentations in front of peers in a similar, but less formal environment than the actual presentation....practice makes perfect!

## Socials

*“Atomic Cocktail Party” Opening Social* – In sticking with our theme, this event was designed after atmospheric testing viewing parties that occurred in Las Vegas in the 1950s where guests would gather on the roof tops of hotels to view the tests being conducted at the Nevada Test Site. Signature cocktails will be served to those 21 and above (virgin drinks will also be available) and desserts will be provided. Guests can dance the night away to music from the 50’s and will be able to take souvenir photos from the photo booth stocked with 50’s attire and accessories!

*Movie Night and Game Night Social* – Join in some of the more popular UNLV ANS student section social activities with this social! An atomic themed movie will be held in the student union theatre and nuclear themed games such as Jeopardy!, Mad Gab and others will be offered in other rooms in the student union. All events will start directly following the dinner. Shuttles will be running throughout the event so guests can come and go as they please.

## Tours

### *Nevada National Security Site (formerly Nevada Test Site)*

A unique national resource, the Nevada National Security Site is a massive outdoor laboratory and national experimental center that cannot be duplicated. Located just 65 miles north of Las Vegas and larger than the state of Rhode Island, approximately 1,375 square miles, the Nevada National Security Site is one of the largest restricted access areas in the United States. At the NNSS, nuclear science and engineering students can see firsthand artifacts and archaeological sites from the early settlers, many relics from nuclear weapons tests, nuclear rocket experiments, and remnants of a variety of other defense, environmental, and energy-related programs.



### *Remote Sensing Laboratory*



The Atomic Energy Commission Established the RSL (then the “Aerial Measurements Operations” in the 1950s to provide rapid response to radiological emergencies. RSL emergency response teams are on call 24 hours a day, trained to deploy domestically and internationally as a result of any credible nuclear threat. As the RSL can provide true “remote” sensing and specialized counterterrorism technology, the RSL teams are routinely deployed at events such as the Olympic Games and some presidential speeches. The RSL’s capabilities and state of the art equipment includes radiation detection, monitoring and analysis, thermal infrared imaging, and chemical and biological detection systems.

### *Atomic Testing Museum*

The Atomic Testing Museum (in association with the Smithsonian Institution), opened in 2005, documents the history of nuclear testing at the Nevada Test Site. The museum covers the period from the first test at NTS on January 27, 1951 to the present. Among its exhibits covering American nuclear history is a "Ground Zero Theater" which simulates the experience of observing an atmospheric nuclear test. Other exhibits include Geiger counters, radio badges and radiation testing devices, Native American artifacts from around the test area, pop culture memorabilia related to the atomic age, equipment used in testing the devices. Other displays focus on important figures at the facility, videos and interactive exhibits about radiation.



### *Varian Medical Systems*



Varian Medical Systems is the world's leading manufacturer of medical devices and software for treating cancer and other medical conditions with radiotherapy, radiosurgery, proton therapy, and brachytherapy. The company is also a premier supplier of linear accelerators for non-destructive testing and cargo screening applications, and has delivered over 500 systems worldwide. Varian also manufactures X-ray tubes and digital detectors for imaging in medical, scientific, and industrial applications.

Varian's Las Vegas operation is located in over 200,000 square feet of space spread out over five buildings directly south of McCarran International Airport. The company employs about 250 people in the following areas:

- Design, engineering, and manufacturing operations for the Security and Inspection Products Group, which builds the Linatron® linear accelerator for non-destructive testing and cargo screening.
- Varian's clinical education center, where nearly 4,000 clinicians are trained annually in the use of Varian's medical products and technology.
- Varian's clinical implementation and consulting team, which assists hospitals and clinics around the world in the configuration and use of Varian medical technology.
- Customer service center and world-wide headquarters for spare parts logistics.
- Product marketing and support for Varian's treatment planning software products.

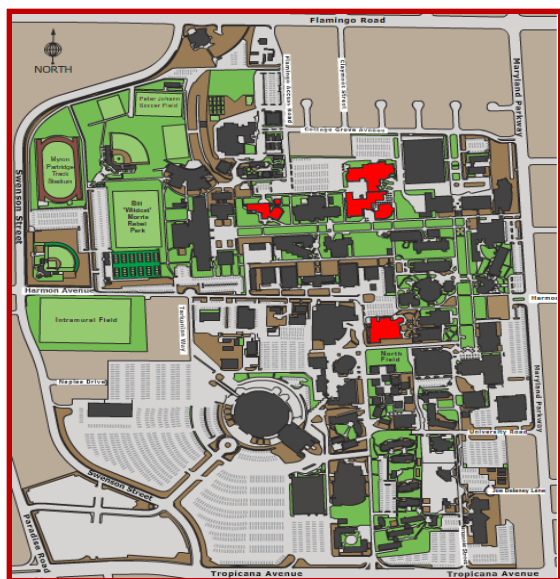
### *Hoover Dam and Mike O'Callaghan – Pat Tillman Memorial Bridge*

Hoover Dam is a concrete arch-gravity dam in the Black Canyon of the Colorado River, on the border between the U.S. states of Arizona and Nevada. When completed in 1936, it was both the world's largest hydroelectric power generating station and the world's largest concrete structure. It is currently the world's 38<sup>th</sup> largest hydroelectric generating station. Construction on the dam began in 1931, and was completed in 1936, a little more than two years ahead of schedule. The dam and the power plant are operated by the Bureau of Reclamation of the U.S. Department of the Interior. Listed on the National Register of Historic Places in 1981, Hoover Dam was designated a National Historic Landmark in 1985.



The Mike O'Callaghan – Pat Tillman Memorial Bridge was recently opened to traffic in late 2010, creating a quicker, safer drive between Las Vegas and Phoenix. The bridge is an engineering marvel and has been proclaimed by USA Today as America's newest wonder. Perched 890 feet above the Colorado River, the bridge is wedged between rock cliffs of the Black Canyon. It is the highest and longest arched concrete bridge in the western hemisphere, the second-highest bridge of any kind in the United States (14<sup>th</sup> in the world) and has the world's tallest concrete columns of their kind.

### *University of Nevada, Las Vegas*



The three nuclear based programs at UNLV offer a wide range of laboratory equipment, instruments and facilities. Tours will allow attendees to get a first-hand look at what UNLV has to offer. The Bigelow Health Sciences Building is home to the Health Physics and Diagnostic Sciences department and contains cell culture labs, a counting lab and low-level radiochemistry labs. The Thomas Beam Engineering Building is home to the Materials and Nuclear Engineering department and contains the lead bismuth test loop and the radiation detection lab. The Harry Reid Center for Environmental Studies contains several laboratories used by the Radiochemistry program, offering a multitude of instrumentation and the ability to work with wide

ranges of activity. The new Science and Engineering Building contains both health physics and radiochemistry laboratories. The map above shows the locations of the four buildings on campus.



## Budget

### Table of Expenditures and Revenue

Trends show that sponsorship for the ANS Student Conference has been continuously growing. The table below shows the actual revenue from student conferences as long ago as 2008. This trend shows a 5-10% increase in revenue per year.

Amount	Texas A&M (2008)	Florida (2009)	Michigan (2010)
\$25,000	--	2	4
\$15,000	5	2	1
\$10,000	4	3	2
\$5,000	8	15	10
\$2,500	8	--	--
\$2,000	--	--	14
\$1,000	9	10	--
Actual Sponsorship	\$184,000	\$195,000	\$213,000

The estimated revenue for the 2012 ANS Student Conference is shown below. While this number is higher than in past proposals, we feel it is a conservative estimate and follows the clear upward trend in sponsorship levels.

Source	Amount	#	Revenue
Student Registration	\$30	400	\$12,000
Professional Registration	\$250	200	\$50,000
Tier 1 Sponsorship	\$25,000	3	\$75,000
Tier 2 Sponsorship	\$15,000	1	\$15,000
Tier 3 Sponsorship	\$10,000	2	\$20,000
Tier 4 Sponsorship	\$5,000	8	\$40,000
Tier 5 Sponsorship	\$1,000	10	\$10,000
Tier 6 Sponsorship	\$500	7	\$3,500
Total			<b>\$225,500</b>

Expenditures have been broken down into operational and discretionary items. Operational items are required for the conference we have envisioned while discretionary items could be reduced or eliminated in the case of fundraising shortfalls. The discretionary items are listed in the order of cuts with items towards the bottom of the list being reduced before they are completely eliminated. Profits to our student section would be the first item cut and travel reimbursements would be the absolute last item to be reduced. The total estimated expenditures of **\$207,974** are over \$17,000 (>7 %) lower than estimated revenues to create a large buffer for fundraising. All items include 8.1 % tax and 20 % gratuity. Further budget details are shown in Appendix F.

### Operational Expenditures

Category	Item	Price	Unit	W	R	F	Sa	Su	Total
Food	Breakfast	\$8	person	--	--	400	400	150	\$7,790
	Lunch	\$16	person	--	--	500	500	--	\$16,300
	Opening Dinner	\$48	person	--	450	--	--	--	\$21,510
	Friday Dinner	\$16	person	--	--	550	--	--	\$8,800
	Awards Dinner	\$65	person	--	--	--	600	--	\$39,000
Total Food:									\$93,400.00

Facilities	Awards Dinner	waived	total	--	--	--	1	--	\$0
	Meeting Room Rental	\$0	each	--	--	--	--	--	\$0
	A/V	\$384	day	--	--	1	1	--	\$768
	Student Union Staff	\$20	hour	--	--	16	16	--	\$640
Total Facilities:									\$1,408

Transportation	Daily Shuttles	\$58	hour	--	--	22	15	--	\$2,146
	Awards Dinner Shuttle	\$89	hour	--	--	--	44	--	\$3,916
	Speaker Reimbursement	\$500	each	1	--	--	--	--	\$500
	Travel Reimbursement	\$200	each	375	--	--	--	--	\$75,000
Total Transportation:									\$81,562

Conference Package	Conference Programs	\$7	each	600	--	--	--	--	\$4,200
	Marketing	\$3,000	total	--	--	--	--	--	\$3,000
	Nametags	\$0.75	person	600	--	--	--	--	\$450.00
	T-shirts	\$5	person	400	--	--	--	--	\$2,000
Total Conference Package:									\$9,650

Total Operational Expenditures:									\$186,020
---------------------------------	--	--	--	--	--	--	--	--	-----------

### Discretionary Expenditures

Item	Price	Unit	W	R	F	Sa	Su	Total
Saturday Cocktail Hour	\$8,700	total	--	--	--	--	--	\$8,500
Thursday Social	\$5,000	total	--	--	--	--	--	\$5,000
Airport Shuttles	\$68	hour	--	14	--	--	14	\$1,904
Student Gifts	\$10	person	400	--	--	--	--	\$4,000
Student Awards	\$75	each	30	--	--	--	--	\$2,250
Speaker Gifts	\$100	person	3	--	--	--	--	\$300
Total Discretionary Expenditures:								\$21,954



## Cost of Attendance

The cost to the student comes from airfare, lodging and a nominal registration fee. The total average cost includes \$302 round trip airfare, \$79 lodging (three nights at Alexis Park based on triple occupancy) and \$25 registration, which sums up to **\$406 per student**. As shown above, we have budgeted to offer an average travel reimbursement of \$200 per student, nearly half the out of pocket costs! The average cost per student, or the total conference expenses divided by the total number of student attendees, is \$520.

## Fundraising Plan

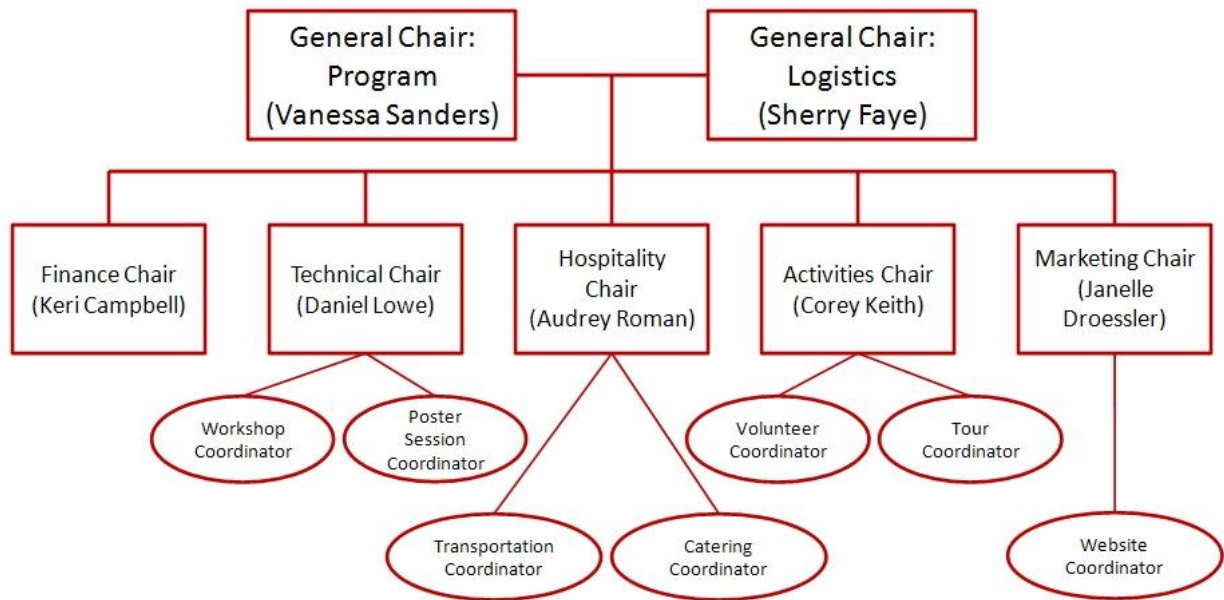
Should UNLV win the conference bid, we will immediately start a fundraising campaign. We will start by utilizing the many connections UNLV has with various companies, national laboratories, research institutions and power utilities. Arrangements have also been made with the Georgia Tech conference committee to gather contact information from sponsors of the 2011 Student Conference. Once this information is collected, a sponsorship package will be developed to send to sponsors alerting them of the importance of the conference and requesting their support. A tiered system will be developed to encourage companies to support at a level they are financially comfortable with. The conference committee is prepared to send delegations to the 2011 ANS national meeting and winter meeting to gain support from ANS divisions and touch base with sponsors.

## Financial Oversight

Since our student section's day-to-day financial operations are relatively small compared to those required in hosting a large conference, we intend to use ANS headquarters for our conference banking needs. This will allow oversight in the banking as well as full transparency when it comes to conference expenses. Using ANS-HQ will also imply tax exempt status for the conference, which should help keep costs lower. The UNLV student section also has a checking account at Bank of America that can be used for smaller transactions, if needed.

## Conference Committee

We have set up positions with three levels of responsibilities; general chairs, major area chairs and coordinators. Major area chair positions have final say in conference planning and execution in their specific areas, while the general chairs oversee all decisions and hold responsibility for all aspects of the conference. Due to the importance of the chair positions, they have already been filled. Coordinator positions comprise day-to-day duties designed to support the chairs so they have not yet been assigned, but will be one of the first steps if we are awarded the conference bid. Committee chair bios are shown in Appendix G.



## Chair Responsibilities

### General Chair, Logistics (Sherry Faye)

- Provides all direction, leadership and organization for the non-technical aspects of the conference
- Assists **General Chair, Program** in:
  - Creating conference milestones and enforcing deadlines
  - Serving as the primary interface between the university and ANS headquarters
  - Completing any un-delegated tasks
- Oversees:
  - Activities Chair
  - Marketing Chair
  - Hospitality Chair
- Primary contact for sponsors and guest speakers

### General Chair, Program (Vanessa Sanders)

- Provides all direction, leadership and organization for the technical aspects of the conference
- Assists **General Chair, Logistics** in:
  - Creating conference milestones and enforcing deadlines
  - Serving as the primary interface between the university and ANS headquarters
  - Completing any un-delegated tasks
- Oversees:
  - Technical Chair
  - Finance Chair
  - Hospitality Chair

### Technical Chair (Daniel Lowe)

- Choose topics for technical sessions

- Organize sessions
- Process abstracts
- Approve paper, abstract and presentation formats
- Approve and publish presentation and paper evaluation criteria
- Recruit judges
- Obtain A/V equipment for session rooms
- Organize poster session
- Determine award structure

#### **Marketing Chair (Janelle Droessler)**

- Write articles for ANS and nuclear news
- Write press releases and public service announcements
- Design brochures and conference transactions
- Write announcements for distribution to schools and student members
- Arrange for ad space in local newspapers
- Organize and conduct mass mailings, postings of fliers and other publicity campaigns
- Work with fundraising committee for advertising space on conference publications
- Oversee awards

#### **Finance Chair (Keri Campbell)**

- Contact ANS-HQ regarding banking procedures and use of bank account
- Plan and conduct student registration
- Assist with sponsor solicitation campaign
- Keep records, receipts, databases and track revenues and expenses
- Apply for a tax ID and write the final financial report for ANS-HQ
- Create a sponsor recruitment packet

#### **Hospitality Chair (Audrey Roman)**

- Reserve hotel, banquet space and session rooms
- Plan menu and social events
- Run meals and conference reception
- Evaluate and reserve transportation options for tours
- Arrange for use of hotel facilities/catering for social functions
- Arrange and manage daily transportation between attendee hotels and conference facilities
- Plan lunch and dinner menus

#### **Activities Chair (Corey Keith)**

- Arrange technical and non-technical tours
- Plan and execute student mixer and other social events
- Reserve space for social events, banquets and tours
- Work with hospitality committee for providing meals at social events
- Work with hospitality chair to assure transportation to/from events

## Coordinator Responsibilities

### Website Coordinator (Publicity Chair)

- Design and maintain conference website and social media outlets
- Manage conference registration system
- Post information requested by other committee members

### Volunteer Coordinator (Activities Chair)

- Recruit volunteers
- Coordinate volunteers at conference and keep records of contributions

### Tour Coordinator (Activities Chair)

- Assist activities chair in arranging tours
- Interface between conference committee and attendees to communicate information about tours

### Workshop Coordinator (Technical Chair)

- Assist technical chair with arranging technical and non-technical workshops
- Interface between conference committee and attendees to communicate information about workshops

### Poster Session Coordinator (Technical Chair)

- Assist technical chair with arranging the poster session
- Set up and take down poster session
- Interface with conference attendees to communicate information about the poster session

### Transportation Coordinator (Hospitality Chair)

- Assist hospitality chair in arranging transportation to various conference events
- Interface with conference attendees to assure transportation from the airport to host hotel upon arrival to Las Vegas

### Catering Coordinator (Hospitality Chair)

- Assist hospitality chair in arranging catering for all provided meals
- Interface with catering staff to assure successful meal events

## Day-to-Day Staffing

The UNLV ANS student section realizes that a conference of this magnitude takes a lot of dedication to coordinate and even more hard work to run smoothly. While our conference committee includes 14 dedicated chairs and coordinators, we plan to utilize at least another 40-50 volunteers for day-of duties such as technical sessions, workshops, registration, tours, etc. Should we not get enough volunteers from our student section, we are prepared to make arrangements with other groups on campus that we work closely with such as HPS, ASME, STARS, Alpha Phi Omega and the Rebel Service Council. A more detailed estimate of minimum day to day staffing needs is shown in Appendix H.

## Conflict Resolution

Although we would love to plan and execute the entire conference with no conflicts, there is always the possibility of disagreement. We have developed the following steps for conflict resolution before any conflicts have arisen so we will be better prepared to handle conflicts if any do occur.

- Step 1- Conflict between committee members will be recognized and attempted to be resolved by the conflicting committee members.
- Step 2- If the conflict cannot be resolved by disputing members, the general chairs will step in act as mediators.
- Step 3- If the conflict is still not resolved, the matter will be presented to the conference committee with the faculty advisor acting as the mediator.

## Website and Social Media

Communication is most effective when the information is easily accessible. The UNLV ANS student section currently sustains a website ([www.ansatunlv.com](http://www.ansatunlv.com)) so that section members have a direct link with the officers as well as access to other relevant nuclear information. Should we win the conference bid, the section will create a conference website to keep conference attendees updated with current conference details. The website will include information about the host hotel, registration, shuttle schedules, travel to Las Vegas, itineraries, as well as a list of food and entertainment options. A snapshot of the conference website is shown in Appendix K. UNLV ANS also maintains a facebook page and a Twitter account (@ansatunlv) to further disseminate important information.

## Liability

The UNLV ANS student section understands that liability is a great consideration when hosting a conference of this magnitude. We have spoken with each venue and vendor about liability concerns and present a list of responsibility for several areas below.

- Transportation – Both Triple J (chartered bus service) and Bell Trans (airport and daily shuttles) assume liability while under contract with us and carry their own insurance coverage.
- Food – Catering services at Alexis Park Resort, UNLV and JW Marriott assume liability for any issues relating the food, such as food poisoning.
- Alcohol – We consider this to be one of the largest areas of liability for this conference, especially with some attendees sure to be under 21. For any event that includes alcohol, drink tickets will be used which will have to be presented with a valid ID. Wrist bands will also be distributed for easier identification of underage attendees.
- UNLV Facility Use – The UNLV student union requires groups reserving meeting space to obtain insurance in the amount of \$1 million. This policy will cover general liability insurance for bodily injury and property damage.
- Attrition – Alexis Park Resort offers a 20 % attrition with a one week cut off, which is not only one of the best deals in town, but something we feel we can meet without a problem.



## **Conclusion**

In conclusion, the ANS student section at UNLV would be honored to host the ANS Student Conference in 2012. We believe we have come a long way in the past few years and we possess the vision and leadership to offer an amazing conference that will not soon be forgotten. The combination of a very easily accessible destination with a unique nuclear history should certainly set us apart. We very much appreciate your consideration for UNLV hosting the 2012 American Nuclear Society Student Conference!

## Appendix A: Letters of Support



January 18, 2011

To the American Nuclear Society Student Section,

I am writing this letter for the ANS Student Section at University of Nevada, Las Vegas to support their bid for the 2012 ANS Student Conference. The ANS Student Section at UNLV is a group of hard working and dedicated students who are fully capable of executing this conference due to their leadership and organizational skills. With the support and help of the Radiochemistry department, I am more than confident that UNLV's student section will put on a very prosperous and well executed student conference.

With the student conference coming here we would be able to showcase our facilities and the strength of our department. Not only would UNLV be greatly benefitted by the opportunity to host the conference but the conference would be enriched by Las Vegas' nuclear science history with the Atomic Testing Museum, Nevada National Security Site, and Remote Sensing Lab in close vicinity. With all these reasons in mind, I am glad to give my recommendation and support to the UNLV's ANS Student Section.

Kind Regards,

A handwritten signature in black ink, appearing to read "Ken Czerwinski".

Ken Czerwinski, Ph.D.  
ANS Student Section Faculty Advisor  
Radiochemistry Program Director  
Harry Reid Center  
University of Nevada, Las Vegas  
702.895.0501, office



Harry Reid Center for Environmental Studies  
4505 S. Maryland Parkway • Box 454009 • Las Vegas, Nevada 89154-4009  
(702) 895-3382 • FAX (702) 895-3094



January 18, 2011

To the American Nuclear Society Student Section,

I am writing this letter for the ANS Student Section at University of Nevada, Las Vegas to support their bid for the 2012 ANS Student Conference. With the student conference coming here, the Engineering department would greatly benefit, as we do have a Nuclear Engineering Master's degree program. The conference would also be enriched by the ability to see our many instruments and unique capabilities offered at UNLV. Since we also have many desirable connections in the Nuclear Science field, this could easily supplement the networking opportunities for the visiting students.

Based on the events that the student section has hosted in the past we full believe in their ability to plan and host the 2012 Student Conference. Though they are small and relatively young student section they make up for it with their innovative and ambitious qualities. Hosting the 2012 Student Conference would not only be a great opportunity for the student section but for UNLV as a whole.

Kind Regards,

A handwritten signature in blue ink, appearing to read "Rama Venkat", with a stylized flourish extending from the end.

Rama Venkat, Ph.D.  
Interim Dean, College of Engineering  
Howard R. Hughes College of Engineering  
University of Nevada, Las Vegas  
702-895-1094, office



Woosoon Yim, Ph.D. Fellow ASME  
Professor and Chair, Dept. of Mechanical Engineering  
University of Nevada, Las Vegas  
Las Vegas, NV 89154-4027  
email: woosoon.yim@unlv.edu  
Phone: (702) 895-0956

January 13, 2011

RE: Support Letter for 2012 American Nuclear Society (ANS) Student Conference

Dear Selection Committee members:

This letter is to support the proposal by UNLV student sections to hold the 2012 American Nuclear Society (ANS) Student Conference on our campus. Mechanical Engineering department has been offering a M.S. degree in Materials and Nuclear Engineering since 2005, and the number of degrees conferred in this program is 7. Even if our program is still very young and small, I strongly believe that the proposed student conference in UNLV will greatly promote our programs in nuclear engineering in the future. Department will fully provide necessary resources needed for holding this conference, and please do not hesitate to contact me if you need more information about our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Woosoon Yim", is written above the printed name.

Woosoon Yim



January 18, 2011

RE: ANS Student Conference

Dear Colleagues:

On behalf of the College of Sciences, I strongly support the nomination of the UNLV ANS Student Section's proposal to host the American Nuclear Society Student Conference. We believe that hosting this conference is essential to broadening and advancing our institution's research in the nuclear sciences. In addition to benefitting a wide array of research scientists and students at UNLV, the conference will allow for individual interaction and development between region, state, campus and community leadership.

Nevada and UNLV will serve as an outstanding venue for the conference attendees and our significant body of resources is one of the many reasons why the Radiochemistry Program at UNLV is enjoying successful growth, recognition and consistently growing national and internationally laboratory ties. Hosting the American Nuclear Society Student Conference will provide additional support and recognition to our interdisciplinary research programs such as health physics, nuclear engineering and radiochemistry. In addition it will extend support to the growth of centers for excellence for fundamental nuclear science, advanced fuel cycle and nuclear forensics research.

Our College is fully committed to advancing and developing nuclear science. This includes our own Radiochemistry Program, and its mission to continually become a premier location for the study of the chemistry of the actinides, technetium and other radionuclide's. We look forward to the potential of hosting the ANS Student Conference and promoting this outstanding opportunity to our research community.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Timothy L. Porter", is written over the typed name.

Timothy L. Porter  
Dean, College of Sciences and  
Professor of Physics

College of Sciences  
Office of the Dean  
4505 Maryland Parkway • Box 454001 • Las Vegas, Nevada 89154-4001  
(702) 895-3487 • FAX (702) 895-4159





January 12, 2011

ANS Selection Committee

To Whom It May Concern:

I strongly endorse the proposal submitted by the UNLV Student Chapter of the American Nuclear Society to host the 2012 student conference. The proposal has the full support of the Department of Health Physics and Diagnostic Sciences and, as such, the department will commit the necessary resources to ensure success of the conference.

UNLV has a strong presence in a number of nuclear-related fields, including health physics, radiochemistry and nuclear engineering. Students and faculty in these programs look forward to the opportunity of hosting this conference at UNLV.

Should additional information be required, please do not hesitate to contact me at [steen.madsen@unlv.edu](mailto:steen.madsen@unlv.edu), or by phone at (702) 895-1805.

Thank you for your consideration,

A handwritten signature in black ink, appearing to read "Steen", with a long, horizontal flourish extending to the right.

Steen Madsen, Ph.D.  
Professor and Chair  
Dept. of Health Physics and Diagnostic Sciences

School of Allied Health Sciences  
Health Physics & Diagnostic Sciences  
Box 453037 • 4505 S. Maryland Parkway  
Las Vegas, Nevada 89154-3037  
Main (702) 895-4320 • Fax (702) 895-4819



## University of Nevada, Las Vegas

4505 S. Maryland Parkway  
Las Vegas, Nevada 89154  
(702) 219-6463; (702) 895-2936

January 13, 2011

To the ANS Student Conference Site Selection Committee:

I have been involved in the Nevada Test Site mission for nearly 30 years. As an alumnus of the University of Nevada, Las Vegas (UNLV), the president of the ANS Nevada Section, and a past president of the Lake Mead Chapter of the Health Physics Society, I have a unique perspective into the nuclear business and UNLV academic development.

I am writing to endorse the student membership in the Nevada Section of the ANS for their efforts to host the 2012 Student Conference in Las Vegas. Their bid for the 2011 conference was accepted, but not chosen, so they have a great deal of time invested in researching the nuances of planning and conducting a National-level conference. They have been successful in enlisting a number of the local ANS members in their support. They were materially involved in planning and conducting the ANS Radiation Protection and Shielding Division Topical meeting in Las Vegas during April 18-23, 2010. These driven students are well versed in conference operation, planning and implementation, and are the most active student membership I have seen in the ANS in 30 years at UNLV.

Not only are the students qualified, but they intend to include tours of the Nevada Test Site and Atomic Testing Museum. These historic locations are uniquely relevant to the nuclear field and will allow students attending the conference to learn firsthand about our country's nuclear history and provide, for some, a once-in-a-lifetime chance to see the evidence of more than forty years of nuclear weapons testing and current research relevant to modern counter-terrorism technologies.

There is no doubt that these students will host an outstanding 2012 ANS Student Conference, complete with a strong technical program, unique tours that most nuclear science and engineering students can only dream about and an opportunity to experience a bit of true Vegas nightlife. Although Las Vegas has been host to many ANS meetings, the student conference has never visited our city. The UNLV administration and the Nevada Section of ANS are fully backing this event and the UNLV campus is an excellent venue for academic excellence in nuclear science. I urge the Selection Committee to realize the full potential of this proposal and allow UNLV to set a new standard in student conferences. If I can provide any additional supporting information, please do not hesitate to contact me at [steve.curtis@unlv.edu](mailto:steve.curtis@unlv.edu) or (702) 219-6463.

Steven Curtis

A handwritten signature in blue ink, appearing to read "Steve Curtis", is written over a faint, larger blue ink signature that is partially obscured.

Deputy Associate Director  
Harry Reid Center for Environmental Studies and  
Nevada Section, ANS President

## Appendix B: Student Support

I pledge my support to the University of Nevada, Las Vegas American Nuclear Society Student  
Section in hosting the 2012 ANS Student Conference

Adetaye Adeseye

Paul Laisel

Michelle Phanard

Dominique Lockwood

A'Shira Hunt

Sterling Kwitky

Amanda Thompson

JOHN ENYEART

Mohammed Al-Karawi

Anthony Springer Jr.

Andrew Reyes

Marisa Turner

Aleta J Dupree

Matt Kimball

Justin Swinney

~~David Felt~~ David Forhee

POI NEAL Frederic

Joe Pmt

Mary Turner

Nathan Sigal


~~Alamir~~ Ras Tanvir

Antonio Sanders




Paul Laisel

Michelle Phanard



A. Hunt



Amanda Thompson

John Enyeart

M. Al-Karawi

Anthony Springer Jr.

Andrew Reyes

Marisa D. Turner

Aleta J Dupree

Matt Kimball


Justin Swinney

David Felt

Frederic Poineau

Joe Pmt

Mary Turner



Ras Tanvir

Antonio Sanders


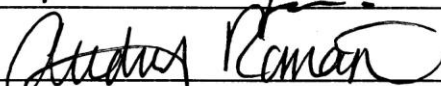
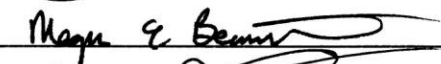

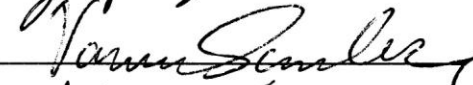
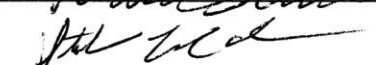
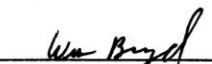
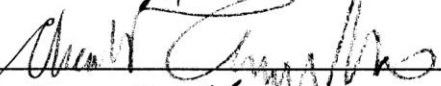

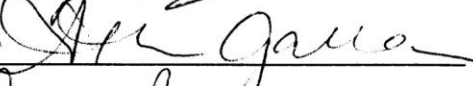
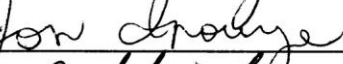

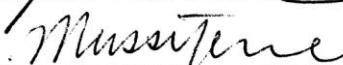

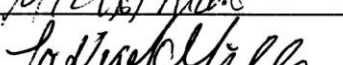
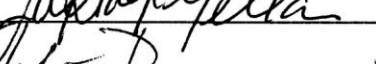
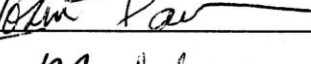



I pledge my support to the University of Nevada, Las Vegas American Nuclear Society Student  
Section in hosting the 2012 ANS Student Conference

Diana Pann  
Derrek Spitznagel  
Selenium Hernandez  
Joshua Hunter  
John Wynn  
Jessica Kim  
FERNANDO FLORES  
NOE GONZALEZ  
Jack Cheney  
Vicki Holmes  
Jami Vallesteros  
Drew Pruitt  
Allen Leung  
Kyle Danton  
David Rivas  
Erika Arballo  
Keri Campbell  
Janelle Droessler  
Christopher Klug

Felix  
Diana  
Selenium  
Joshua  
John Wynn  
Jessica Kim  
FERNANDO FLORES  
NOE GONZALEZ  
Jack Cheney  
Vicki Holmes  
Jami Vallesteros  
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Allen Leung  
David Rivas  
Erika Arballo  
Keri Campbell  
Janelle Droessler  
Christopher Klug

I pledge my support to the University of Nevada, Las Vegas American Nuclear Society Student  
Section in hosting the 2012 ANS Student Conference

  
N. Ghazizadeh  
  
Audrey Roman  
  
Megan E. Bennett  
  
John Despotopoulos  
  
Vanessa Sanders  
  
Steve Maddon  
  
Wes Boyd  
  
Truc Hianh  
  
Corey Keith  
  
Athena Gallardo  
  
Jon Inayye  
  
Suyog Chhetri  
  
Mussie Mahderes  
  
Mike Moore  
  
Lakia McMillan  
  
Johnne Dawson  
  
Monica Johnson  
  
Sherry Faye

Sherry Faye  
Narek Gharibyan  
Audrey Roman  
Megan Bennett  
John Despotopoulos  
Vanessa Sanders  
STEVE MADDON  
Wes Boyd  
TRUC HIANH +10  
Corey Keith  
Athena Gallardo  
Jon Inayye  
Suyog Chhetri  
Mussie Mahderes  
Mike Moore  
Lakia McMillan  
Johnne Dawson  
Monica Johnson



## Appendix C: Schedule of Conflicts

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb 19 - 25	Feb 19	20	21	22	23	24	25
					Proposed Date #3		
Feb 26 - Mar 3	26	27	28	29	Mar 1	2	3
	Proposed Date #3				Proposed Date #2		
Mar 4 - 10	4	5	6	7	8	9	10
	Spring Break (7): Including Penn State, University of Florida, Vanderbilt, Virginia Tech ...						
	Proposed Date #2						
Mar 11 - 17	11	12	13	14	15	16	17
	Spring Break (14): Including Missouri, Purdue, RPL Texas A&M ...						
Mar 18 - 24	18	19	20	21	22	23	24
	Spring Break (9): Including Georgia Tech, Ohio State, Idaho State, University of Illinois UC, Ohio State ...						
Mar 25 - 31	25	26	27	28	29	30	31
	Spring Break (4): UC Berkeley, University of Missouri - Columbia, MIT, Oregon State						
	MARC IX						
Apr 1 - 7	Apr 1	2	3	4	5	6	7
	Spring Break (1): UNLV						
Apr 8 - 14	8	9	10	11	12	13	14
	Easter Sunday				Proposed Date #1		
Apr 15 - 21	15	16	17	18	19	20	21
	International Topical Meeting on Advances in Reactor Physics (PHYSOR 2012)						
	Proposed Date #1				Finals: University of Michigan		

Proposed conference dates are shown in green while university spring breaks are shown in red. ANS conferences are listed in yellow.

## Appendix D: Transportation

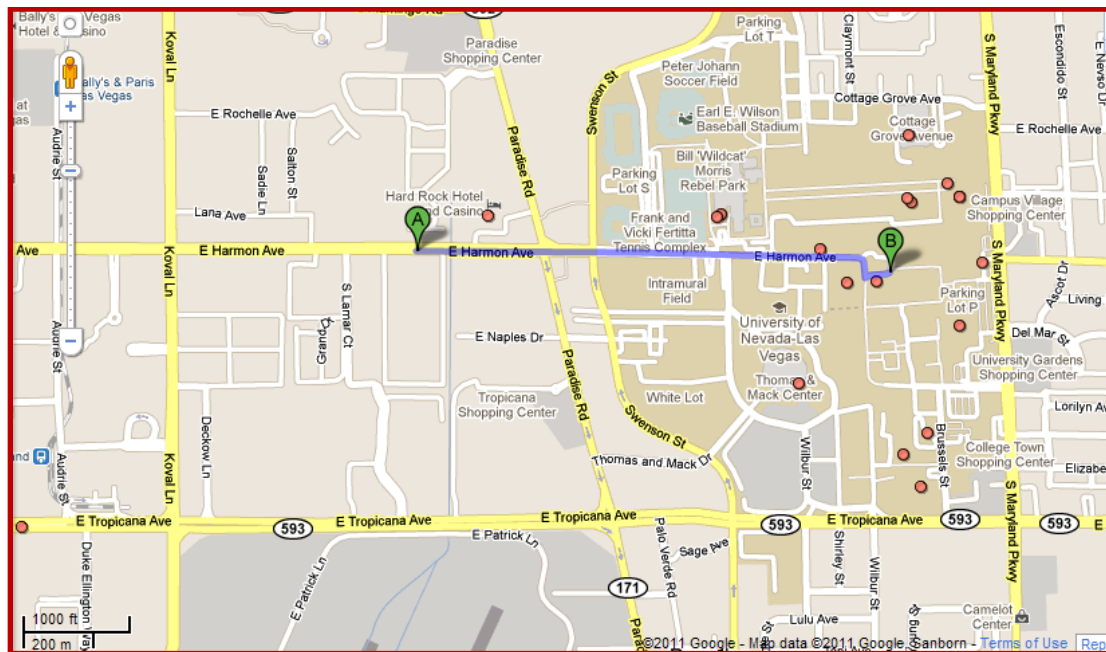
The table below represents the shuttle schedule between Alexis Park Resort and conference facilities at UNLV. Several 29 passenger mini-busses will be running on a continuous loop throughout the day. With a 15 minute round trip time and 5 minutes for loading and unloading, busses will depart from each location at least every 20 minutes.

Fri/Sat AM Service		7:30	7:40	7:50	8:00	8:10	8:20	8:30	8:40	8:50	9:00	9:10	9:20	9:30	9:40	9:50	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10	11:20	11:30	11:40	11:50	12:00
	Alexis Park UNLV	2 0	1 2	2 1	1 2	2 1	1 2	2 1	1 2	2 1	1 2	2 1	2 1	2 1	0 1	1 0	0 1	1 0	1 0	0 1	1 0	0 1	0 1	1 0	1 0	0 1	0 1	0 1	0 1

Fri/Sat PM Service		12:10	12:20	12:30	12:40	12:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20	2:30	2:40	2:50	3:00	3:10	3:20	3:30	3:40	3:50	4:00	4:10	4:20	4:30	4:40
	Alexis Park UNLV	1 0	0 1	1 0	0 1	1 0	0 1	1 0	0 1	1 0	0 1	1 0	0 1	0 1	1 0	0 1	1 0	0 1	1 0	0 1	1 0	0 1	1 0	0 1	1 0	2 1	1 2	2 1	2 1

Friday Evening Service		4:50	5:00	5:10	5:20	5:30	5:40	5:50	--	8:00	8:10	8:20	8:30	8:40	8:50	9:00	9:10	9:20	9:30	9:40	9:50						
	Alexis Park UNLV	1 2	2 1	1 2	2 1	1 2	2 1	1 2		1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1						

The map below shows the route shuttles will take between Alexis Park and the UNLV Student Union.



Transportation from the host hotel to the Saturday night awards banquet will begin at 5:00 pm with eleven 59 passenger busses leaving at staggered times until 5:30 pm. The trip length to the awards banquet is approximately 30 minutes, leaving guests enough time to arrive for the garden cocktail hour.

## Appendix E: Conference Room Space Schedule

Friday, April 13th, 2012

Building Name	Room #	# Seats	Seating Type	Breakfast	Lunch	Dinner and Plenary
Student Union	Ballroom	600	rounds of 8			
Student Union	Prefunction	N/A	N/A			
Student Union	208	50	Exhibits			
Student Union	205	65	Theater			
Student Union	207	65	Theater			
Student Union	209	65	Theater			
Student Union	211	65	Theater			
Student Union	213	65	Theater			
Student Union	224	65	Theater			
Student Union	218	15	Hollow Square			
Student Union	219	15	Hollow Square			
Student Union	222	15	Hollow Square			
Green Room	20		Hollow Square			
Theater	300		Theater			
Greenspun Hall	203	45	Classroom			
Greenspun Hall	205	30	Classroom			
Greenspun Hall	205	30	Classroom			
Student Union	Lobby	15	N/A			

Saturday, April 14th, 2012

[illegible]

## Appendix F: Detailed Budget Items

### UNLV A/V

	Description	Price	Unit	# Needed	Total Price
Ballroom	Risers	\$25.00	each	1	\$25.00
	Podium	\$20.00	each	1	\$20.00
	9'X12' screen	\$25.00	each	2	\$50.00
	Screen drape	\$20.00	each	2	\$40.00
	Projector, large portable	\$75.00	each	2	\$150.00
	Sound system	\$25.00	each	1	\$25.00
	Mixer, 4 channel	\$5.00	each	1	\$5.00
	Microphone, wireless	\$18.75	each	1	\$18.75
Meeting Rooms	Support Staff	\$20.00	hour	32	\$640.00
	Flip chart	\$7.50	each	2	\$15.00
	Podium	\$10.00	each	12	\$120.00
	Projector	\$25.00	each	12	\$300.00
Total A/V:					\$1,408.75

### Socials

	Description	Price
Thursday Social	sound system (estimate)	\$200
	photo booth ( <a href="http://www.redeyeboothvegas.com">www.redeyeboothvegas.com</a> )	\$675
	pb accessories (poodle skirts, wigs, glasses, hats)	\$150
	drink tickets (2X 375 people at \$5/drink)	\$3,750
	drink accessories (napkins, swizzle sticks, etc)	\$250
	total	\$5,025
Saturday Social	hors d' oeuvres (\$7/person)	\$5,375
	drink tickets (1x 375 people at \$7/drink)	\$2,625
	music (dj or similar, piped jazz or other fancy tunes)	\$500
	total	\$8,500

## Appendix G: Committee Chair Bios

### Sherry Faye – General Chair: Logistics



Sherry Faye is a third year PhD student studying environmental radiochemistry at UNLV. She has been an active member of the American Nuclear Society since 2006, holding student section positions such as treasurer (2006 – 2008) and president (2009 – 2010). While pursuing her master's degree in health physics, she was active in the Health Physics Society and started the UNLV student section of HPS in 2006 as well as being elected president of the student section. Sherry is currently a member of the Nevada Chapter of the American Nuclear Society and served on the planning committee for the Radiation Protection and Shielding Division (RPSD) topical meeting in April 2010 in Las Vegas. Serving on this committee allowed her to experience everything involved in how a successful conference is planned and managed. As a member of the UNLV ANS Student Section, Sherry was an author on the sections first ever proposal to host an ANS student conference in 2009-10. As a returning author for this year's proposal, she will offer conference planning experience and knowledge to the rest of the proposal writing team.

Sherry has presented her research at several meetings, including, but not limited to the ANS Student Conference in Ann Arbor, MI in 2010 and at MARC VIII in Kona, HI in April of 2009. She won honorable mention for her poster presentation at the ANS winter meeting in 2010 and was a technical session winner at the 2007 ANS Student Conference in Corvallis, OR. Sherry was also a GNEP Fellow in 2008-09 and the recipient of Roy G. Post Scholarship in 2010-11.

### Vanessa Sanders – General Chair: Program



Vanessa Sanders is a second year PhD student studying radiochemistry at UNLV. She has been an active member of the American Nuclear Society since 2009, holding the vice president position for two consecutive years (2009-present). Vanessa is currently a member of the Nevada Chapter of the American Nuclear Society and volunteered for the Radiation Protection and Shielding Division (RPSD) topical meeting. She has presented in several conferences including the April 2010 ANS Student Conference, and the Florida-Georgia Louis Stokes Alliance for Minority Participation EXPO (February 2009). While receiving her bachelor's degree in Chemistry she became a member of Zeta Phi Beta Sorority Incorporated (2007- Present): A community conscious service sorority. The sorority is involved in various community service programs such as; volunteering in food and clothing drives, participating in road clean-ups in the adopt-a-road program, and conducting educational forums for young adults.

Has previously served as the community service chair, where the duties included contacting, and organizing community service projects. Vanessa also served as the amenities chair, where the duties included organizing social events within the chapter. She is currently serving on the executive board as the chapter's treasurer.

#### Daniel Lowe – Technical Chair



Daniel Lowe is a third year Ph.D. student in nuclear engineering at UNLV. He has held the multiple chair positions within local student organizations such as VP of ANS, VP of ASME and Treasurer of ANS. He received his bachelor degree in mechanical engineering in 2005, his master's degree in nuclear engineering in 2006 and is currently pursuing his Ph.D. in nuclear engineering with a focus on radiopharmaceutical production techniques under the direction of Dr. William Culbreth. Daniel has been the recipient of multiple nuclear related awards and scholarships including the National Science Foundation Research Experience for Undergraduates, the National Academy for Nuclear Training Scholarship and an outstanding presentation in computational/mathematical modeling at the ANS Student Conference of 2004 held in Wisconsin. Daniel's past research has produced 12 peer reviewed publications in the previous 8 years and has worked on a variety of nuclear related research projects such as benchmarking studies, Monte Carlo optimization techniques, dose studies of linear accelerators, criticality analyses for fast pulsed assemblies, analysis of mega-voltage cargo imagers and studies on pulsed neutron generating devices.

#### Audrey Roman – Hospitality Chair



Audrey Roman is a second year PhD student studying radiochemistry at UNLV. She has been an active member of the American Nuclear Society since 2009 and has held positions such as treasurer (2009-2010) and president (2010-present). While finishing her bachelor's degree, Audrey was greatly involved in the Greek community at the University of Idaho. She not only held positions in her sorority but also was on the panhellenic community as the VP of recruitment. This has given her experience in planning large events with 500+ people, handling multiple events running simultaneously while ensuring the safety and integrity of not only the Greek community but all participating in the events as well. Audrey is currently a member of the Nevada Chapter of the American Nuclear Society and volunteered for the Radiation Protection and Shielding Division (RPSD) topical meeting. This gave her the understanding of what is needed to run a successful conference.



#### Corey Keith – Activities Chair



Corey Keith is a first year Master's student in Health Physics at UNLV. He is an active member of the ANS and HPS student chapters since August of 2010 and is currently the Treasurer for HPS. He received a Bachelor's of Science degree in Physics at the University of Texas at El Paso in May of 2010. During that time he was involved with various TA duties including organizing and teaching labs as well as helping organize a 2 week summer workshop for NCLT-PD in 2006. He is involved with submitting a paper on Non-Contrast Enhanced MRA and is now starting research with Dr. Cerefice focusing on understanding the surface chemistry that affects the release of radionuclides from certain types of spent nuclear fuel.

#### Janelle Droessler – Marketing Chair



Janelle Droessler is a first year graduate student in the Radiochemistry PhD program at UNLV. She is looking to become a new member of the American Nuclear Society, and has assisted with functions of the student chapter of the ANS. She assisted with the Fuel Cycle Summer School held at UNLV during the summer of 2010, overseeing the research portion of a student. She has experience as an editor for her high school yearbook which included organizing pictorial spreads, developing copy, and editing the work of others for submission by section deadlines. During her undergraduate studies, she was awarded the Boyd Earl Award for physical chemistry (2009) and graduated Cum Laude with her chemistry degree.

#### Keri Campbell – Finance Chair



Keri Campbell is a first year student in the Radiochemistry PhD program at UNLV. She is an active member of the ANS student chapter. Before finding her passion for Chemistry and receiving a Bachelors of Science, she majored in Accounting for a year. She has presented at the 33<sup>rd</sup> Annual Actinide Separations Conference in 2009 and the ACS spring conference in 2010. For the past ten years she has been an active member of the Fraternity of the Desert Bighorn. This is a non-profit organization dedicated to the utilization and conservation of Nevada wildlife. The charity constructs rain-catching systems so the wildlife is sustained through the drought season.

## Appendix H: Day to Day Staff

	Description	Volunteers Needed	Overseen By
Thursday Afternoon	Registration Desk	4	Hospitality
	Varian Tour Guides	2	Activities
	ATM Tour Guides	2	Activities
	Workshop Staff	2	Technical
	Runners	2	General
	Opening Reception	3	Hospitality
	Total	15	
Friday Morning	Registration Desk	3	Hospitality
	Technical Sessions	10	Technical
	Runners	3	General
	Career Fair	3	Technical
	Transportation	2	Hospitality
	Workshop	2	Technical
	Total	23	
Friday Afternoon	Registration Desk	2	Hospitality
	Technical Sessions	10	Technical
	Runners	3	General
	Career Fair	1	Technical
	Transportation	2	Hospitality
	Tours	4	Activities
	Total	22	
Saturday Morning	Registration Desk	2	Hospitality
	Technical Sessions	10	Technical
	Runners	3	General
	Career Fair	1	Technical
	Transportation	2	Hospitality
	Workshop	2	Technical
	Total	20	
Saturday Afternoon	Registration Desk	2	Hospitality
	Technical Sessions	10	Technical
	Runners	3	General
	Transportation	2	Hospitality
	Poster Session	2	Technical
	Total	19	

## Appendix I: Conference Planning Milestones

Deadline	Task	Responsible Party
<b>April 2011</b>		
04.20.2011	Appoint full conference committee	Committee Chairs
04.22.2011	Arrange conference banking through ANS national	Finance Chair
04.27.2011	Finalize conference date	General Chairs
04.30.2011	Reserve conference and event space	General Chairs
04.30.2011	Block hotel rooms for non-conference hotels	Hospitality Chair
<b>May 2011</b>		
05.06.2011	Create sponsor packets/contact potential sponsors	Marketing/General Chairs
05.06.2011	Draft conference website	Marketing Chair
05.15.2011	Start developing letterhead and brochures	Marketing Chair
05.31.2011	Invite guest speakers	General Chairs
05.31.2011	Obtain more solid information on tours	Activities Chair
<b>June 2011</b>		
06.15.2011	Launch website	Website Coordinator
06.26-30.2011	Send delegation to ANS national meeting	General
06.30.2011	Continue contacting/follow up with sponsors	General Chairs
<b>July 2011</b>		
07.15.2011	Begin inviting judges and session chairs	Technical Chair
07.31.2011	Follow up with sponsors and update budget	General Chairs
<b>August 2011</b>		
08.15.2011	Finalize technical session categories	Technical Chair
08.15.2011	Start designing conference program	Marketing Chair
08.31.2011	Follow up with sponsors and update budget	General Chairs
<b>September 2011</b>		
09.01.2011	Progress report to SSC	General Chairs
09.09.2011	New officer elections	ANS student section
09.15.2011	Post technical sessions to website	Website Coordinator
09.15.2011	Post call for papers to website	Website Coordinator
09.30.2011	Follow up with sponsors and update budget	General Chairs
<b>October 2011</b>		
10.15.2011	Add registration to website	Website Coordinator
10.31.2011	Follow up with sponsors and update budget	General Chairs

### **November 2011**

10.30 - 11.03	Send delegates to ANS Winter meeting	General
11.30.2011	Follow up with sponsors and update budget	General Chairs

### **December 2011**

12.01.2011	Request materials from ANS-HQ (lanyards, nametags, etc)	Marketing Chair
12.15.2011	Design t-shirt	Marketing Chair
12.15.2011	Determine awards	Technical Chair
12.31.2011	Follow up with sponsors and update budget	General Chairs

### **January 2012**

01.15.2012	Progress report to SSC	General Chairs
01.15.2012	Preliminary program posted to website	General Chairs
01.15.2012	Finalize tour details	Activities Chair
01.22.2012	Complete final aspects of website	Website Coordinator
01.31.2012	Purchase supplies for welcome bag	Activities Chair
01.31.2012	Follow up with sponsors and update budget	General Chairs

### **February 2012**

02.01.2012	Finalize menus	Hospitality Chair
02.15.2012	Confirm all hotel reservations	Hospitality Chair
02.15.2012	Assign rooms for sessions	Technical Chair
02.28.2012	Finalize transportation	Hospitality Chair

### **March 2012**

03.01.2012	Abstract submission deadline (4 weeks before)	N/A
03.15.2012	Print name tags, room boards, banners, etc.	Marketing Chair
03.15.2012	Abstract review and notification	Technical Chair
03.31.2012	Print conference program	Marketing Chair
03.31.2012	Prepare welcome bags	All

### **April 2012**

04.12-15.2012	CONFERENCE	All
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### **Post Conference**

04.30.2012	Send thank you notes to guest speakers	Marketing/General Chair
04.30.2012	Send thank you notes to sponsors	General Chairs
05.15.2012	Send travel reimbursement	Finance Chair
05.15.2012	Publish conference report, send to SSC	Committee Chairs

## Appendix J: Conference Forms

# American Nuclear Society

## 2012 National Student Conference

### “Nuclear Science and Technology: Past, Present, and Future”

April 12-15, 2012

University of Nevada, Las Vegas

### Call for Papers

Submission Deadline: March 1<sup>st</sup>, 2012

Notification of Acceptance: March 15, 2012

#### TECHNICAL TRACKS

- Reactor physics, operations and thermal hydraulics
- Criticality safety
- Aerospace applications
- Decommissioning
- Materials science and fuels
- Computation
- Isotopes and radiation
- Biology and medicine applications
- Detection and measurements
- Protection and measurements
- Protection and shielding
- Decontamination
- Nuclear forensics
- Nonproliferation and safeguards
- Environmental remediation
- Advanced separations
- Waste management
- Education and training
- Accelerators
- Fusion
- Outreach
- Student section activities



#### Submission Requirements

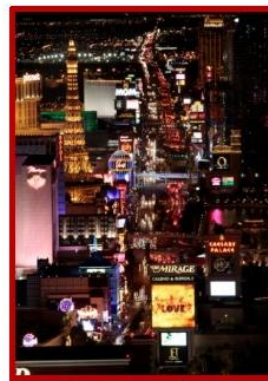
Abstracts must meet the following criteria:

- First author is a student.
- Pertain to recent work that provides significant contributions relevant to the topics of interest in the nuclear community.
- Title of 10 words or less.
- Maximum length of **900 words (podium presentations) or 2000 characters (posters)**.
- Minimum length of **450 words (podium only, not including tables and figures)**.
- Tables and figures count **150 words each – use no more than 3**.
- Abstracts should comply with the requirements in the ANS Guidelines for TRANSACTIONS Summary Preparation.
- File formats: Microsoft Word (\*.doc, \*.docx) or Portable Document Format (\*.pdf)

Submissions for podium presentations will be reviewed and judged according to the following criteria:

- (1) Originality,
- (2) Significance
- (3) Relevance

Due to the limited space available for podium presentations, some papers may be selected for poster presentations. Papers may be submitted for consideration as poster presentations only. Please visit the conference website for more information.



Technical Chair  
Daniel Lowe

General Chairs  
Sherry Faye  
Vanessa Sanders

## 2012 ANS Student Conference Oral Presentation Judging Form

---

Date: \_\_/\_\_/\_\_\_\_ Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Total Time: \_\_\_\_\_

Presenter Name: \_\_\_\_\_

School Affiliation: \_\_\_\_\_

Presentation Title: \_\_\_\_\_

Presentation Track: \_\_\_\_\_

Educational Level: ☐ Undergraduate ☐ Graduate

### Content (35 points)

\_\_\_\_/7 pts Objective  
\_\_\_\_/7 pts Data  
\_\_\_\_/7 pts Data Analysis  
\_\_\_\_/7 pts Conclusions  
\_\_\_\_/7 pts References

### Communication (15 points)

\_\_\_\_/3 pts Eye contact  
\_\_\_\_/3 pts Professional attire  
\_\_\_\_/3 pts Use of hands/gestures  
\_\_\_\_/3 pts Audience engagement  
\_\_\_\_/3 pts Speaking

### Oral Presentation (20 points)

\_\_\_\_/5 pts Introduction  
\_\_\_\_/5 pts Explanation  
\_\_\_\_/5 pts Organization  
\_\_\_\_/5 pts Questions

### Visual Presentation (20 points)

\_\_\_\_/5 pts Slide design  
\_\_\_\_/5 pts Organization  
\_\_\_\_/5 pts Graphs/figures/charts  
\_\_\_\_/5 pts Information/slide

### Timing (10 points)

\_\_\_\_/10 pts

Total Points

Comments for presenter:

---

Comments for technical chair

Judge's Name/Affiliation: \_\_\_\_\_



# 2012 ANS Student Conference Poster Presentation Judging Form

---

Date: \_\_/\_\_/\_\_

Presenter Name: \_\_\_\_\_

School Affiliation: \_\_\_\_\_

Poster Title: \_\_\_\_\_

Educational Level: ☐ Undergraduate ☐ Graduate

## Content (40 points)

\_\_\_\_/8 pts Objective  
\_\_\_\_/8 pts Information  
\_\_\_\_/8 pts Data Analysis  
\_\_\_\_/8 pts Conclusions  
\_\_\_\_/8 pts References

## Visual Presentation (20 points)

\_\_\_\_/5 pts Poster design  
\_\_\_\_/5 pts Organization  
\_\_\_\_/5 pts Graphs/figures/charts  
\_\_\_\_/5 pts Amount of information

## Oral Presentation (40 points)

\_\_\_\_/8 pts Introduction  
\_\_\_\_/8 pts Explanation  
\_\_\_\_/8 pts Appearance  
\_\_\_\_/8 pts Communication  
\_\_\_\_/8 pts Questions

Total Points



Comments for presenter:

---


Comments for technical chairs:

Judge's Name/Affiliation: \_\_\_\_\_

## Appendix K: Conference Website



[home](#) [about](#) [plan](#) [register](#) [connect](#) [contact](#)



### The American Nuclear Society: 2012 Student Conference

Nuclear Science and Technology:  
Past, Present, and Future  
April 12-15 2012 - Las Vegas, Nevada

### Register Now

#### Important Dates




**February 1 2012**  
Conference registration opens

**March 1 2012**  
Abstracts for oral and poster presentations due


**March 15 2012**  
Notification of abstract acceptance sent to authors

**April 12-15 2012**  
ANS Conference 2012

### Connect Now




### Information Center




#### About The Conference

Everything you need to know about the 2012 ANS Conference at UNLV.  
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#### Plan Your Conference

Hotels, transportation, and travel to and from Las Vegas, NV.  
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Learn about ANS at UNLV and how to contact the conference organizers.  
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Prospectus  
ANS Website

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Transportation Options  
Important Dates

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**Nuclear Science and  
Technology:  
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