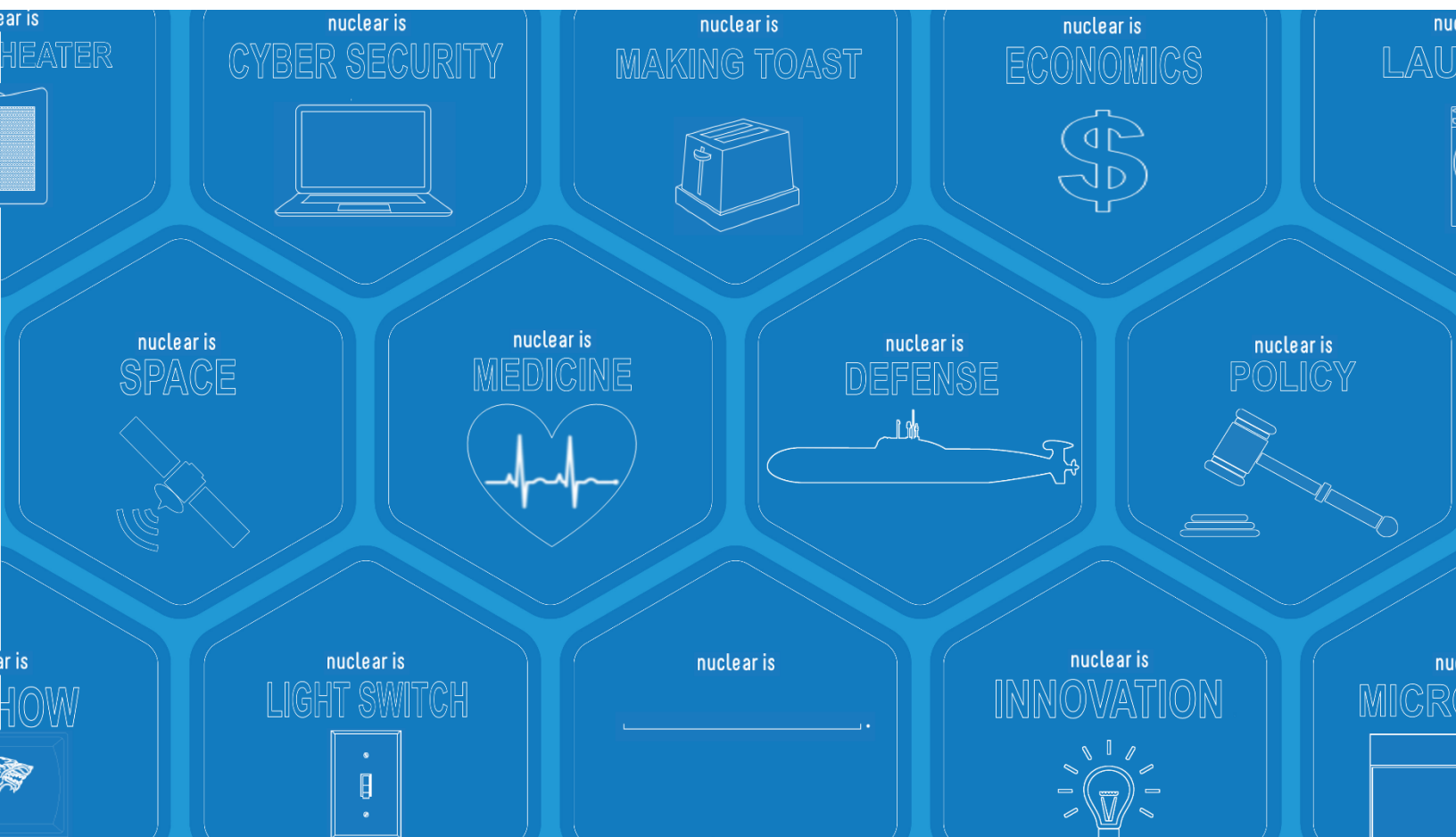


2019 American Nuclear Society National Student Conference



Presented by:



**VCU Section of the
American Nuclear Society**



September 27th, 2017

Student Sections Committee
ANS Education and Training Division

Dear ANS Student Sections Committee,

The Virginia Commonwealth University ANS Student Section is pleased to submit our proposal to host the 2019 ANS Student Conference. We have a growing nuclear department, and we are eager to share it with the rest of the nuclear industry. Our student section has continued to grow since being chartered in 2012, and we are excited to take on the challenges of hosting an ANS Student Conference.

Our university is located in the middle of Virginia - a centralized location for most chapters to travel to. Virginia is also well known in the nuclear industry, with established companies including AREVA, BWX Technologies, Newport News Shipbuilding, Lightbridge, Dominion, and many more. VCU's nuclear department often gets the opportunity to partner with some of these aforementioned companies for projects and experiments and has therefore developed a strong relationship with most of them. With the wealth of nuclear companies in our backyard, we expect to attract more professionals to our conference, giving students more networking opportunities.

We have chosen the theme "Nuclear is _____." to promote making nuclear one's own interest. We want each participant in the conference to be able to learn and relate something from the conference to their own work. We also want to highlight the need for varied industries to work together in order to meet an end goal, whether it be computer science engineers and nuclear engineers making "Nuclear is cyber security," or policy makers and non-proliferation professionals making "Nuclear is safety." We hope to showcase the many different uses for nuclear in everyday life while promoting working with others outside one's field to further promote uses for nuclear sciences.

Thank you for reviewing our proposal, and we look forward to hearing any input.

Sincerely,

Sarah Morgan
Graduate Co-Chair

Hunter Kobrinetz
Undergraduate Co-Chair

Daniell Tincher
VCU-ANS President

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Theme.is

NUCLEAR IS _____.

#nuclearis

The word “nuclear” likely invokes a few specific mental images to the general public. Indeed, prior to receiving a full undergraduate education, even aspiring nuclear engineers may only be aware of a few applications and opportunities in the nuclear field. However, the applications of and opportunities within nuclear science and technology go much further than power generation. For example, the medical field has benefited greatly from advances in nuclear science and technology with nuclear-enabled tools for imaging, cancer treatments, and sterilization. Irradiating food offers protection from harmful microorganisms without compromising the quality of food. Nuclear science and technology provides tools to law enforcement and national security personnel to help identify threats and protect our communities. Of course, nuclear power generation is a major focus in education, research, and industry; and the successes and advances in this area are not to be overlooked.

Professionals working in the nuclear industry often require skills and expertise beyond strictly nuclear science. Modeling and simulation analysts must learn and maintain computer coding skills. The nuclear power industry needs professionals that understand regulations in order to meet their strict requirements for safety. Additionally, the nuclear power industry is looking to those with an entrepreneurial spirit to bring new technologies to fruition that promise increased performance at a lower cost. The finances of nuclear power plants are unique in the energy production sector and require those with economic expertise to plan for the continued, financially successful operation of nuclear power plants.

We have chosen to focus on the broad nature of nuclear science and technology with the theme “**Nuclear is _____.**” Under this theme, the conference will explore the many opportunities accustomed to students within the nuclear science and technology realm. The theme will also encompass the many supportive activities, technologies, and experts in varied fields of nuclear science and technology. Obvious examples of the application of the theme include: “Nuclear is thermal-hydraulics.” or “Nuclear is neutronics.” or “Nuclear is nonproliferation.” Other, less obvious applications of the theme include: “Nuclear is cyber security.” or “Nuclear is health.” or “Nuclear is advocacy.” or “Nuclear is economics.”

In addition, this theme allows us to explore the subtle and ubiquitous impacts of nuclear science and technology. For example: “Nuclear is making toast.” One out of every five pieces of bread used in making toast is toasted using electricity generated from nuclear power plants. Another example would be “Nuclear is fresh herbs and spices.” Almost every jar of dried herbs or spices sold in the U.S. has been irradiated to preserve its flavor and maintain longer shelf-lives. Demonstrating the successful and safe day-to-day use of nuclear science and technology represents an important nuclear advocacy tool that we will highlight throughout the conference.

Additionally, the exciting new technologies that hold much promise for the nuclear industry will be represented by “Nuclear is entrepreneurship.” and “Nuclear is innovation.” Innovations in reactor designs, medical applications, and security tools will require those with the imagination and the business skills capable of launching new products and/or companies that fulfill the promise of an improved world. In contrast with the ubiquitous and mundane, successes in innovation and entrepreneurship represent the exciting and inspiring aspects of nuclear science and technology that will energize those students in attendance.

Richmond and Virginia Commonwealth University.is

RVA.is



Sited along the undulating hills surrounding the falls of the James River, Richmond, VA, has served as an important economic and cultural driving force in the Commonwealth of Virginia since the mid-eighteenth century. Richmond is rich in history as an important village in Powhatan Confederacy, the location for Patrick Henry’s famous, “Give me liberty or give me death” speech in 1775 at St. John’s Church, and the capitol of Virginia since 1780. While the destruction during the Civil War left its mark, Richmond celebrates other heroes such as Maggie L. Walker, an African-American businesswoman, who served as the first female bank president in the United States.



These days, the beautiful and thriving city of Richmond continues to attract visitors and investors alike. Named the “Best River City in America” by Outside Magazine, Richmond’s James River is home to the country’s only Class II through IV whitewater rapids in an urban center. Richmond

has museums for lovers of art, architecture, history, and culture. Richmond also has a vibrant restaurant scene and was selected in 2016 by National Geographic Traveler as one of the world's top 10 destinations for food travelers. In recent years, Richmond has become one of the craft brewing capitals of the East Coast. Richmond hosted the 2015 UCI Road World Championship and showcased its beauty and quality of life to the entire world. More information about the city and its hosting capabilities can be found through [this](#) link.



Virginia has a long tradition in nuclear science and technology and numerous and diverse nuclear stakeholders. Virginia is home to well-known nuclear employers such as world-class nuclear vendors AREVA and BWX Technologies; Dominion, one of the largest and more innovative nuclear utilities in the US, responsible for the 40% nuclear generation in Virginia; Lightbridge, one of the pioneering companies pursuing work in accident tolerant fuels; Newport News Shipbuilding, the largest employer

in Virginia and the builder of all nuclear aircraft carriers and half of the nuclear submarines for the US Navy; and Thomas Jefferson National Accelerator Facility, a national laboratory focused on nuclear physics and accelerator science. Richmond is centrally located in the state, making all of these locations close enough to visit.

VCU.is

Virginia Commonwealth University (VCU) has made a long-term commitment to nuclear engineering education and research. VCU is a leading provider of Nuclear Engineering education in the Commonwealth of Virginia and in the US, with a full suite of both undergraduate and graduate nuclear engineering programs. VCU is currently the only university in Virginia to offer a full complement of degrees in nuclear engineering, including an ABET accredited BS and SCHEV approved MS and PhD. Currently, there are approximately 100 students enrolled in the undergraduate nuclear engineering concentration and about 115 graduate students enrolled in the MS and PhD programs in mechanical and nuclear engineering. The VCU student section of the American Nuclear Society started in 2011, was chartered in 2012 and has remained extremely active since,



offering professional development and outreach opportunities to VCU NE students. VCU-ANS meets every other Thursday during the school year and has sent students to the ANS Student Conferences and ANS National Meetings since 2011.



The VCU Brandcenter is one of the top advertising graduate programs in the USA. Several successful campaigns have come out of the Brandcenter and spread throughout the country. If awarded the student conference, we plan to work with the Brandcenter to help promote the student conference. This will help us in advertising the student conference as well as provide students at the Brandcenter the opportunity to expand their portfolios. This will also hopefully lead to building relationships between young nuclear proponents and young marketing gurus. Some of the work done on our theme was done by Elizabeth Gardiner, Zack Lepine, Allison Murphy, Dylan Philips, Melody Song and Elly Taura and presented at SXSW while they were students at the Brandcenter.

Conference Details.is

Selection of Dates.is

As done in the past, we have chosen to host the conference from a Thursday through Sunday. Straying from the norm, our first choice in dates is February 21st - 24th. The following considerations went into this selection:

- This gives students ample time to network and line up awesome summer internships at the career fair.
- This time of year is significantly lower cost to host conferences in Richmond.
- This is a very centralized time of year between other major ANS meetings.
- Richmond experiences mild winters so the weather is not a concern. The average snowfall in February from the years 1981 - 2010 is less than three and a half inches.
- Some senior design projects that commonly present their work at student conferences may not be as far along yet; this is a concern but we still feel there will be plenty of posters, papers, and presentations.

- This is plenty of time after semester's start and still a while before midterms.
- This date does not coincide with any Spring Breaks or Holidays.
- Health Physics Society (HPS) has their mid year meeting February 17th-20th, but we do not expect this to take away from our attendance.

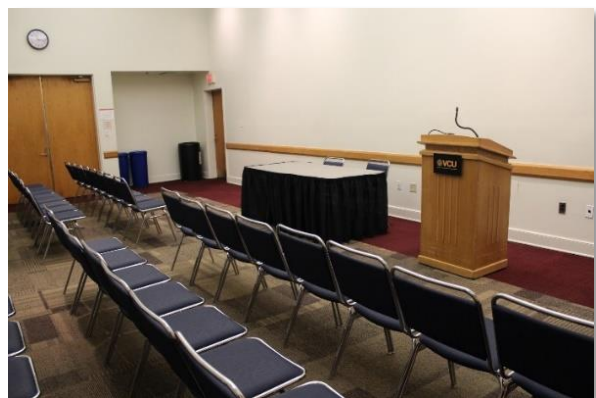
Our second choice of dates is April 4th-7th. This falls in line with previous conferences and also does not have any scheduling conflicts. A table and graphical calendar detailing the dates we chose can be found in Appendix A.

Facilities.is

The University Students Commons, known as “The Commons,” is where the Main Conference Program will take place. It is located at the heart of VCU’s Monroe Park Campus. The entire second level of The Commons will be blocked off and used for the conference, this includes the Commonwealth Ballroom, Richmond Salons, Virginia Rooms, James River Terrace, and several other smaller rooms that will be utilized.



The Virginia Rooms will be split into four equal 375 square foot rooms for technical sessions. The rooms will be setup lecture style with a podium, projector, computer, and microphone being able to host approximately 50 people per room. The Richmond Salons will be split into four 375 square foot rooms as well. Two of these rooms will be for technical sessions, setup lecture style holding up to 80 people each with the same accommodations as the Virginia



Rooms. In addition, one Richmond Salon room will be used for the workshops and the other will be used for panels. Both will still be setup lecture style, holding 80 people each, but will have a table for speakers rather than a podium. The Commonwealth Ballroom will host the career fair and the poster session. The Career fair will occupy roughly two-thirds of the room, 3,771 square feet, and will be setup with tables for vendors to use. The other one-third of the room, 1,378 square feet, will be used for the poster session. The portions will be open to one another, rather than sectioned to promote both the career fair and the poster session. Should the poster session receive more submissions than expected then the James River Terrace, 1,446 square feet, will be used as an overflow room. The Commons Theater will be used for a screening of “The New Fire” and is set up to hold 280 people. Lastly, the Shockoe Room and the Canal Room will be used for interviews and technical session preparation.





Hotels.is

Graduate Richmond

Graduate Richmond Downtown is nestled in the heart of Richmond's historic and financial districts. Located just steps from Virginia Commonwealth University and within walking distance to local museums, and entertainment venues. Each guest room features curated furniture and art that embraces the Richmond culture along with the following standard amenities:

- Complimentary Wi-Fi
- Refrigerator
- Hairdryer
- Coffeemaker
- Tech supported alarm clocks
- Extended viewing channels on 43" flat screen HDTV
- Spacious work desk
- Iron with board

Also available for guests, Brookfield, lobby cafe and bar serving breakfast, lunch and dinner; Byrd House, 16th floor rooftop bar, complimentary bicycle rentals for local transportation and sightseeing, and conference spaces.

Graduate Richmond was chosen as the preferred hotel for its close proximity to The Commons as well as its competitive pricing. Complimentary shuttles will be provided to transport members to The Commons for the conference as well as airport service.

Pricing:

| | |
|----------------------|---------------------|
| Double Occupancy | $\$139/2 = \69.50 |
| Quad Occupancy | $\$139/4 = \34.75 |
| Six Occupancy Suites | $\$269/6 = \44.84 |

Marriott Richmond

Another facility option for the conference is the Marriott Hotel in Downtown Richmond. This venue would be able to facilitate both the hotel rooms and the conference venue. This hotel has 410 guestrooms on 18 floors. There are over 30 restaurants within walking distance, including several of the world renowned locally owned restaurants such as Tarrant's cafe, Rappahannock, and Pasture. Guests can also take advantage of the free hotel shuttle within a one mile radius.



The Marriott's recently renovated meeting spaces would be large enough to accommodate the conference in addition to being able to host the banquet dinners in its Grand Ballroom.

Pricing:

Double Occupancy $\$149/2 = \74.50

Quad Occupancy $\$149/4 = \37.25

Other Options

The Graduate Richmond is able to accommodate all the participants of the conference; however, should one like another hotel option, the Jefferson is located directly next door. This luxurious hotel is still in walking distance to the conference facilities. Quirk Hotel is another boutique hotel that is close to the conference facilities.

Travel and Transportation.is

Air and Ground Travel.is

Air Travel.is

Richmond International Airport (RIC) is located just ten miles from the Graduate Richmond and The Commons. A complementary Graduate Richmond Hotel shuttle will be available to carry people from the airport to the hotel upon arrival. Below are round-trip airfare costs for the last weekend of February.

| School | Departure City | Airfare to Richmond (RIC) |
|---------------------------------|-----------------------|---------------------------|
| University of Florida | Orlando (ORL) | \$224 |
| | Jacksonville (JAX) | \$222 |
| | Gainesville (GNV) | \$240 |
| Texas A&M | College Station (CLL) | \$386 |
| Penn State | State College (SCE) | \$246 |
| MIT | Boston (BOS) | \$151 |
| UNLV | Las Vegas (LAS) | \$314 |
| Georgia Tech | Atlanta (ATL) | \$255 |
| Michigan | Detroit (DTW) | \$326 |
| Oregon State University | Portland (PDX) | \$388 |
| RPI | Albany (ALB) | \$323 |
| UC Berkley | Oakland (OAK) | \$432 |
| UC Irvine | Orange County (SNA) | \$416 |
| United States Naval Academy | Baltimore (BWI) | \$245 |
| University of Maryland | Baltimore (BWI) | \$245 |
| University of Missouri-Columbia | St Louis (STL) | \$356 |
| | Kansas City (MCI) | \$354 |
| University of Nevada – Reno | Reno (RNO) | \$476 |
| University of New Mexico | Albuquerque (ABQ) | \$368 |
| | El Paso (ELP) | \$392 |
| NC State University | Raleigh (RDU) | \$245 |
| University of Pittsburgh | Pittsburgh (PIT) | \$342 |
| Clemson University | Greenville (GSP) | \$292 |
| | Charlotte (CLT) | \$325 |
| South Carolina State University | Columbia (CAE) | \$335 |
| University of South Carolina | Columbia (CAE) | \$335 |
| University of Tennessee | Knoxville (TYS) | \$335 |
| Vanderbilt University | Nashville (BNA) | \$340 |
| Brigham Young University | Salt Lake City (SLC) | \$364 |
| University of Wisconsin-Madison | Madison (MSN) | \$386 |
| Colorado School of Mines | Denver (DEN) | \$338 |

Ground Travel

With Richmond's central East Coast location, driving could be a viable option for many groups and individuals. The table below lists the required driving times from several universities.

| School | Drive Time |
|-----------------------------|-------------|
| University of Florida | 9 hr 37 min |
| Penn State | 6 hr 14 min |
| MIT | 10 hr |
| Georgia Tech | 8 hr |
| RPI | 8 hr 33 min |
| United States Naval Academy | 3 hr 10 min |
| University of Maryland | 3 hr |

| School | Drive Time |
|------------------------------------|--------------|
| University of Massachusetts Lowell | 10 hr 12 min |
| NC State University | 2 hr 31 min |
| University of Pittsburgh | 6 hr |
| Clemson University | 6 hr 35 min |
| South Carolina State University | 5 hr 24 min |
| University of South Carolina | 5 hr 14 min |
| University of Tennessee | 6 hr 19 min |
| Vanderbilt University | 8 hr 55 min |
| VT | 3 hr 35 min |

Travel to Events.is

The facility where the conference will be taking place is within walking distance from the hotel; however, for those who wish to not walk, a complimentary shuttle will be provided by the hotel to transport people back and forth all day Thursday through Sunday. Additionally, the hotel provides complimentary bicycles. Richmond also has bicycles available at hubs all around the city to return bikes or rent more. The dinner at the Altria Ballroom is also within walking distance to the hotel, but the hotel will also provide complimentary transportation to this event.



Several bussing companies have been considered for the transportation to the tours and the dinners. These quotes for the company we plan to use, Winn, and our contingency plan for transportation, Martz, can be found in the Appendix B.

Conference Program.is

Technical Program.is

Graphical Schedule.is

| | THURSDAY | | | | FRIDAY | | | | SATURDAY | | | |
|---------|---------------------------------|----------------|----------------|--------------------|---------------------------------|----------------|--------------------|-------------------|-----------------------------|--------------------|-------------------|--|
| 8 A.M. | Registration & Information Desk | Selected Tours | Workshop | LinkedIn Photos | Registration & Information Desk | Breakfast | | | Breakfast | | | |
| 9 A.M. | | | | Career Fair | | Panel | Technical Sessions | Workshop | Career Fair | Technical Sessions | Poster setup | |
| 10 A.M. | | | | | | Panel | | | | | Poster Viewing | |
| 11 A.M. | | | | | | Panel | | | | | | |
| 12 P.M. | | | Lunch Break | Lunch & Learn | | SSC Meeting | Lunch Break | Lunch & Learn | | | | |
| 1 P.M. | | | | | | | | | | | | |
| 2 P.M. | | | | | | | | | | | | |
| 3 P.M. | | | | | | | | | | | | |
| 4 P.M. | | | Workshop | Technical Sessions | | Panels | Workshop | Technical Session | Poster session - judging | | | |
| 5 P.M. | | | | | | | | | | | | |
| 6 P.M. | Opening Reception | | | | Banquet | | | | Dinner and Award Ceremony | | | |
| 7 P.M. | | | | | | | | | | | | |
| 8 P.M. | Opening Social | | | | Social | | | | Social | | | |
| 9 P.M. | | | | | | | | | | | | |
| 10 P.M. | | | | | | | | | | | | |

Panels.is

Technical panels aid in the overall goal of the technical program by allowing communication between conference attendees and industry professionals. One goal of the technical panels is to showcase the large number of nuclear companies and facilities in or around Virginia by having a local representative on every panel if possible. The panels during the conference will consist of each speaker being allowed to speak for 10 minutes followed by moderator and attendee questions.

Health Physics and Medicine

This panel will focus on radiation dosimetry, health physics and radioisotope use in the medical field. This will include methods of accurately predicting the dose the patient will

receive from various treatments, methods of controlling doses, and efforts to reduce the received dose. The radioisotope use will include an overview of the area that radioisotopes are being used and where they will potentially be used and the challenges being faced in this area.

Power Generation

The focus of this panel is the progression of nuclear power worldwide. The panelists will address the challenges of building new power plant in different political climates, reactor design that are being used in new plants and the how further research could drive the use of SMRs and other reactor types. This can also include the challenges being faced by companies attempting to license new sites or reactor designs.

Safety, Security, and Nonproliferation

The panelists will discuss the new methods of radiation detection that are being developed and implemented to track the movement of nuclear materials. In addition to the current technologies, this panel will discuss the challenges moving forward in regards to both technical and political aspects.

Innovation and Entrepreneurship

This panel will consist of industrial leaders in innovation that include SMRs and Gen IV reactor designs and the progress being made on those designs and the potential for licensing them. We will also include innovation in other area such as radiation detection and safety.

Simulation

Developers of nuclear simulation codes will provide an overview of their specific codes and the status of their current simulations. They will address the focus of their simulations (reactor neutronics, thermal hydraulics) and the challenges in these respective simulation as well as any method of linking the two areas.

Material Separation and Recovery

Expert on various methods of nuclear reprocessing will give a brief explanation of the process they represent as well as present the pros and cons of their method. They will also discuss the challenges of incorporating reprocessing into the current U.S. nuclear fuel cycle.

Saving the Ageing Fleet

This panel will focus on the economic status of the aging light water and boiling water reactors in the nuclear industry. New research is being performed, such as developing accident tolerant fuels, that is believed to help these old systems; however, it may be the economics solely driving these designs into extinction over the next decade.

Workshops.is

The workshops provide a hands-on experience for attendees where they are able to refine existing skills and acquire new skills to help separate them from the competition.

Proposal Writing

Proposal writing is very important to all scientists so it is important that we all understand how to effectively write an informative proposal. This workshop will focus on writing research proposals for graduate students, postdocs, national lab workers, and academics professors. Useful tools that can be used when writing a research proposal at any levels will be taught so attendees will learn skills that they will take into their future endeavors.

Coding

Computer programming is becoming a huge part of the nuclear industry, and some undergraduate level academics are experiencing important gaps in this technology. It is important to teach students the importance of learning this craft before they get into the industry. This panel will focus on all the aspects of coding in the nuclear industry and provide insight to students on how to learn this art on their own.

Nuclear Advocacy

This workshop will focus on learning skills that will help convey a pronuclear message to the general public. This is a very important skill to have as nuclear scientists because we need to advocate to improve the public's perception of nuclear technologies. The workshop will focus on talking at community outreach events and to members of the media.

Preparing for Graduate School and Being an Effective Graduate Student

This two part workshop will focus on how to apply to graduate school and what to expect in the application process. It will also talk about basic requirements such as taking the GRE and having a GPA sufficient enough to get into the school you are looking at. Then the workshop will transition to what is important to be an effective graduate student. The second part will focus on balancing research and course work and look at types of funding such as assistantship, fellowships and grants.

Distilling Your Message

Participants learn to speak clearly and vividly about their work and why it matters, in terms non-scientists can understand. They practice finding common ground with an audience, speaking at different levels of complexity for different audiences using storytelling, and answering questions about their work.

Improvisation for Scientists

Improvisation for Scientists is an innovative workshop pioneered by Alan Alda that uses improvisational theater games to help scientists speak more spontaneously, responsively

and directly with their audience. This workshop is not about acting, but about getting scientists to connect with and engage their audience.

Technical Sessions.is

The technical sessions make up the majority of the technical program at the conference. The technical sessions provide attendees an opportunity to present their work and learn about the research that other universities and peers are performing.

Divisions, Judging, and Awards

Each ANS technical division will have one or more technical sessions during the conference based on the amount of submissions to each respective division. If there is a lack of submissions for a specific division then some divisions may be combined for the technical sessions. The speakers will have 15 minutes to give an oral presentation and 5 minutes for questions. Student volunteers will moderate the sessions and two or three professional judges will oversee the presentations. The presentations will be judged based on communication, organization, and content. Copies of the judging forms will be sent to the speakers following the conference in order to aid in their development of presentation skills. Each technical division will have two awards based on the judging criteria, one undergraduate and one graduate award.

Accommodations

The VCU Student Commons will have six rooms for presentations, accommodating approximately 40 sessions with 4 to 5 presenters each. Each room will be set up as a lecture style and equipped with a podium, projected screen, microphone, and computer. Prior to a speaker's presentation they may practice and check their presentation in a preparation room which will be available from 10am - 5pm starting from Thursday. Additionally, speakers should arrive to their session early to sign in with the student volunteer and upload their presentation to the designated computer.

Poster Sessions.is

Judging and Awards

Posters will be judged based on the material, layout, design, and communication. Three awards will be given out based on average score, best poster and two honorable mentions. Due to the volume of posters there will be one or two judges per poster and a judge may oversee several posters.

Accommodations

A poster session to present research and/or school projects will be held Saturday afternoon in a portion of the Commonwealth Ballroom approximately 1,378 square feet. There will be additional space in the James River Terrace if required. Students will have from 9am - 10am to set up their posters, then the posters will be available for viewing the remainder of the day. Poster judging will be held from 1pm - 4pm. Presenters are required

to be present during judging to answer questions and hold discussion with both the judges and other attendees.

Career Fair.is

The career fair will be held starting Friday morning, ending early evening, through Saturday morning in the Commonwealth Ballroom at the Student Commons. Here, students will have a chance to interact with representatives from companies in the nuclear field. Job interviews may be conducted in a designated room that day, subject to the companies' wants. Each company will have to pay a registration fee which will help cover the cost of the career fair itself, i.e. school staffing, meals for the representatives, etc. We will also have a LinkedIn photo booth at the career fair to give students the opportunity to get professional pictures taken.

Guest Speakers.is

Chris Comfort works for Southern Nuclear in Birmingham, Alabama, as the Innovation and Technology Manager with responsibilities for positioning Southern Nuclear as an innovation and technology leader in the nuclear industry. Comfort joined Southern Nuclear in 1998 as a core analysis engineer in the nuclear fuel department. Comfort graduated from Georgia Tech in 1996 where he received his undergraduate nuclear engineering degree. In 1998 he received a master's degree in nuclear engineering from Texas A&M University.



Per F. Peterson holds the William and Jean McCallum Floyd Chair in the Department of Nuclear Engineering at the University of California, Berkeley. He participated in the development of the Generation IV Roadmap in 2002 as a member of the Evaluation Methodology Group, and co-chaired its Proliferation Resistance and Physical Protection Working Group. His research in the 1990's contributed to the development of the passive safety systems used in the GE ESBWR and Westinghouse AP-1000 reactor designs. Currently his research group focuses primarily on heat transfer, fluid mechanics, and regulation and licensing for advanced reactors.

Suzy Hobbs Baker

While attending art school at Appalachian State, Suzy's sculpture and writing veered so far into the realm of climate science and biology that her professors could no longer grade her work – and had to bring in a science advisor for support. Her career has included time as an art teacher at a children's hospital exploring the science of cancer, an education advisor to conceptual artist Mel Chin, and then time at Idaho National Laboratory, supporting communications for the Nuclear Innovation Workshops and subsequent events that have rapidly pushed new nuclear technologies into the public spotlight. She is now part of Third Way's Clean Energy team as Communications Advisor.



Jill Cooley is a senior technical consultant with Global Security and Strategic Partnerships of Consolidated Nuclear Security, LLC at the Y-12 National Security Complex. She recently returned to Y-12 after a 20-year assignment with the International Atomic Energy Agency (IAEA) in Vienna, Austria, where she led a technical division of 70 staff in the Department of Safeguards responsible for strategic planning, policy development and training for IAEA staff and member states. Jill has over 35

years of experience with nuclear non-proliferation policy, international and domestic safeguards, and arms control and disarmament. In her current position, Jill is responsible for broadening the role of the Y-12 National Security Complex and the Pantex Plant in nonproliferation and arms control programs and providing direct support to National Nuclear Security Administration organizations. Previous to her assignments with the IAEA, Jill was manager of the Safeguards Program of Lockheed Martin Energy Systems in Oak Ridge, responsible for technical support to the IAEA and various US federal agencies. She also served as technical advisor to the U.S. Department of State in the Office of Nuclear Technology and Safeguards and the Bureau of Intelligence and Research. Jill received her Bachelor of Science degree in Mathematics and Physics and a Master of Science degree in Nuclear Engineering, both from the University of

Wisconsin. She is a fellow of the Institute of Nuclear Materials Management and has received that organization's distinguished service award.



The Honorable Kristine L. Svinicki was sworn in for her second term as a Commissioner of the U.S. Nuclear Regulatory Commission (NRC) on June 29, 2012, to a term ending on June 30, 2017. Her previous term as a Commissioner began on March 28, 2008. Ms. Svinicki has a distinguished career as a nuclear engineer and policy advisor, working at the state and federal levels of government, and in both the legislative and executive branches. Before joining the NRC, Ms. Svinicki spent over a decade as a staff member in the United States Senate advancing a wide range of policies and initiatives related to national security, science and technology, and energy and the environment. She also served as a professional staff member on the Senate Armed Services Committee for the

Committee's former Chairman, Sen. John Warner, R-Va., and, subsequently, for the Committee's ranking Republican member, Sen. John McCain, R-Ariz. There, Ms. Svinicki was responsible for the Committee's portfolio of defense science and technology programs and policies, and for the atomic energy defense activities of the U.S. Department of Energy, including nuclear weapons, nuclear security, and environmental programs. Previously, Ms. Svinicki worked as a nuclear engineer in the U.S. Department of Energy's Washington, D.C. Offices of Nuclear Energy, Science and Technology, and of Civilian Radioactive Waste Management, as well as its Idaho Operations Office, in Idaho Falls, Idaho. Before that, she was an energy engineer with the State of Wisconsin at the Wisconsin Public Service Commission in Madison, Wisconsin. Born and raised in Michigan, Ms. Svinicki earned a bachelor's degree in nuclear engineering from the University of Michigan in 1988. She is a longstanding member of the American Nuclear Society, where she served two terms on the ANS Special Committee on Nuclear non-Proliferation. In 2006, the Society honored her with its Presidential Citation in recognition of her contributions to the nuclear energy, science, and technology policies of the United States. She has served as a member of the Center for Strategic and International Studies' Task Force on Global Nuclear Materials Management, and as an Expert Advisory Panel Member to the NRC on assessing the future of regulatory research needs. She was selected as a Stennis Congressional Fellow of the 108th Congress, as a Brookings Institution Legis Congressional Fellow in 1997, and as the University of Michigan College of Engineering Alumni Society Merit Award recipient for Nuclear Engineering and Radiological Sciences in 2009.

Andrew Paterson, Principal – Environmental Business International

Mr. Paterson brings nearly three decades of experience to projects in the energy and environmental industries, focused on analysis of policy and commercial markets in energy technology and finance. He is a board member and principal with Environmental Business International, and a principal with its financing affiliate, Verdigris Capital, LLC. While with Econergy, a private equity developer of clean energy and carbon resource projects, he worked on energy project finance and carbon management projects focused in the Americas (acquired in December 2008 by GDF-Suez). Mr. Paterson speaks at numerous industry conferences and is a skilled moderator in energy policy forums, and speaks on policy developments each year at the Environmental Business Summit. He works with numerous industry groups and NGOs: EPRI, NARUC, EEI, SSEB, IEA, CSLF, GABI. He also lectures on Energy Market and Policy Trends to the Naval Post-graduate School (2010-14), and was selected as Scholar of the Year at the George Mason Univ. School of Public Policy in 2013. He was chosen to speak at the 2014 Global Leaders Forum in Seoul, Korea Nov. 19-20 on National Energy Strategies.

Technical Tours.is

Virginia is home to many nuclear facilities which play a vital role to the commonwealth's economy. These tours will allow conference attendees to venture out into the surrounding areas to see highlights of Virginia's strong and varied nuclear network.

Dominion Energy Emergency Response Center

Dominion has two nuclear plants in Virginia: North Anna and Surry power stations. In order to be prepared to address any issues that may occur, Dominion has their emergency response center at their Innsbrook facility, located 20 minutes from the conference site. This facility is a training and research center for energy emergency preparedness, based on their employees' observations and in lessons learned from other nuclear power plants worldwide. These exercises allow for evaluation of the company emergency response and their improvement.



North Anna or Surrey Power Plants Tours

North Anna and Surrey power plants are located 1 hour and 1.5 hours from Richmond, respectively. VCU-ANS members have toured these facilities annually. The tours showcase models of their nuclear reactors and containment structures, and give the opportunity to visit the control room simulators. In this room, the students are able to manipulate the controls and experience the impact of their choices in plant operations. The control room simulator is a learning tool for maintenance, craft, chemistry and health physics personnel, allowing for both basic and continuing training. The objective of this tour is to reinforce the theoretical knowledge of the students and place it a more practical scenario.



NIST Center for Neutron Research

NIST Center for Neutron research (NCNR) is a reactor site built in 1967 and declared by ANS as a nuclear historic landmark. The NCNR is located in Maryland approximately 2.5 hours from Richmond. The reactor produces neutrons that are used to study a variety of physical phenomena which cannot be studied by other means. One of the most important studies carried out in the reactor is an investigation of stresses imposed to pipes and

materials used in the nuclear industry. Some other studies carried out here include the production of hydrogen for nuclear fuel cells and the high capacity data storage devices based on giant magnetoresistance.

AREVA facilities tour

Located in Lynchburg approximately two hours from Richmond is a unique facility that offers the opportunity to test nuclear materials for the safety requirements required in the nuclear industry. AREVA's seismic analysis laboratory is built around an electro-hydraulic 7-ton shake table capable of testing items weighing up to 10 tons with vibrations up to 100 Hz. Furthermore, the facility simulates the high temperatures and vibration conditions encountered when earthquakes and tsunamis impact a nuclear power plant. Areva has been a benefactor of the university through the numerous visits by the nuclear students of VCU. In the past, students have been able to learn about AREVA's business, the design process, and the various robots and inspection tools developed and built by AREVA engineers.



BWXT fuel manufacture facility

BWXT Nuclear Operations Group, Inc. located in Lynchburg, VA is a facility that is certified as the only domestic supplier of research reactor fuel for universities and national laboratories. Students will have the opportunity to tour their site, composed of facilities designed to monitor and test integral system behavior for integrated nuclear systems. The tour will also showcase their research on design for small modular nuclear reactors via experimentation and simulation.



Newport News Shipbuilding

Founded in 1886, Newport News Shipbuilding is one of the most historically prolific shipyards, building both naval and commercial ships. Located in Newport News, VA, approximately one and a half hours from Richmond, their facilities span more than 550 acres in one of the great harbor areas of the East Coast. Moreover, Newport News Shipbuilding is the sole designer, builder and refueler of U.S. Navy aircraft carriers and one of two providers of U.S. Navy submarines. With approximately \$4 billion in revenues and more than 20,000 employees, NNS is the largest industrial employer in Virginia and the largest shipbuilding company in the United States. The students will have the opportunity to tour facilities in a bus tour provided by the company. Afterwards engineers will share their experience with augmented reality, a technique that they use in the building and maintenance of the ships.



Afternoon on the hill in D.C.

With the recent closures of nuclear power plants around the country due to economic concerns, it is vital that nuclear players create a strong voice to our legislature in support of the existing nuclear power plants and future of the industry. The logistics committee will organize a day on the hill for nuclear engineering students to meet and discuss the importance of nuclear power with legislators. This event will consist of a brief meeting with any senator or delegate in order to advocate for nuclear matters. It will serve as a follow-up and precursor to the Storm the Hill events at the ANS winter meetings in Washington D.C., which is approximately two hours from the city of Richmond.



Nuclear Medicine tour at the VCU Medical Campus

VCU School of Engineering often collaborates with the school of medicine at MCV hospital, one of the main hospitals in Richmond. In this tour, students will have the opportunity to visit the linear accelerators which make the treatments for radiotherapy patients. Furthermore, students will visit the hospital accelerator where radionuclides for treatment and diagnosis are produced. The attendees also will learn about the safety requirements involved in transporting the radionuclides within the hospital, as well as the shielding involved for device operators and medical staff when treating a patient who has been treated with radionuclides.



Non-technical Program.is

Non-technical Tours.is



Stone Brewing Company

The Richmond area is home to dozens of craft [breweries](#). Stone Brewing Co., founded in 1996 in San Marcos, California, opened its eastern U.S. production brewery in Richmond in March 2016. This 200,000 sq. ft. facility provides most of the Stone beer for distribution east of the

Rocky Mountains. The brewery is located approximately three miles from the hotel and transportation will be provided. Note this is a 21+ event.

Hardywood Park Craft Brewery

Hardywood Brewery is one of Richmond's favorite spots. It was founded in Richmond and has been soulfully brewing beer since 2011. Today, Hardywood operates a brewery and taproom in Richmond, will be opening a brewery and taproom in Charlottesville soon, and has plans for a \$28M brewing facility and beer campus in Goochland, Virginia slated for 2018. One of the more unique characteristics of this expanding brewing company is its commitment to minimizing their environmental impact through striving to source all of their power through renewable energy. Note this is a 21+ event.



Breakfasts.is

Breakfasts will be catered by a local Richmond favorite Early Bird Biscuit Co. Breakfast will be served in a grab-and-go fashion in one of the conference rooms at the Graduate Hotel. Bakery favorites will be provided for participants to choose from. Coffee by another local Richmond favorite company, Blanchard's Coffee, will also be provided. Both of these companies already currently work with Graduate Richmond.



Lunches.is

Companies wishing to host a sponsored lunch will be provided a room in The Commons with catered boxed lunches for 30 guests. This is an opportunity to connect with students interested in their company as well as serve as a great recruiting tool.

The SSC Meeting will take place over lunch, with boxed lunches provided for 50 guests.

Tours that will take place over the entirety of a day will provide boxed lunches, with the exception of Afternoon on the Hill. The Afternoon on the Hill Tour will have a specified time to go out in the nation's capital to find lunch.

Because the conference will be taking place in the heart of Richmond, attendees are encouraged to go out and explore the city and take advantage of the many food options within walking distance. Richmond has become well known for its food scene, as can be seen in [this](#) video. We will also work to bring the food truck scene to the street located behind The Commons in order to provide a quicker affordable lunch option.

Dinners.is



Thursday: Opening Ceremony at Virginia Museum of Fine Art

The opening ceremony will be held at the Virginia Museum of Fine Arts (VMFA). The museum provides a sophisticated yet casual atmosphere that welcomes all guests after their travels. The Marble Hall will be reserved, and guest can enjoy access to all of the art exhibits, which are excellent sources of conversation-starters. All food will be catered by VMFA. Guests will enjoy a large selection of Hors D'oeuvres.

Friday: Dinner at Altria Theater

Art has always been an important matter of subject for the city of Richmond. Thus the Altria theater, one of the most important landmarks of the city, always offers something to everyone. The theater opened in 1927 and has hosted musicians such as Jimi Hendrix and Elvis Presley, entertaining for decades to the Richmond population. The dinner will be hosted at the elegant Altria Theater Ballroom. The theater's diverse blend of architecture based on mosque art will transport guests to another world.

**Saturday: Dinner and Award Ceremony at the Main Street Station**

Dinner will be held in the Richmond's Main Street Station, which is a fully functioning Amtrak station. This architectural gem is a Richmond historical landmark. The Main Street Station was built in 1901 and is considered a US historic landmark. The building has an iconic architecture made of red brick and it has a significant role in the development of Virginia, providing an important stop on the southeast high speed rail corridor as well as direct transportation for downtown Richmond. The newly built shed within the station has glass windows, allowing guests at a banquet to enjoy the view of downtown Richmond. The Shed will be utilized for the dinner and the following awards ceremony due to its spacious facilities.



Movie Night.is

The New Fire

"The New Fire" is an independent documentary about next-generation nuclear technology and the role it could play in fighting climate change. It is a grassroots effort that has been funded entirely through the generosity of visionary individuals and family foundations. VCU MNE is one of the many producers of the film.

The movie will be shown as part of the conference at the theater in The Commons, with the concession stand open and complimentary popcorn, candy, and drinks available. We will try to work with the filmmaker Dave Schumacher to provide introductory remarks and join a panel discussion with diverse experts at the conclusion of the film.



Socials.is

Thursday: Carytown Exploration

Guests will be encouraged to explore Carytown, one of Richmond's most thriving social districts. Known for its culinary adventures and timeless atmosphere, Carytown is a short walk from VMFA. Guests can visit some of the renowned local bars, such as Can Can Brasserie, Bakers Crust, and Garden Grove Brewing; or enjoy a scrumptious dessert at Galaxy Diner. Shopping options are also available.





Friday: Walking on Shockoe Bottom

Shockoe Bottom, which is within a 15-minute walk from Main Street Station, is a flourishing piece of Richmond with historical charm and a name of uncertain origin. This district is home of several historical sites such as the former residence of Edgar Allan Poe and the first white house in the nation. As guests wind their way down the cobblestone streets, they can pop into local breweries for trivia. In

particular, guests will enjoy Capital Ale House, which

will be rented out for the evening. This restaurant offers an animated atmosphere with different local, national and international beers and wines as well as a band always willing to cheer the crowd.



Saturday: Mysterious Grandstaff and Stein

Grandstaff and Stein is a secret place enclosed by bookshelves with old novels. But if you walk towards its back door and whisper the password you will enter to an interesting scene. The bartenders are dressed with old time outfits and the place seems to evoke a different era, where drinking was forbidden. Their specialties are cocktails and fast food entrees that will entice patrons to enjoy the speak-easy environment.

Under 21 Socials

Two socials will be held throughout the weekend for under-21 students. The first social will be in The Graduate's Sixty Room, which can hold 180 people. An escape room will be set-up in the hotel by Ravenchase Adventures and non-alcoholic beverages will be served by The Graduate. The theme of the escape room will be related to nuclear, and riddles regarding the theory and general knowledge about nuclear sciences will be employed. The second activity will be a trivia night, in which students will be quizzed in important subject matters ranging from Sports to History. The winning team will be awarded with ANS swag and of course bragging rights.

Finances.is

Attendance.is

We are projecting 450 students and 100 professionals. This was decided through examining historical trends and taking in consideration advice from several previous chairs. Projecting more students than previously estimated and fewer professionals is a way of conservatively budgeting. This same approach was recommended and has worked well in the past. Should we have fewer participants, we will visit our contingency budget plan found in Appendix B.

| Host School | Year | Students | Professionals |
|-----------------------------------|------------------|----------|---------------|
| VCU | 2019 (projected) | 450 | 100 |
| UF | 2018 (projected) | 430 | 120 |
| University of Pittsburgh | 2017 | ~500 | ~75 |
| University of Wisconsin - Madison | 2016 | 438 | 130 |
| Texas A&M University | 2015 | 375 | 137 |
| Pennsylvania State University | 2014 | 350 | 150 |
| MIT | 2013 | 536 | 101 |
| University of Nevada, Las Vegas | 2012 | 400 | 200 |
| Georgia Institute of Technology | 2011 | 425 | 105 |
| University of Michigan | 2010 | 482 | 183 |

Banking and Financial Oversight.is

Currently, the VCU student chapter of ANS has one bank account through Wells Fargo for which we are granted tax exempt status with our 501(c)(3) in firm standing. With this in mind, we propose to use Wells Fargo as our primary account holder for the conference. Having them host our account for several years we have established a working relationship with them and have been given sufficient reason to trust them. Currently, it is unknown whether ANS National is tax exempt in the state of Virginia, but this is currently being investigated. Should investigations prove ANS does have this status, we will reconsider. ANS has much more experience with accounts of this size, as well as brand recognition that allows donors to feel more secure.

For oversight, we plan on implementing a system similar to the one we have within our chapter. In this system, every expense or income will be reported to the treasurer who will then report it to the president of the chapter/Head of the Conference. A cosigned receipt of each transaction will then be scanned into an electronic file and made public to (the public at large)/(other chairs). This allows for both security and clarity.

Liability.is

Dining

- Catering vendors assume all food related liabilities.

Transportation

- Contracted bussing companies assume all transportation liabilities.
- Graduate Richmond's airport shuttles are covered under their own insurance.

Alcohol

- Alcohol is not permitted at the University Student Commons.
- Alcohol will only be served to students ages 21 or older.
- Alcohol served in bars is distributed by the bar establishment and therefore the conference is not responsible.

Money

- All purchases will be made with the approval of the conference co-chairs and finance chair.
- ANS claims liability for all unpaid expenses. Therefore, they will carefully review all contracts before we can sign anything.

Event Insurance

- A possible insurance policy through ANS National will be explored. Special Event Insurance will also be looked into in order to cover any other liability issues.

Budget.is

Expense.is

| | Item | Price (\$) | Thursday | Friday | Saturday | Sunday | Total (\$) |
|------------|----------------------------|------------|----------|--------|----------|--------|-------------------|
| Facilities | VCU Student Commons | 3,600.00 | | | | | 3,600.00 |
| | Facilities Subtotal | | | | | | 3,600.00 |
| Food | VMFA Dinner | 16,950.00 | 1 | | | | 16,950.00 |
| | Altria Ballroom Dinner | 31,076.15 | | 1 | | | 31,076.15 |
| | Main Street Station Dinner | 46,246.94 | | | 1 | | 46,246.94 |
| | Breakfast | 10.00 | | 400 | 400 | 200 | 10,000.00 |
| | SSC Lunch | 9.00 | | | 50 | | 450.00 |
| | Sponsored Lunches | 9.00 | | 60 | 30 | | 810.00 |
| | Professional's Lunches | 9.00 | 100 | 100 | 100 | | 2,700.00 |
| | Tour Lunches | 9.00 | 150 | | | | 1,350.00 |
| | Coffee Breaks* | 1,500.00 | | 1 | 1 | | 3,000.00 |
| | Food Subtotal | | | | | | 112,583.09 |



| | Item | Price (\$) | Thursday | Friday | Saturday | Sunday | Total (\$) |
|----------------|----------------------------|------------|----------|--------|----------|--------|--------------|
| Socials | Carytown Social* | 3,000.00 | 1 | | | | 3,000.00 |
| | Capitol Ale House Social* | 3,000.00 | | 1 | | | 3,000.00 |
| | Grandstaff & Stein Social* | 3,000.00 | | | 1 | | 3,000.00 |
| | Under 21 Social* | 1,000.00 | | 1 | 1 | | 2,000.00 |
| | Socials Subtotal | | | | | | 11,000.00 |
| Transportation | Dinner Shuttle - VMFA | 5,650.00 | 1 | | | | 5,650.00 |
| | Dinner Shuttle - MSS | 5,650.00 | | | 1 | | 5,650.00 |
| | Student Reimbursment | 60,000.00 | | | | | 60,000.00 |
| | Dominion Tour | 851.00 | 1 | | | | 851.00 |
| | Areva Tour | 1,223.00 | 1 | | | | 1,223.00 |
| | BWXT Tour | 1,223.00 | 1 | | | | 1,223.00 |
| | North Anna Tour | 972.00 | 1 | | | | 972.00 |
| | Afternoon on the Hill | 1,223.00 | 1 | | | | 1,223.00 |
| | NIST Tour | 1,223.00 | 1 | | | | 1,223.00 |
| | Stone Brewery Tour* | 565.00 | 1 | | | | 565.00 |
| | Hardywood Brewery Tour* | 565.00 | 1 | | | | 565.00 |
| | Transportation Subtotal | | | | | | 79,145.00 |
| Awards & Gifts | \$\$\$ Awards* | 100.00 | | | 3 | | 300.00 |
| | Speaker Gifts | 50.00 | | | | | 300.00 |
| | Certificates | 50.00 | | | | | 50.00 |
| | Swag | 10,000.00 | | | | | 10,000.00 |
| | Awards & Gifts Subtotal | | | | | | 10,650.00 |
| Tours | Stone Brewery* | 3.00 | 50 | | | | 150.00 |
| | Hardywood Brewery* | 8.00 | 50 | | | | 400.00 |
| | Tours Subtotal | | | | | | 550.00 |
| Promotions | Website | 200.00 | | | | | 200.00 |
| | Mobile App | 2,500.00 | | | | | 2,500.00 |
| | Programs | 5,000.00 | | | | | 5,000.00 |
| | Promotions Subtotal | | | | | | 7,700.00 |
| Grand Total | | | | | | | \$225,228.09 |

*Marks discretionary costs, for more information see Appendix C: Contingency Plan.

Revenues.is

Registration costs at the VCU conference will be \$35 per student and \$250 per professional. With our anticipated attendance, we are expecting \$40,750. We are estimating \$187,500 in sponsorship funds bringing our total revenue to \$228,250. This number does not take into account the money typically provided by ANS Sections and through the ANS National Seed money. We believe with our proximity to so many large nuclear companies, this sponsorship will be achieved.

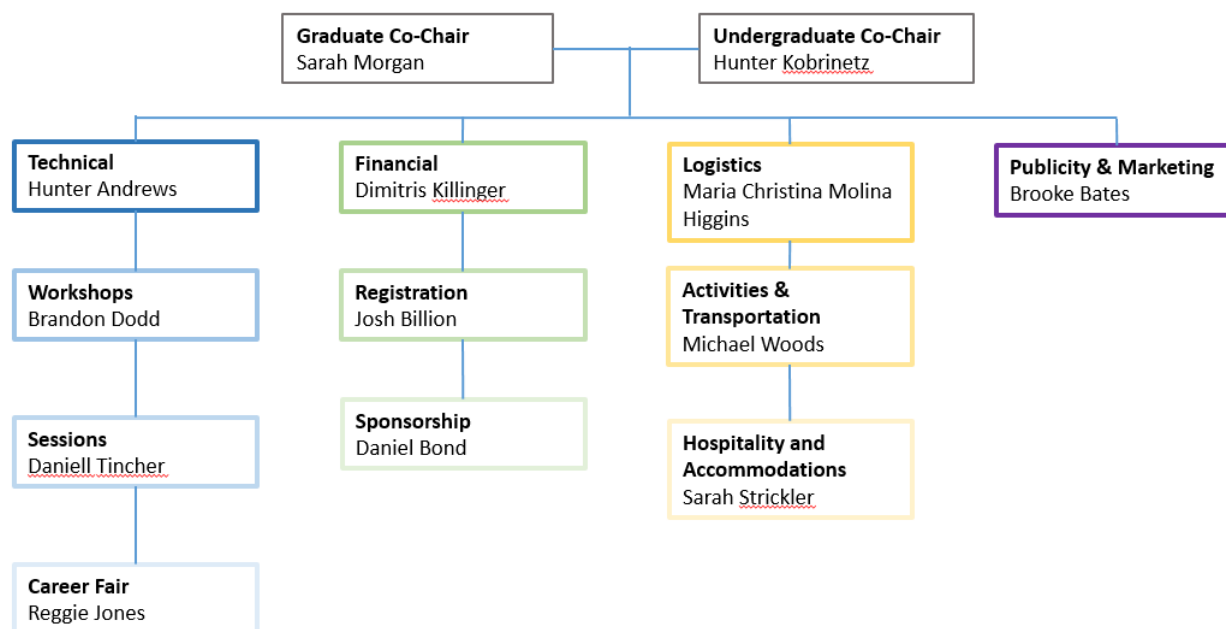
| | Amount (\$) | Quantity | Subtotal (\$) |
|---------------|-------------|----------|---------------|
| Registration | 35.00 | 450 | 15,750.00 |
| | 250.00 | 100 | 25,000.00 |
| | Subtotal | | 40,750.00 |
| | | | |
| Sponsorship | 25,000.00 | 1 | 25,000.00 |
| | 15,000.00 | 3 | 45,000.00 |
| | 10,000.00 | 5 | 50,000.00 |
| | 5,000.00 | 5 | 25,000.00 |
| | 2,500.00 | 15 | 37,500.00 |
| | 1,000.00 | 5 | 5,000.00 |
| | Subtotal | | 187,500.00 |
| Revenue Total | | | 228,250.00 |

Contingency Plans.is

In the chance that the budget is inadequate for the conference, a contingency plan was made with several budget cuts. Some major cuts involve having two dinners at the Altria Ballroom rather than just one, therefore significantly lowering both the food costs and transportation cost. Also some long distance tours can be cancelled, lowering the transportation costs and the cost of box lunches. Additionally, socials can have less money set aside for them, or no complimentary bar services offered. Another potential saver would be offering transportation to a brewery tour, but requiring participants to pay the \$8 or \$3 participation fee. A detailed chart of these cuts can be found in Appendix B. Raising the student attendance cost to \$40 instead of \$35 could also help offset prices.

Committee and Planning.is

Committee Chart and Responsibilities.is



General Chairs: One graduate and one undergraduate chair members make up the two co-chairs. They set up the major milestones and goals and delegate tasks to other Chairs to achieve these goals. They serve as the primary contact between the Chairs and advisors as well as professionals. The co-chairs will have the final word on all conference decisions.

Technical Chair: The technical Chair is responsible for organizing technical sessions, workshops, panels, and helping coordinate the career fair. He will oversee paper submissions and the review process and set judging criteria. He will also be in charge of recruiting judges and reviewers.

Workshop Coordinator: Organizes workshop locations, times, staffing, costs, supplies, student enrollment, and any other tasks needed to have successful workshops.

Sessions Coordinator: Will oversee any technical support needed for presentations and help coordinate the schedule.

Career Fair Coordinator: Will oversee staffing and support for the career fair as well as work closely with the Sponsorship Coordinator to ensure a successful Career Fair.

Financial Chair: The financial Chair is responsible for all aspects of financing the conference, and the required banking. He is responsible for creating and sticking to the budget and writing the financial reports for ANS National.

Registration: Responsible for assisting the Financial Chair by managing registration revenue and assisting with any discounts.

Sponsorship: Assists the Financial Chair with matters involving sponsorship as well as working closely with the Publicity/Marketing Chair.

Logistics: Responsible for overseeing the non-technical aspects of the conference. She recruits student volunteers and conference staffing.

Activities and Transportation: Responsible for both technical and non-technical activities including tours, socials, and banquets. Also plans snacks, breakfasts, and provided lunches. Additionally, coordinates all aspects of required transportation.

Hospitality and Accommodations: Coordinates with the conference facilities to ensure guests' needs are all met. She also organizes the meals and ensures any dietary restrictions are met and all guests are pleased. She also plays a key role in setting the events schedules.

Publicity/Marketing: Responsible for writing announcements for ANS and student members and organize and conduct publicity campaigns with several media sources as well as managing the website, social media and the conference app. She will ensure the conference is advertised widely and effectively.

Committee Biographies.is



Sarah Morgan (Graduate Conference Co-Chair)

Sarah is a first year graduate student pursuing a PhD in Mechanical and Nuclear Engineering. She is currently working on modeling of thermal stratification for sodium fast reactors. She also did her undergraduate work in Mechanical and Nuclear Engineering at VCU. Before returning to school to pursue a PhD, she worked at Norfolk Naval Shipyard as a Refueling Engineer for the Navy. She has been an active member of the local Virginia ANS and VCU ANS section for the past year, including attending the 2017 Student Conference and planning to participate in the student program at the 2017 ANS Winter Meeting.

Hunter Kobrinetz (Undergraduate Conference Co-chair)

Hunter is currently a sophomore pursuing a B.S. in Mechanical Engineering with a Nuclear Concentration. He is also in pursuit of a Physics degree to compliment the nuclear degree. He is a voting member of the VCU ANS chapter and has attended the University of Pittsburgh ANS Student Conference.



Dimitris Killinger (Financial Chair)

Dimitris is a first year graduate student in the VCU Department of Mechanical and Nuclear Engineering. His current project focuses on the observation and analysis of uranium morphology via electrochemical separation. He received his undergraduate degree in Mechanical and Nuclear Engineering from VCU, followed by a brief employment at Norfolk Naval Shipyard as a Refueling Engineer for the US NAVY. He is an active member of the VCU INMM section and the local VCU ANS section. He is also the current Secretary of the local VA ANS section and is looking forward to attending and participating in the 2017 ANS Winter Meeting, as well as future meetings to come.

**Brandon Dodd (Workshops Coordinator)**

Brandon is a fourth year PhD student in the VCU Department of Mechanical and Nuclear Engineering. His PhD research is focused on the development of an optics method to detect trace amounts of uranium in aqueous solutions. He did his undergraduate work at Virginia Military Institute in Mechanical Engineering. He is the Student President of the VCU INMM Chapter and an active member of National ANS and VCU ANS student section, which has included him attending the 2017 ANS Student Conference and planning to attend the 2017 ANS Winter Meeting.

Daniell Tincher (Sessions Coordinator)

Daniell is a Ph.D. candidate in his third year in the Mechanical and Nuclear Engineering Department at VCU and a US DOE NEUP Fellow. His research focuses on real-time, interactive modeling and simulation of nuclear power plants to engage nuclear engineering students and improve the efficiency of nuclear power plant studies. He currently serves as the President of the VCU student section of ANS. Prior to attending VCU, Daniell worked as a mechanical engineer in the Reactor Plant Planning Yard at Newport News Shipbuilding, in Newport News, VA. He performed engineering studies to improve performance and/or reduce operational and maintenance costs of aircraft carrier Reactor plant fluid systems. Daniell received a master's degree in nuclear engineering from the University of South Carolina in 2010. His thesis examined the feasibility of minor actinide transmutation in light water reactors to reduce the burden of high level waste, and he co-authored a paper regarding this work. Daniell received his bachelor's degree in physics from Presbyterian College in Clinton, SC in 2007. He has been active in ANS in student and local sections and as a national member since 2009.



**Michael Woods (Activities and Transportation Coordinator)**

Michael is a graduate student in his third year in pursuit of a PhD in the VCU Mechanical and Nuclear Engineering department. He received his B.S. Physics from Florida State University in 2014 after years of work at the National High Magnetic Field Laboratory. His graduate research focuses on electrochemical separations for alkali/alkaline-earth fission products from used nuclear fuel. He is the current VCU-ANS secretary and serves as a member at large of the VA-ANS local section. He has presented his work at ANS student, winter, and annual conferences.

Maria Molina Higgins (Logistics Chair)

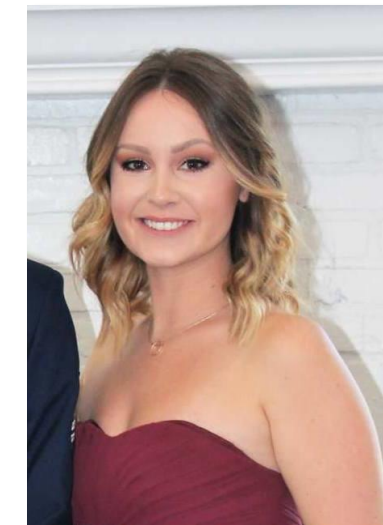
Maria Molina is currently pursuing her PhD in Mechanical and Nuclear Engineering at Virginia Commonwealth University. Her research focused on the development of a new nanomaterial that enhances the sensitivity of harmful tissue to radiation therapy. Upon graduation, she wants to continue encouraging and mentoring young women to actively participate in STEM fields.

**Reggie Jones (Career Fair Coordinator)**

Reggie Jones is a senior student pursuing a B.S. in Mechanical and Nuclear Engineering. He is currently an undergraduate research assistant designing a system with the ability to measure the viscosity and density of different molten salts for nuclear applications. He has been a member of ANS for the past two semesters.

Hunter Andrews (Technical Chair)

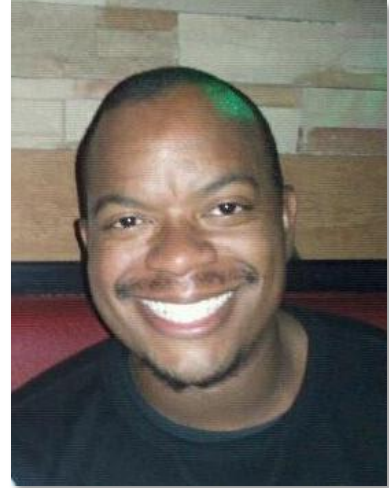
Hunter B. Andrews obtained a B.S. in Mechanical Engineering with a Nuclear Engineering Concentration from Virginia Commonwealth University (VCU) in the spring of 2016. He has previously interned at Newport News Shipbuilding in the Radiation Control department where he gained experience with nuclear safety procedures and aided in radiation surveys. He is currently a research assistant in the Radiochemistry Laboratory at VCU studying the properties of molten salts for used

**Brook Bates (Publicity and Marketing Chair)**

Brooke Bates is a senior undergraduate student pursuing a B.S. in Mechanical and Nuclear Engineering. She is currently a PRA intern for Dominion Energy and has accepted a full time position there contingent on graduation. She is the current VCU-ANS vice president and serves as a member at large of the VA-ANS local section.

Daniel Bond (Sponsorship Coordinator)

Daniel is a Ph.D. student in the Department of Mechanical and Nuclear Engineering with an interest in deep space shielding for manned missions to Mars using both material and spacecraft evaluation, as well as NASA's On-Line Tool for the Assessment of Radiation In Space (OLTARIS) and LANL's Monte Carlo N-Particle Code (MCNP). Prior to enrolling at VCU, Daniel worked for three years as an Instructor in the Department of Engineering at Virginia State University. He holds a master's degree in Nuclear Engineering from the University of California, Berkeley and a Bachelor's of Science in Physics from Howard University.

**Sarah Strickler (Hospitality and Accommodations Coordinator)**

Sarah is a junior in the Mechanical and Nuclear Engineering department at VCU. She has been a member of VCU-ANS since her freshman year and has participated in many of its activities, such as Girls Scout Workshops. She performs undergraduate research in infant airway anatomy modeling for use in pharmaceutical drug delivery in Dr. Longest's lab. Additionally she is a member of National-ANS and was the recipient of the Virginia ANS Section scholarship this year.

Joshua Billion (Registration Coordinator)

Josh is a senior in the Physics Department at VCU. His interests lie in medical nuclear application and is hoping to attend graduate school to pursue this interest further. He is currently the treasurer of the VCU-ANS.



Conflict Resolution.is

An official document for resolving conflicts and removing insubordinate members of the conference committee will be created. All members of the committee will review and agree to the official document. In general, any misconduct and/or negligence will be handled by the co-chairs. This includes not showing up to committee meetings and neglecting to complete tasks. The co-chairs have final authority on decisions regarding misconduct and negligence.

Conflicts between members of the committee will be resolved by the director overseeing the section of the committee those members are in. Conflicts between directors will be resolved by the co-chairs. Conflicts between the co-chairs will be resolved by a committee meeting where all directors will attempt to resolve the conflict. If a conflict can not be resolved then a committee will be called and the entire committee will vote on a resolution. Each member will have an equal vote and the majority rules.

In the case of extreme misconduct and/or negligence a member of the committee may be removed. In order to remove a member the co-chairs will first discuss the offense with the offending member. Then the co-chairs will consult with faculty advisors. Lastly, a committee meeting will be called and the entire committee will vote on removing the member. Before the vote, the offense must be presented and discussed by the committee. During the vote the offending member and the one who accused the offending member will not be allowed to vote. Each member gets one vote and majority rules for regular members. If a director or co-chair is being removed then $\frac{2}{3}$ of the committee must vote to remove that member. Lastly, a replacement for a director and/or co-chair must be ready to take the place of the removed member before the voting meeting takes place.

Staffing Requirements.is

The student members of VCU ANS are ready and willing to help fulfill the staffing requirements for this event. In addition to active student members, other members of the Mechanical and Nuclear Engineering department at VCU are ready and willing to step in and assist in any way necessary. If more volunteers are still needed then other local chapters will be asked to assist in staffing the conference. A small room for volunteers will be reserved to hold volunteer meetings if needed and to allow volunteers to take breaks during the day. Volunteers will be provided with a student conference t-shirt to help distinguish them from the rest of the students. Registration costs is also an option to entice students to volunteer.

| Head Coordinator | Task | Staff Needed |
|---------------------------------------|------------------|--------------|
| 2 Co-chair Assistants Needed Everyday | | |
| Thursday | | |
| Hotel Reception | Airport Greeters | 2 |

| Head Coordinator | Task | Staff Needed |
|--|---------------------------------|--------------|
| (Registration and Hospitality Directors) | Receptionist | 2 |
| | Hospitalities | 2 |
| Selected Tours (Technical Director) | Guides | 8 |
| | Workshop Assistants | 2 |
| Welcome Reception (Activities and Logistics Director) | Activities Coordinator | 1 |
| | The New Fire Movie Assistants | 2 |
| | Dinner Assistants | 3 |
| | All Purpose | 6 |
| Total Thursday Staffing Requirements | | 28 |
| Friday | | |
| Hotel Reception (Registration and Hospitality Director) | Receptionist | 2 |
| | Hospitalities | 2 |
| Breakfast (Hospitality Director) | Coordinator | 1 |
| | All Purpose | 2 |
| Program (Technical Director) | Coordinator | 1 |
| | Interview/Recruiters' Aide | 2 |
| | Career Fair | 2 |
| | Technical Session Room Proctors | 4 |
| | Food/Lunch | 2 |
| | Technical Director | 1 |
| | Hospitalities | 2 |
| | Audio/Visual Assistants | 4 |
| | Workshop Assistants | 2 |
| | All Purpose | 6 |
| Dinner (Activities and Logistics Director) | Coordinator | 1 |
| | Dinner Assistants | 3 |
| | All Purpose | 6 |
| Social (Activities Director) | Coordinator | 1 |
| | All Purpose | 6 |
| Total Friday Staffing Requirements | | 50 |
| Saturday | | |
| Hotel Reception (Registration and Hospitality Directors) | Receptionist | 2 |
| | Hospitalities | 2 |
| Breakfast (Hospitality Director) | Coordinator | 1 |
| | All Purpose | 2 |
| Program (Technical Director) | Coordinator | 1 |
| | Interview/Recruiters' Aide | 2 |
| | Career Fair | 2 |
| | Technical Session Room Proctors | 4 |

| Head Coordinator | Task | Staff Needed |
|--|-------------------------------|--------------|
| | Poster Session Setup/Proctors | 2 |
| | Food/Lunch | 2 |
| | Technical Director | 1 |
| | Hospitalities | 2 |
| | Audio/Visual Assistants | 4 |
| | Workshop Assistants | 2 |
| | All Purpose | 6 |
| Dinner (Activities and Logistics Directors) | Coordinator | 1 |
| | Dinner Assistants | 3 |
| | All Purpose | 6 |
| Social (Activities Director) | Coordinator | 1 |
| | All Purpose | 6 |
| Total Saturday Staffing Requirements | | 52 |
| Sunday | | |
| Hotel Reception (Registration and Hospitality Directors) | Receptionist | 2 |
| | Help Desk | 2 |
| Breakfast (Hospitality Director) | Coordinator | 1 |
| | All Purpose | 2 |
| Total Sunday Staffing Requirements | | 7 |

Schedules and Milestones.is

| Deadline | Task | Responsibility |
|---------------------------|--|------------------------------|
| November | | |
| November 2 nd | Announcement of 2019 Conference | |
| November 2 nd | Update milestones with lessons learned | |
| November 5 th | Notify department of selection | Co-Chairs |
| November 13 th | Confirm Conference Committee and finalize date | Co-Chairs |
| November 19 th | Confirm conference reservations | Logistics |
| November 26 th | Contact national for support and begin negotiation with hotels | Co-Chairs & Logistics |
| November 26 th | Set up banking through associated bank and ANS | Financial |
| December | | |
| December 3 rd | Finalize facilities reservations | Hospitality & Accommodations |
| December 21 st | Finalize logo design | Publicity & Marketing |
| December 21 st | Begin outlining website, app, social media, etc. | Publicity & Marketing |
| January | | |

| Deadline | Task | Responsibility |
|------------------------------|---|------------------------------|
| January 14 th | Confirm bi-monthly meeting schedule | Co-Chairs |
| February | | |
| February 4 th | Launch social media plan | Publicity & Marketing |
| February 18 th | Finalize technical topics | Technical |
| March | | |
| March 4 th | Get in touch with speakers and presenters | Technical |
| April | | |
| April 5-7 th | Attend Student Conference in Florida | |
| April 22 nd | Request information from UF on lessons learned | Co-Chairs |
| May | | |
| May 6 th | Confirm tours and costs of tours | Activities & Transportation |
| May 20 th | Submit progress report to SSC | Co-Chairs |
| May 20 th | Create call for papers sheet | Technical |
| June | | |
| June 17-21 st | Attend National Conference in Philadelphia | |
| July | | |
| July 1 st | Confirm with all speakers and presenters | Technical |
| July 15 th | Report on talks with sponsors | Sponsorship |
| July 29 th | Reassess budget based on sponsorship and other costs | Financial |
| August | | |
| August 12 th | Touch base with sponsors | Sponsorship |
| August 26 th | Submit progress report to SSC | Co-Chairs |
| September | | |
| September 9 th | Updates on conference and paper submission deadlines | Sponsorship |
| September 26 th | Finalize order of gift bags | Logistics |
| October | | |
| October 7 th | Confirm hotel blocks and contracts | Hospitality & Accommodations |
| October 21 st | Open registration | Registration |
| October 21 st | Create and test online paper submission portal | Technical |
| November | | |
| November 4 th | Print out call for papers | Technical |
| November 11-15 th | Attend Winter Conference in Orlando | |
| November 18 th | Finalize marketing material | Publicity & Marketing |
| November 18 th | Report on engagement with sponsors and other meetings at the Conference | Co-Chairs |
| December | | |

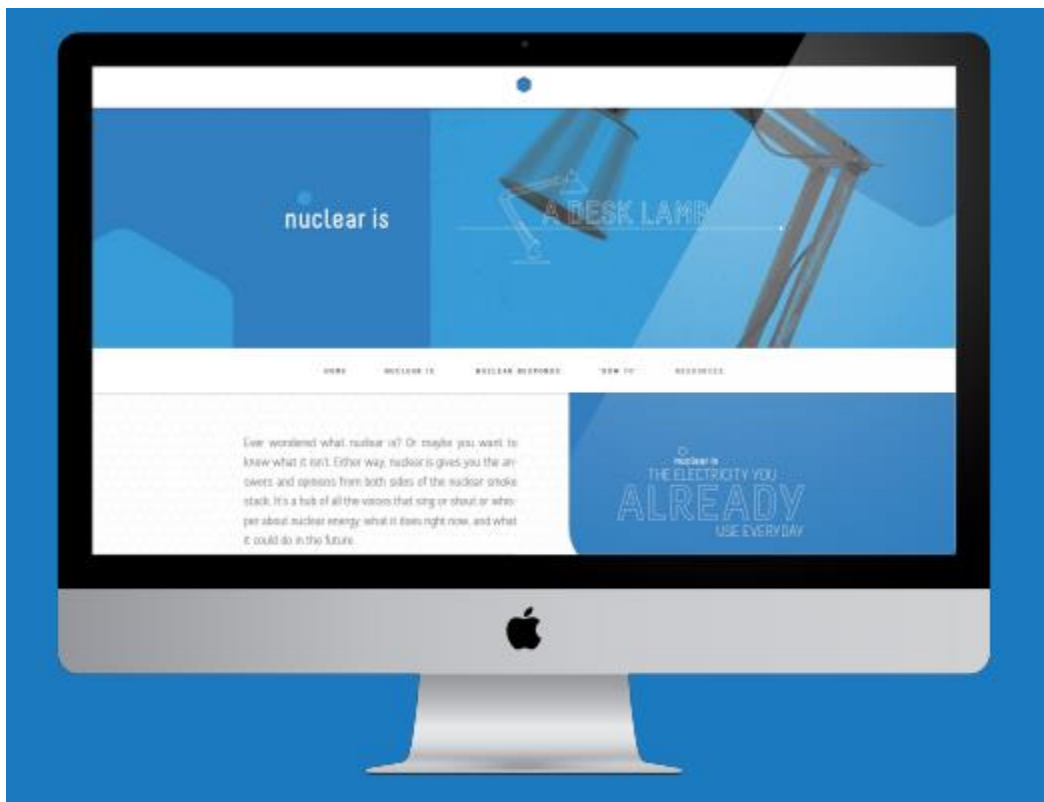
| Deadline | Task | Responsibility |
|------------------------------|---|------------------------------|
| December 2 nd | Reassess budget | Financial |
| December 17 th | Update mobile app and website | Publicity & Marketing |
| December 17 th | Update SSC on progress | Co-Chairs |
| December 17 th | First paper deadline – send to reviewers | Technical |
| January | | |
| January 7 th | Return paper reviews, give one week to turn in edits | Technical |
| January 7 th | Order swag | Logistics |
| January 14 th | Receive final papers, organize tracks | Technical |
| January 21 st | Confirm menus and transportation | Hospitality & Accommodations |
| January 28 th | Print programs | Technical |
| January 28 th | Finalize awards | Technical |
| February | | |
| February 1 st | Submit final progress report to SSC | Co-Chairs |
| February 15 th | Prepare welcome bags and print tags, signs, and banners | Co-Chairs |
| February 21-24 th | Host Conference | |
| February 28 th | Publish report | Co-Chairs & Technical |
| February 28 th | Process student travel reimbursements | Financial |
| March | | |
| March 4 th | Return seed money | Financial |
| March 11 th | Finalize financial report | Financial |
| March 11 th | Submit conference report | Co-Chairs |

Website, App, and Social Media.is

Website.is

Our student section of ANS would provide a website for the conference featuring possible live stream viewing options for those who could not make the conference in person. In the future, this stream could be featured and shared on all of the ANS Facebook pages for different universities etc. for maximum exposure. The website could capture emails for those who want to view the live stream and that contact list could be provided to ANS for future communication opportunities with its audience. The website would provide an interactive schedule with times for featured speakers with their social media profiles and most pronounced work linked to their speaking topic. We would also install a Facebook "messenger bot" in the bottom corner of the website for potential attendees to message the Facebook page and ask questions. We could even

attach the main ANS Facebook messenger to the website as an interactive "chat bubble" in case people have questions about the conference. We would be sure to install Google Analytics and the Facebook Tracking pixel in order to measure data from this year's visitors. This will provide helpful insights about the ANS online audience as well as useful data for future conferences and events. It will also create possible advertising audiences for marketing in the future. The website should be a platform for people to educate themselves on the conference, and we will use it as a tool to build retention with those visitors.



App and Social Media.is

For social media and a mobile app, we will be providing an app built out by a local brand here titled "V4." They have the capability of building out a mobile app that could send out push notifications to attendees. For example, if a particular speaker is about to begin, we would have the ability to send a notification to all attendees phones with a reminder of when the speaker is starting. We could even go as far as having the conference passes on the app in order to encourage downloads of the app, which also provides more data and feedback to capture an in-depth understanding of who attends the events, and who is highly likely to attend in the years to come. For social media, we can build out an Instagram and Facebook page dedicated to posting before, during, and after the event as well as providing live footage and streams about the conference and possibly even short in-person interviews with keynote speakers etc. We can also use small Google proximity beacons to send push notifications to people that are within a radius



of the physical beacon at the conference. For example, if they walk near a particular "booth" we can send a notification to their phone alerting the attendee that they can enter the raffle that is held at the table with the blue apron. This is just an example, but our strategy is clear. We will drive high retention rates for attendees and get them excited about the conference by providing a unique user experience which no University has tackled before.

Appendix A: Schedule of Conflicts

| School | Spring Break | Finals | Holidays/Events |
|---|-------------------------------|------------------|-----------------------------------|
| University of Florida | March 2 -9 | April 27 – May 3 | 1/21 |
| Texas A&M* | March 11-15 | May 9 -15 | 1/21 |
| Penn State | March 3-9 | April 29-May 3 | 1/21 |
| MIT | March 25-29 | May 20-24 | 1/21, 2/18 |
| UNLV* | March 11-16 | May 6-11 | 1/21, 2/18 |
| Michigan | March 2-10 | April 25 – May 2 | 1/21 |
| Oregon State University | NA | March 15-22 | 1/21, 5/27 |
| UC Berkley | March 25-29 | May 13-17 | 1/21, 2/18 |
| UC Irvine | N/A | March 16-22 | 1/21, 2/18, 3/29 |
| United States Naval Academy | March 11-15 | May 2-9 | 1/21, 2/11-2/15, 2/18, 4/1-4/5 |
| University of Maryland | March 17-24 | May 16-22 | |
| University of Massachusetts Lowell | March 11-18 | May 6-11 | 1/21, 2/18, 4/15 |
| Missouri University of Science and Technology | March 14-18 ,March 24-April 1 | May 13-17 | 1/21 |
| University of Missouri-Columbia | March 23 - April 1 | May 13-17 | 1/21 |
| University of Nevada – Reno | March 16-24 | N/A | N/A |
| University of New Mexico* | March 10-17 | N/A | N/A |
| NC State University | March 11-15 | April 29 - May 7 | 1/21, 4/19 |
| Air Force Institute of Technology | | March 11-14 | 1/21, 2/18, 5/24 |
| University of Pittsburgh | March 3-10 | April 22-27 | 1/21, 3/8 |
| Clemson University | March 18-22 | April 29 - May 3 | 1/21 |
| University of South Carolina | March 10-17 | May 1-8 | 1/21 |
| University of Tennessee | March 18 -22 | April 30 - May 7 | 1/21, 4/19 |
| Brigham Young University | March 15 | April 19-24 | 1/21, 2/18 |
| University of Utah | March 10-17 | April 25 – May 1 | 1/21, 2/18 |
| Utah State University | March 11-15 | April 29 – May 3 | 1/21, 2/18, 4/22- 4/26 |
| VCU | March 3-10 | May 2-10 | 1/21 |
| Virginia Tech | March 9-17 | May 10-15 | 1/21 |
| University of Wisconsin-Madison | March 16-24 | May 5-10 | 1/21 |
| Colorado School of Mines | March 23-31 | May 4-9 | 1/21 |

*Proposed dates



| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|---|-------------------------|-----|----------------------------|-------|---------------------------------------|-----|
| 18 Presidents Day | 19 | 20 | 21 First Proposed Dates | 22 | 23 | 24 |
| 25 Finals: Ohio State | 26 | 27 | 28 | Mar 1 | 2 | 3 |
| | | | | | | |
| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
| 25 Finals: Ohio State | 26 | 27 | 28 | Mar 1 | 2 | 3 |
| | | | | | | |
| 4 Spring Break: U Florida, Penn State, U Michigan, U Pitt, VCU | 5 | 6 | 7 | 8 | 9 | 10 |
| | | | | | | |
| 11 Spring Break: Texas A&M, UNLV, Ohio State, Oregon State, US Naval Academy, U Mass Lowell, Missouri S&T, U | 12 Finals: Air Force | 13 | 14 | 15 | 16 Finals: UC Irvine, Oregon State | 17 |
| | | | | | | |
| 18 Finals: UC Irvine, Oregon State | 19 | 20 | 21 | 22 | 23 | 24 |
| | | | | | | |
| 25 Spring Break: U Maryland, Clemson, U Tennessee, U Wisconsin | 26 | 27 | 28 | 29 | 30 | 31 |
| | | | | | | |
| | | | | | | |
| Mon | Tue | Wed | Thu | Fri | Sat | Sun |
| Apr 1 | 2 | 3 | 4 Second Proposed Dates | 5 | 6 | 7 |
| | | | | | | |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | | | | | | |

Appendix B: Transportation Quotes

Winn Transportation

| Pickup Location | Pickup Time | Drop-Off Location | Return to Pickup Location? | Return Time | Buses (Assume Capacity = 55 passengers) | Quote/Cost (\$) |
|----------------------------------|-------------|--|----------------------------|-------------|---|-----------------|
| Graduate Richmond Hotel | 11:00 AM | MCV - Richmond, VA | Yes | 4:00 PM | 1 | 565 |
| Graduate Richmond Hotel | 7:00 AM | Dominion Resources Innsbrook - Glen Allen, VA | Yes | 4:00 PM | 1 | 851 |
| Graduate Richmond Hotel | 7:00 AM | Areva - Lynchburg, VA | Yes | 4:00 PM | 1 | 1223 |
| Graduate Richmond Hotel | 7:00 AM | BWXT - Lynchburg, VA | Yes | 4:00 PM | 1 | 1223 |
| Graduate Richmond Hotel | 7:00 AM | Lightbridge Corporation - Reston, VA | Yes | 4:00 PM | 1 | 1223 |
| Graduate Richmond Hotel | 7:00 AM | Nuclear Regulatory Commission - Rockville, MD | Yes | 4:00 PM | 1 | 1223 |
| Graduate Richmond Hotel | 7:00 AM | North Anna Nuclear Generating Station - Mineral, VA | Yes | 4:00 PM | 1 | 972 |
| Graduate Richmond Hotel | 7:00 AM | Newport News Shipbuilding - Newport News, VA | Yes | 4:00 PM | 1 | 972 |
| Graduate Richmond Hotel | 7:00 AM | NIST - Gaithersburg, MD | Yes | 4:00 PM | 1 | 1223 |
| Graduate Richmond Hotel | 11:00 AM | Triple Crossing Brewing (Fulton) - Richmond, VA | Yes | 4:00 PM | 1 | 565 |
| Graduate Richmond Hotel | 11:00 AM | Stone Brewing - Richmond, VA | Yes | 4:00 PM | 1 | 565 |
| Graduate Richmond Hotel | 11:00 AM | Hardywood Park Craft Brewery - Richmond, VA | Yes | 4:00 PM | 1 | 565 |
| Graduate Richmond Hotel | 5:00 PM | Virginia Museum of Fine Arts - Richmond, VA (Dinner) | No | N/A | 10 | 5650 |
| Graduate Richmond Hotel | 5:00 PM | Science Museum of Virginia (Dinner) | No | N/A | 10 | 5650 |
| Graduate Richmond Hotel | 5:00 PM | Main Street Train Station - Richmond, VA (Dinner) | No | N/A | 10 | 5650 |
| Total Passengers for Dinner | ~550 | | | | | |
| Bus Capacity used in Spreadsheet | 55 | | | | | |

Martz Transportation

Quotation Details

Martz Group

| | | | |
|---|--|--|---|
| Client ID Client Company Client Ref 1 Client Ref 2 | Dimitris Killinger Virginia Commonwealth University | Quotation ID Movement ID Passengers | 66288 81149 550 |
| First Pick-up Pick-up Date Single Journey Vehicle To Stay | Richmond, VA Fri 8/31/2018 Time 11:00 No Yes | Destination Arrival Date Leave Date Back Date | Richmond, VA Fri 8/31/2018 Time Fri 8/31/2018 Time Fri 8/31/2018 Time 16:00 |
| First Pick-up Instructions | | Destination Instructions | |
| Graduate Richmond 301 West Franklin Street Richmond, VA 23220 | | MCV Campus Virginia Commonwealth University Richmond, VA 23284 | |
| POC/Group Leader: TBA | | | |
| Quantity | Seats | Vehicle Description | |
| 9 | 55 | Deluxe Motorcoach | |
| Movement Totals | | | \$5,355.00 |
| Route | | Further Requirements | |
| | | Quoted by Marie Rivera mrivera@martzgroup.com Phone: 570-821-3868 Fax: 570-821-3811 *Please note, this quote is valid for 30 days before the price is subject to change. This does not guarantee availability of buses. You must call or email to confirm availability and reserve.* *Group is responsible for any parking fees. It is also the Group's responsibility to verify bus parking permission and availability at the venue.* *Any change in time, pickup location, or itinerary may result in a change of price.* | |
| Included Items | Included | Included Items | Included |
| Driver Gratuity | No | Parking | No |
| Vehicle Facilities | | | |
| DVD Player | Restroom | | |

Appendix C: Contingency Plan

| | Item | Total (\$) | 1st Cut | 2nd Cut | 3rd Cut |
|------------|---------------------|------------|-------------|-------------|-------------|
| Facilities | VCU Student Commons | 3600 | 3600 | 3600 | 3600 |
| | Facilities Subtotal | | 3600 | 3600 | 3600 |

| | | | | | |
|------|----------------------------|----------|-----------------|----------------|----------------|
| Food | VMFA Dinner | 16950 | 16950 | 16950 | 16950 |
| | Altria Ballroom Dinner | 31076.15 | 31076.15 | 31076.15 | 31076.15 |
| | Main Street Station Dinner | 46246.94 | 46246.94 | 31076.15 | 31076.15 |
| | Breakfast | 10000 | 10000 | 10000 | 10000 |
| | SSC Lunch | 450 | 450 | 450 | 450 |
| | Sponsored Lunches | 810 | 810 | 810 | 810 |
| | Professional's Lunches | 2700 | 2700 | 2700 | 2700 |
| | Tour Lunches | 1350 | 900 | 450 | 450 |
| | Coffee Breaks | 3000 | 2000 | 1000 | 0 |
| | Food Subtotal | | 111133.1 | 94512.3 | 93512.3 |

| | | | | | |
|---------|---------------------------|------|-------------|-------------|-------------|
| Socials | Carytown Social | 3000 | 2000 | 1000 | 0 |
| | Capitol Ale House Social | 3000 | 2000 | 1000 | 1000 |
| | Grandstaff & Stein Social | 3000 | 2000 | 1000 | 1000 |
| | Under 21 Social | 2000 | 1000 | 500 | 500 |
| | Socials Subtotal | | 7000 | 3500 | 2500 |

| | | | | | |
|----------------|-------------------------|-------|--------------|--------------|--------------|
| Transportation | Dinner Shuttle - VMFA | 5650 | 5650 | 5650 | 5650 |
| | Dinner Shuttle - MSS | 5650 | 5650 | 0 | 0 |
| | Student Reimbursement | 60000 | 56250 | 50625 | 45000 |
| | Dominion Tour | 851 | 851 | 851 | 0 |
| | Areva Tour | 1223 | 1223 | 1223 | 1223 |
| | BWXT Tour | 1223 | 1223 | 0 | 0 |
| | North Anna Tour | 972 | 972 | 972 | 972 |
| | Afternoon on the Hill | 1223 | 1223 | 1223 | 0 |
| | NIST Tour | 1223 | 0 | 0 | 0 |
| | Stone Brewery Tour | 565 | 565 | 565 | 0 |
| | Hardywood Brewery Tour | 565 | 0 | 0 | 0 |
| | Transportation Subtotal | | 73607 | 61109 | 52845 |



| | Item | Total (\$) | 1st Cut | 2nd Cut | 3rd Cut |
|-----------------|-------------------------|------------|----------------|----------------|----------------|
| Awards & Gifts | \$\$\$ Awards | 300 | 150 | 150 | 0 |
| | Speaker Gifts | 300 | 300 | 300 | 300 |
| | Certificates | 50 | 50 | 50 | 50 |
| | Swag | 10000 | 10000 | 9000 | 8000 |
| | Awards & Gifts Subtotal | | 10500 | 9500 | 8350 |
| Tours | Stone Brewery | 150 | 150 | 0 | 0 |
| | Hardywood Brewery | 400 | 0 | 0 | 0 |
| | Tours Subtotal | | 150 | 0 | 0 |
| Promotions | Website | 200 | 200 | 200 | 200 |
| | Mobile App | 2500 | 2000 | 1750 | 1500 |
| | Programs | 5000 | 5000 | 5000 | 5000 |
| | Promotions Subtotal | | 7200 | 6950 | 6700 |
| New Grand Total | | | 213,190 | 179,171 | 167,507 |

Appendix D: Hotel and Facility Prices and Capacities

Graduate Hotel



Tuesday, January 17, 2017

Thank you for your interest in the Graduate Richmond. We welcome the opportunity to provide guest rooms for your event and I am confident that our team of hospitality professionals will exceed your expectations. The following proposal includes information about our property, as well as your group's agenda and related pricing for the **American Nuclear Society Student Conference**.

To be a Graduate, is to be part of a well-curated, well-crafted collection of hotels that reside in the most dynamic University towns across the country. Every site and property celebrates and commemorates the youthful optimism of school days and cultivates the spirit of each community in a bright new way.

Every smart cultural nod in the place winks at the heritage and history of Richmond. Bask in the unexpected, where little moments of surprise and discovery will meet you down every corridor and around each corner. Our warm, friendly and whip smart staff can guide you in and around town so that you feel like a local, at home again — even if it's your first time in town.

Opened June 2017!

Each guest room features curated furniture and art that embraces the Richmond culture along with these standard guest room amenities:

complimentary Wi-Fi, refrigerator, hairdryer, coffemaker, tech supported alarm clocks, extended viewing channels on your 43' flat screen HDTV, spacious work desk, and iron with board

Additional amenities at the property also include:

Complimentary shuttle available in a two-mile radius based upon availability

Brookfield: lobby café and bar with outdoor terrace

Byrd House: 16th floor roof-top bar serving small plates with panoramic views of Richmond-
opening September 2017!

Roof-top seasonal outdoor pool and 2nd floor Fitness Center

Complimentary bicycle rentals for local transportation and sightseeing

Conference space up to 150 people available for rental

Located in Downtown Richmond, Graduate Richmond is within walking distance to many unique dining options, theaters, museums, the James River, and historic Broad Street and Monument Avenue.

Come see why Richmond was voted 2016 Travel + Leisure "Best Place to Visit in 2016" and National Geographic Traveler included Richmond in its list "Where to Travel for Food in 2016" feature!

301 WEST FRANKLIN STREET, RICHMOND, VA 23220 804-644-9871 WWW.GRADUATERICHMOND.COM

Proposal

Preferred AVAILABILITY:

| | | Thu, 02-21-19 | Fri, 02-22-19 | Sat, 02-23-19 |
|--------------|----------|---------------|---------------|---------------|
| QQ | per diem | 70 | 70 | 70 |
| K | Per diem | 20 | 20 | 20 |
| Family Suite | \$269.00 | 5 | 5 | 5 |

The current per diem government rate for Richmond is \$139.00, the prevailing per diem rate for 2019 will be honored. Rates are released October 2018.

Alternate date:

| | | Thu, 04-04-19 | Fri, 04-05-19 | Sat, 04-06-19 |
|--------------|----------|---------------|---------------|---------------|
| QQ | \$169.00 | 70 | 70 | 70 |
| K | \$169.00 | 20 | 20 | 20 |
| Family Suite | \$299.00 | 5 | 5 | 5 |

These net rates are based on double occupancy and are for our standard King or Queen/Queen rooms. Hotel room rates are quoted exclusive of applicable state and local taxes (currently 13.3% per room per night) in effect at the time of check-in. Hotel check-in time is 4:00 p.m. and check-out time is 11:00 a.m.

Attrition: Graduate Richmond will allow 20% attrition in this room block. Anything above 10% will be charged at the average rate and tax.

RESERVATIONS/CUT OFF DATE: The block will be reserved until 30 days prior and any unreserved rooms will be automatically released at that time. A credit card will be required at time of booking to confirm reservations.

PARKING: Valet parking only is available at this property for \$22.00 per car per day with in/out privileges. Street parking may be available during posted hours only.

COMMISSION/REBATE: The group room rate listed above is non-commissionable.

SPECIAL CONCESSIONS:

- One complimentary room night per every 40 full priced rooms actualized
- Reduced valet of \$12.00 per car per day

Details in this proposal expire on, **Tuesday, January 16, 2018**. You can contact me by phone at 804-521-3408 or by e-mail at nboughan@graduaterichmond.com to receive a contract guaranteeing your space held.

Nicole Boughan, Director of Sales

Virginia Museum of Fine Arts



Facility Rooms and Spaces

(All prices for 4 hours of event time)

| Space | Building/Wing | Capacity | Fee |
|----------------------------------|---|-----------------------------|--|
| Amuse | McGlothlin Wing Level 3 | 150 standing | 2000.00 |
| Amuse Terrace | (must have rain plan) | 60 seated | |
| Claiborne-Robertson Room | McGlothlin Wing Level 3 | 100 seated 200 standing | 1500.00 |
| Private Dining Room | McGlothlin Wing Level 3 | 40 seated 60 standing | +\$200 with Amuse or Claiborne- Robertson Room |
| Best Café | McGlothlin Wing Level 1 | 250 standing | 2000.00 |
| Café Terrace | (must have rain plan) | 64 seated | |
| Cochrane Atrium | McGlothlin Wing Level 1 | 300 seated 1000 standing | 7500.00 |
| Exhibition Gallery East Lobby | McGlothlin Wing Exhibition Level (inc. Spec. Exhibition Galleries) | 150 standing | 4500.00 |
| Marble Hall | West Wing Level 2 | 300 seated 700 standing | 3500.00 |
| West Wing Terrace | (must have rain plan) | 200 standing | |

*2016



Hors D'oeuvres Menu

For 150 guests and fewer:
Please select a maximum of eight items - two must be butlered.

For groups of 150 and greater:
Please choose a maximum of ten items - two must be butlered.

We assume a minimum of 50 guests for a special event. Special pricing is available for smaller groups.

| | |
|---|-------------------|
| Select all items from List A | \$26.50 per guest |
| Select an equal number of items from Lists A & B | \$34.00 per guest |
| Select all items from List B | \$40.00 per guest |
| Select an equal number of items from Lists B & C | \$46.00 per guest |
| Select all items from List C | \$52.50 per guest |

The prices above do not include the service charge of \$30.00 per server, per hour. Service charge includes set up, event time and break down time. Some charges are subject to state (5.3%) and local (6%) taxes. Your event coordinator will provide an estimate upon request.

*2016

Hors D'oeuvres Menu

List A

Hors D'oeuvres

Liptauer cheese/pumpnickel croutons
Domestic cheese board/crackers
Roasted red pepper and spinach gratin/garlic croutons
Southwestern layered dip/tortilla chips
Salsa trio - black bean, salsa verde, fruit salsa/tortilla chips
Salmon spread/crackers
Shrimp cocktail torta/crackers
Season's fruits/raspberry yogurt dipping sauce
Fresh and roasted vegetables/herbed goat cheese dip
Devilled eggs/chives/bacon or caviar
Belgian endive/fresh grilled tuna caper salad
New potatoes/goat cheese/sun-dried tomatoes
New potatoes/sour cream/caviar
Hummus, tabbouleh and baba ghannoush/fresh pita chips
Baked artichoke dip/crostini
Greek lamb meatballs/aioli dipping sauce
Maytag blue cheese meatballs Marchand de vin
Warm Montrachet/wild mushrooms/caramelized onion
Pork and crab balls/apricot mustard sauce

*2016

List A**Butlered items**

Three Cheese Quesadillas
Cheese puffs
Tomato and fresh mozzarella bruschetta
Southwest chili/corn cups
Pissaladiere
Artichoke hearts stuffed with cream cheese
Spanokopita
Crabmeat in pastry
Chicken tempura/plum sauce
Mushrooms stuffed with crabmeat
Warm chive biscuits/St. Andre
Pork satay/peanut sauce
Wild mushroom and brie toasts
Smoked salmon/black bread/fresh dill
Beef tenderloin canapés/horseradish cream
Italian sausage on sun-dried tomato biscuits
Smoked trout canapés/horseradish cream
Black Forest Prosciutto and melon skewers
Turkey/sun-dried cranberry biscuits
Smoked pork/onion walnut muffins
Smoked salmon mousse/cucumber rounds
Roquefort grapes
Mini tomato/basil and/fresh mozzarella stack
Herbed Brie/pecans/fruit chutney
Pita chip/hummus/watermelon radish
Fried green tomatoes/house-made pimiento cheese
Southwestern spirals
Tarragon chicken salad in croustade
Pumpkin ham biscuits
Prosciutto and olive tapenade crostini

*2016



Bar Menu

Bar service based on consumption
(Host Bar)

| <u>House Brands</u> \$6.00 per drink | <u>Call Brands</u> \$7.00 per drink | <u>Premium Brands</u> \$8.00 per drink |
|---|--|---|
| <i>Smirnoff Vodka</i> | <i>Absolut Vodka</i> | <i>Grey Goose Vodka</i> |
| <i>Seagram's Extra</i> | <i>Tanqueray Gin</i> | <i>Bombay Sapphire</i> |
| <i>Dry Gin</i> | <i>Jack Daniels</i> | <i>Maker's Mark</i> |
| <i>Virginia Gentleman</i> | <i>Mount Gay</i> | <i>Ten Cane Rum</i> |
| <i>Bourbon</i> | <i>Dewar's Scotch</i> | <i>Famous Grouse</i> |
| <i>Bacardi Silver</i> | | <i>Scotch</i> |
| <i>J & B Scotch</i> | | |

*Other brands available by special request
(minimum charge will be 20 drinks per bar, per special request)

Domestic Beer
\$4.00 per drink

Miller Lite
Yuengling

Imported Beer
\$5.00 per drink

Hardywood Singel
Blue Moon
Legend Brown Ale
Stella
Northern Lights

House wine is \$28.00 per bottle

VMFA Red or White Wine is \$28 per bottle
Premium wines are also available by the bottle

House champagne is \$30.00 per bottle

Prices do not include applicable taxes and service charges

*2016



Equipment Fees

PROJECTORS

| | |
|---|--------|
| Portable multimedia projector w/ 5'X5' screen | 200.00 |
| Multimedia projector in Reynolds Lecture Hall, Cheek Theater and Claiborne Robertson Room | 250.00 |

PRESENTATION/MEETING

| | |
|--|--------|
| Laptop computer | 200.00 |
| 42" Flatscreen monitor | 250.00 |
| BluRay or DVD player | 100.00 |
| Flatscreen with BluRay or DVD player | 350.00 |
| Conference phone | 75.00 |
| Wood podium | 75.00 |
| Acrylic podium | 150.00 |
| Easel or flip chart (pad not included) | 10.00 |

SCREENS

| | |
|--|--------|
| Large front or rear projection screen (12' x 9') | 450.00 |
| Large front or rear projection screen (8' x 6') | 300.00 |
| Tripod projection screens (5' x 5') | 125.00 |
| Tabletop projection screen (4' x 3') | 95.00 |
| Confidence monitor (19" LCD screen in Cheek Theater) | 100.00 |

SOUND

| | |
|--|--------|
| Acrylic podium with wireless sound and microphone (2 speakers; includes CD player) | 300.00 |
| Additional wired microphone on stand or handheld | 50.00 |
| Additional wireless handheld microphone (UHF) | 100.00 |
| Lavaliere | 100.00 |
| Additional speakers with tripod stands (a pair) | 250.00 |
| Audio monitor (single) | 125.00 |
| Ipod player | 125.00 |
| Black podium with microphone in CRR | 125.00 |

OTHER EVENT EQUIPMENT

| | |
|---|---------|
| Staging per 4' x 8' section | 60.00 |
| Piano (Cheek theater – 9' grand) | 250.00 |
| Piano tuning (Pauley Center or Marble Hall) | 175.00 |
| Table with cover and chairs | 15.00 * |
| *other than for food and beverage service | |

AV TECHNICIAN

| | |
|---|--------------|
| **Set-up and take-down included in equipment fees above | 75.00/hour** |
|---|--------------|

*2016

Altria Theater Ballroom



Sales / Catering Contract

| | | | | |
|----------------------|-----------------|----------------|----------------------|---------|
| Client/Organization | Event Date | Telephone | Email | Event # |
| ANS Student Section | 2/22/2019 (Fri) | (804) 339-5424 | morgansw@vcu.edu | E01240 |
| Address | Booking Contact | Site Contact | Guests | |
| 401 West Main Street | Sarah Morgan | Sarah Morgan | 550 (Pln) | |
| Event Title | Category | Sales Manager | Revised | |
| ANS Student Section | | Sarah Douglas | 9/21/2017 3:06:07 PM | |

SITE LOCATION

| | |
|-----------|--------------|
| Site Name | Site Address |
|-----------|--------------|

BANQUET ROOMS

| Description | Guests | Start | Bar | Serving | End | Banquet Room |
|-------------|-----------|---------|-----|---------|---------|----------------|
| | 550 (Pln) | 6:00 pm | NA | NA | 9:00 pm | Grand Ballroom |

FOOD/SERVICE ITEMS

| Food/Service Items | Price | Qty | Total |
|--|------------|-----|-------------|
| Grand Ballroom Rental | \$5,000.00 | 1 | \$5,000.00 |
| Rental of the Grand Ballroom includes tables, chairs, china, glassware and flatware. | | | |
| Plated Dinner | \$35.00 | 550 | \$19,250.00 |
| Salad | | | |
| Entree (with Vegetarian Option) | | | |
| Starch | | | |
| Vegetable | | | |
| Dessert | | | |
| Fresh Baked Rolls | | | |
| Water, Iced Tea | | | |
| Production | \$2,441.15 | 1 | \$2,441.15 |
| Riser/Stage, Podium, 2 Screens, 2 Projectors, Sound System, Microphone, Event Technician | | | |
| Security - Estimate | \$150.00 | 1 | \$150.00 |

| | Food | Beverage | Liquor | Equipment | Labor | Room | Other | Total |
|--------------------|-------------|----------|--------|------------|----------|------------|--------|-------------|
| Subtotal | \$19,250.00 | \$0.00 | \$0.00 | \$2,441.15 | \$150.00 | \$5,000.00 | \$0.00 | \$26,841.15 |
| Administrative Fee | \$4,235.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$4,235.00 |
| Taxes | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Total | \$23,485.00 | \$0.00 | \$0.00 | \$2,441.15 | \$150.00 | \$5,000.00 | \$0.00 | \$31,076.15 |

VCU Commons Capacity

University Student Commons & Activities Division of Student Affairs

University Student Commons – Room Capacities

| Room | Square Feet | Clear Room | Lecture | Conference | Banquet (w/ 8 - 9 chairs) | Classroom (w/ tables) | U-Shape* | Hollow Square |
|-----------------------|-------------|------------|--------------------|-------------------------------------|------------------------------|--------------------------|----------|---------------|
| Commonwealth Ballroom | 5,292 | 700 | 500 (Max 544) | | 176-198 | 174 | 72 | |
| Commonwealth A (1/3) | 1,378 | 150 | 120 | 40 | 48-54 | 48 | 41 | |
| Commonwealth B (2/3) | 3,771 | 400 | 300 | | 128-144 | 120 | 54 | |
| Virginia Rooms | 1,500 | 350 | 220 | | 120-135 | 100 | 60 | |
| Virginia (1/4) | 375 | 60 | 50 ⁽¹⁾ | 24 | 24-27 | 24 | 22 | |
| Virginia (1/2) | 750 | 125 | 100 ⁽¹⁾ | 40 | 48-54 | 50 | 33 | 42 |
| Virginia (3/4) | 1,125 | 200 | 170 | | 72-81 | 70 | 45 | 54 |
| Richmond Salons | 4,578 | 500 | 340 | | 160-180 | 144 | 66 | |
| Richmond (1/4) | 1,144 | 100 | 80 | 34 | 48-54 | 36 | 27 | 36 |
| Richmond (1/2) | 2,288 | 250 | 160 | | 80-90 | 72 | 51 | 60 |
| James River Terrace | 1,446 | 75 | | | | | | |
| Forum Room | 600 | | | | | | | |
| Commons Theater | 615 | | 280 | | | | | |
| Alumni Board Room | 868 | | | 30 (20 conference & 10 side chairs) | | | | |
| Canal Room | 300 | | | 14 | | | | |
| Metro Room | 115 | | 20 | | | | | |
| Shockoe Room | 375 | | | 20 (14 conference & 7 side chairs) | | | | |
| Common Ground | 2400 | 250 | 100 | | | | | |

(1) NOTE: Virginia Rooms have non-changeable, standard set-ups from 6:00 pm to close Sunday – Thursday during regular semesters.
VA-A = Lecture for 50; VA-B = Lecture for 50; VA-C&D = Lecture for 100. No changes to these set-ups will be permitted.

For additional information on rates and reserving rooms, go to www.usca.vcu.edu

Appendix D: Support



School of Engineering
Office of the Dean

601 West Main Street
P.O. Box 843068
Richmond, Virginia 23284-3068

804 828-3925 Fax: 804 828-9866
TDD: 1-800-828-1120
www.egr.vcu.edu

September 29, 2017

To the Members of the ANS Students Conference Selection Committee,

I am writing to enthusiastically support the bid proposal prepared by the Virginia Commonwealth University Student Section of the American Nuclear Society (VCU-ANS) to host the 2019 ANS Student Conference. Our ANS student section, as our nuclear engineering program, is relatively young but very active and engaged. Since chartered in 2012, the VCU Student Section of the ANS has sent students to all ANS Student Conferences and most ANS National Meetings. Two VCU-ANS students have served as Student Program Co-Chairs at the 2015 and 2017 ANS Winter Meetings in Washington, DC. At a local level, our ANS student section organizes tours of nearby nuclear facilities, bi-monthly meetings with guest technical speakers from the nuclear community, and numerous professional development workshops to enhance their job-seeking or public-speaking skills. VCU-ANS also organizes annual Boy Scout Nuclear Science Merit Patch workshops and Girl Scout "Get to Know Nuclear" workshops. In addition, the student section supports the week-long Science Teachers Workshop organized by VCU together with our Virginia local section of the ANS. Although, the VCU Student Section of the ANS is somewhat new, they have already demonstrated that they are prepared to handle the organization of a large event as the 2019 ANS Student Conference.

In summary, I have no doubt that the 2019 ANS Student Conference will be a resounding success if held in beautiful Richmond, VA organized by our VCU Student Section of the ANS.

Best Regards,



Barbara D. Boyan, Ph.D.
Dean, VCU School of Engineering



VCU

September 29, 2017

Dear Members of the ANS Student Conference Selection Committee,

I am proud to offer my most enthusiastic support for the bid proposal prepared by the Virginia Commonwealth University Student Section of the American Nuclear Society (VCU-ANS) to host the 2019 ANS Student Conference. I have been the Faculty Advisor of this section since its creation in 2011 (chartered in 2012) and I am also the Director of the very young Nuclear Engineering Program at VCU. As such, I am intimately familiar with the commitment and hard work that our students have invested into making our student section a thriving one, as well as a strong contributor to the success of our nuclear engineering program. I am also confident that the energy, abilities and dedication demonstrated by the current group of VCU-ANS students will allow them to successfully organize an excellent student conference.

I am also excited about the theme "Nuclear is ____" chosen by the students. At a time when the value and contributions of nuclear science and engineering are not recognized by our society, I think it is important to highlight the many ways in which our technology makes everyone's life better. This theme also seeks to recognize the many stakeholders that are a part of the nuclear enterprise, as well as the many career opportunities that nuclear engineering students may choose to pursue. All in all, it is a hopeful, forward-looking and all-inclusive vision for the future of nuclear.

Richmond is a beautiful city, with a rich history and a thriving arts and culture scene. VCU is an urban university, which has been a key positive influence towards Richmond's growth, and our Monroe Park campus is wonderfully intertwined with the city and its character. The venues our students have selected are perfectly suited to host a large student conference while allowing visitors to enjoy the many charms Richmond has to offer. In my opinion, our students have done a great job putting together a conference proposal that combines a strong technical program, unique tours, enriching professional development and networking opportunities, and hopefully lots of fun.

Although I know how competitive this selection process is, I truly hope that the ANS Student Conference Selection Committee will recognize the merits of the VCU-ANS bid proposal by selecting Richmond for the 2019 ANS Student Conference.

Best regards,



Dr. Sama Bilbao y León
Associate Professor, Director of Nuclear Engineering Programs
Dept. of Mechanical & Nuclear Engineering
Virginia Commonwealth University

Mechanical and Nuclear
Engineering
School of Engineering

East Engineering Hall E3252
401 W. Main Street
Richmond, Virginia 23284

804 828-2570
sbilbao@vcu.edu
www.egr.vcu.edu/

Sama Bilbao y León, Ph.D., MBA
Director of Nuclear Engineering
Programs
Associate Professor



an equal opportunity/affirmative action university

21st September, 2017



Selection Committee Members
ANS Student Conference

To Whom It May Concern:

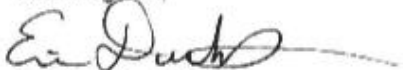
The Virginia Local Section of the American Nuclear Society is pleased to support the Virginia Commonwealth University (VCU) Student Section in their bid for the 2018 Student ANS Conference. The Virginia local section and VCU student section collaborate often and provide mutual support for the hosting of technical lectures and forums, as well as the execution of community outreach events, including science teacher workshops, larger advocacy campaigns such as the upcoming Nuclear in Our Backyard initiative, and Boy Scout merit badge courses. The VCU student section is a strong body of passionate and committed nuclear influencers who make an impact on the nuclear industry on their campus, in their city and across the commonwealth of Virginia.

If Richmond is chosen as the location for the 2018 student conference, the Virginia local section will provide the necessary support to the VCU student section. We will ensure that the conference is staffed with a wide array of volunteers from across the broad nuclear industry in central Virginia. Whether it be our members from Newport News Shipbuilding speaking on the use of new digital technologies for nuclear-worker dose reduction or project engineers from Dominion Energy addressing the outlook of their nuclear fleet, or even policy makers from the Virginia Nuclear Energy Consortium, the Virginia local section is poised to provide excellent support to the 2018 student conference. Furthermore, a broad spectrum of world-class nuclear facilities are available for technical tours through the Virginia local section member base, to include two nuclear power plants, one of the nation's top accelerators at Jefferson Lab, a cutting edge small-modular reactor technology test facility at Areva in Lynchburg, and extensive nuclear medicine facilities at the VCU medical college.

The Virginia Local Section highly recommends the selection of Richmond for the 2018 student conference, based on our vibrant and diverse body of nuclear professionals, the passion of the VCU student section, and the excellent collaboration which can take place between numerous nuclear professional organizations throughout central Virginia. We look forward to the opportunity to serve the next generation of nuclear engineers and scientists as they converge here in Richmond to compete in the marketplace of ideas, challenging each other to think hard on the topic of nuclear. We are confident that a student conference in Richmond will be of great benefit to all attendees.

Please don't hesitate to contact me with any questions.

Kind Regards,



Eric Duvekot, Chair

Virginia Local Section
American Nuclear Society
Phone: 804 971 9806
Email: eric.duvekot@porvairfiltration.com



VCU

Dear ANS Student Sections Committee,

18 September 2017

On behalf of the Institute of Nuclear Materials Management Student Chapter at Virginia Commonwealth University, I give my highest endorsement that VCU be selected to host the 2019 American Nuclear Society Nation Student Conference. The Co-Chairs of our bid have involved me in this proposal as an ANS member and I agree with the choices made in the proposal. I believe that this proposal will highlight the uniqueness of Richmond, Virginia, and show that VCU has a large high quality Nuclear Engineering program. The theme of this conference will allow the attendees to see a wide variety of what nuclear engineers can do and the opportunities ANS can provide them, both as students and after graduation.

The student organizations at VCU are supportive of one another and work together to provide the best opportunities to all of our members. The INMM-VCU student chapter will strengthen the nuclear material management aspect of the ANS National Student Conference, increasing student and professional attendance, as well as attracting additional potential sponsors.

As you consider this proposal, know that the ANS student chapter has the complete support of the INMM student chapter for hosting the 2019 ANS National Student Conference.

Regards,



Brandon Dodd
INMM-VCU Student Chapter President

School of Engineering
Department of Mechanical and
Nuclear Engineering

401 West Main Street
P.O. Box 843015
Richmond, Virginia 23284-3015
804 658-7401
doddbrm@vcu.edu

Brandon Dodd, M.S.
INMM-VCU Student Chapter President



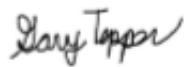
September 27, 2017

To: ANS Students Conference Selection Committee,

I am writing to offer my strong support for the bid proposal prepared by the Virginia Commonwealth University Student Section of the American Nuclear Society (VCU-ANS) to host the 2019 ANS Student Conference. Our department has been home to the newest nuclear engineering program in the nation (established in 2007). In 2010 we formally changed our name to Department of Mechanical and Nuclear Engineering. Although our nuclear engineering program is young, it is not small; we currently offer a full suite of undergraduate and graduate programs in nuclear engineering, the only in Virginia, and enroll around 100 undergraduate students and around 110 graduate students. The involvement of our faculty and students in ANS activities is one of our top priorities, and we have a very active ANS student section. Our VCU-ANS student section organizes numerous technical and professional development activities, such as tours of nearby nuclear facilities, bi-monthly meetings with guest speakers from the nuclear industry, professional development workshops, annual Boy Scout Nuclear Science Merit Patch workshops, annual Girl Scout "Get to Know Nuclear" workshops, and supports the week-long Science Teachers Workshop co-organized our department and the Virginia local section of the ANS. This event, in particular, is one of our key public outreach initiatives and our department has supported this workshop for over a decade, and the involvement and support of our VCU-ANS students is one the reasons this effort is sustainable.

In summary, I feel confident that our VCU-ANS students have the motivation and skills to organize a very successful 2019 ANS Student Conference in beautiful Richmond, VA and I enthusiastically support this bid proposal. If selected, the department will fully support the students to ensure that the conference is successful and provides a rewarding experience for all participants.

Sincerely,



Gary Tepper, Ph.D.
Professor and Chair
Department of Mechanical and Nuclear Engineering

Department of Mechanical
and Nuclear Engineering

401 West Main Street
P.O. Box 843015
Richmond, VA 23284
804.828.9117 Phone
804.827.7030 Fax

September 26, 2017

Student Conference Selection Committee
American Nuclear Society

Dear Student Conference Selection Committee,

It is with a great pleasure that I write this letter to strongly support the proposal of American Nuclear Society Student section at Virginia Commonwealth University to host the 2019 ANS Student Conference. As a faculty member of the Mechanical and Nuclear engineering department, I will provide all the necessary support to the leaders to make of this a successful event.

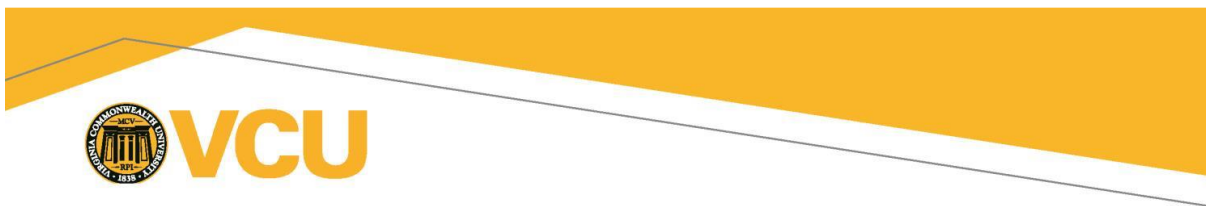
Since I joined the department on 2014, I have seen the VCU-ANS student section to be a highly proactive team with a great ability to organize and implement academic and outreach events such as Girl Scout "Get to Know Nuclear" workshop, Boy Scout merit badge workshop, among others. In addition, the members have demonstrated their excellent performance in this various activities which has been evidenced by the steadiness of such events every year. Therefore, I am confident that our ANS student section has all the necessary skills and the attitude to undertake the challenge of successfully organizing and hosting the student conference.

VCU, being an urban university with a vibrant academic environment, is very well suited for this important event. The university is located in downtown Richmond, a convenient location with on campus convention facilities as well as the Greater Richmond Convention Center near campus. These resources make our University an ideal location. I strongly support this application and I am confident that if VCU-ANS is selected to host the student conference, the team will do everything possible to create a successful event.

Please do not hesitate to contact should you have any question about my support and recommendation. We are looking forward to hearing from you hoping that selection committee choose VCU as the host for the ANS Student conference in 2019.

Sincerely yours,

Dr. Jessika V. Rojas
Assistant Professor
Department of Mechanical and Nuclear Engineering
Virginia Commonwealth University
401 West Main Street, Room E3232
Richmond, Virginia 23284-3067
Phone: (804) 828-4267
Email: jvrojas@vcu.edu



Dear ANS Student Sections Committee,

18 September 2017

I give my strongest recommendation that Virginia Commonwealth University be selected for the 2019 American Nuclear Society National Student Conference. As an Assistant Professor and the Principal Investigator of the Nuclear Security and Nonproliferation Laboratory I will give my full support to the VCU-ANS student chapter and will use my contacts and capabilities to recruit students, professionals, and sponsors to attend the conference, as well as expand the nuclear security and nonproliferation aspects of the conference.

VCU is the ideal location for the next ANS National Student Conference. Its central east coast location will allow for numerous universities to attend with minimal travel cost, its urban setting and proximity to Washington DC offers multiple direct flights from across the US and the world, and the mild climate in Richmond, VA, minimizes the risk of weather related delays and cancellations of travels.

The Department of Mechanical and Nuclear Engineering at VCU is large with a strong nuclear program. The department has 7 nuclear focused faculty covering the full range of nuclear topics (thermal hydraulics, reactor physics, radiation detection, waste management, reactor design, nonproliferation, nuclear materials science, public policy, etc.). The size of the nuclear program, both graduate and undergraduate, is larger than most other universities*, including University of Florida, University of California Berkeley, Purdue University, and Ohio State University. The VCU-ANS student chapter is very active, hosting Boy Scout, Girl Scout, and Science Teacher Workshops every year. The most recent meeting of the ANS-VCU Student Chapter (9/14/2017) had over 35 students and 6 faculty in attendance. The most significant challenge that VCU faces in becoming a recognized world class nuclear program is name recognitions, which hosting the 2019 ANS National Student Conference will significantly help address.

If you desire more information about VCU's nuclear program or its nuclear security and nonproliferation work please do not hesitate to contact me.

Sincerely,

Braden Goddard

School of Engineering
**Department of Mechanical and
Nuclear Engineering**

401 West Main Street
P.O. Box 843015
Richmond, Virginia 23284-3015

804 827-7029 • Fax: 804 827-7030
bgoddard@vcu.edu
<https://RamPages.us/bgoddard>

Braden Goddard, PhD
Assistant Professor



VCU

Mechanical and
Nuclear Engineering
School of Engineering

September 29, 2017

Student Conference Selection Committee
American Nuclear Society

Dear Student Conference Selection Committee,

It gives me absolute pleasure to endorse my strong support for the Virginia Commonwealth University (VCU)'s American Nuclear Society (ANS) Student Section proposal to host the 2019 ANS Student Conference. I have been providing my guidance for this section along with the Faculty Advisor, Dr. Sama Bilbao, since joining VCU in January 2014. I am confident without a doubt that the abilities of the VCU-ANS team members along with their enthusiasms are enormous that they can handle the challenge of organizing and running a successful student conference. The VCU-ANS Student Section has been striving since its birth in 2011 to organize and plan the proposal for this event and they are ready to offer the theme "Nuclear is _____."

The theme, "Nuclear is _____," is critical and vital in our modern view of nuclear science, engineering and technology. Nuclear is not lying within the energy proponent; but it exemplifies in many important applications and themes. For examples, pharmaceutical radioisotopes, space rockets and propulsion industries, materials detection and safeguards, public policy and advocacy, economics, etc. The team organizers have envisioned on what this may impact students of our generation to transition properly into their professions that will enhance today's industries and the industries of our future. With the recent rise of Richmond, Virginia that contains the U.S. historical depths and roots, this location is appropriate for hosting the student conference and venue because all visitors will be able to enjoy the campus area as well as all excellent conference facilities and accommodations. The VCU-ANS team has prepared this program with their hearts and souls fusion with professional approach working, communicating, and identifying different public transportations, living cost/expense plans, and hosting locations for various venues that would best fit with the entire program.

I hope that the selection committees will recognize the merits of this proposal and select VCU as the host of the 2019 ANS Student Conference.

Sincerely yours,



Supathorn (Supy) Phongikaroon
Associate Professor
Department of Mechanical and Nuclear Engineering
Virginia Commonwealth University



September 12, 2017

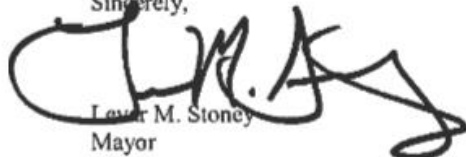
Dear ANS Student Conference Committee:

It is my pleasure to invite you to the City of Richmond for your American Nuclear Society 2019 Student Conference on behalf of the Richmond Hospitality Committee and the Virginia Commonwealth University Student ANS Committee. Our city is honored to offer its hospitality to you.

You will find that the state of Richmond is resurgent. As the Capital of Virginia's Commonwealth, we have an excellent blend of the past and future that adds to the tradition, culture, and style of our historic legacy. Richmond is being recognized in ways that no one would have expected before. We've been named a top travel destination and one of the happiest cities. As well, we have been recognized as one of the most livable and innovative urban areas in the United States.

Thank you for considering Richmond for your event. I hope you will select a city whose warmth and vitality will ensure a valuable experience.

Sincerely,



Leroy M. Stoney
Mayor



PO Box 3504
Arlington, VA 22204-0504
703-690-4754
info@virginiannuclear.org
www.virginiannuclear.org

VNEC Members Include:

AREVA Inc.
BWX Technologies, Inc.
Dominion Resources Services
GE Hitachi Nuclear Energy
Newport News Shipbuilding
University of Virginia
Virginia Commonwealth University
Virginia Tech University

September 29, 2016

To the Members of the ANS Student Conference Selection Committee

Dear sir or Madam,

I am writing to offer Virginia Nuclear Energy Consortium's (VNEC) strong support for the bid prepared by the Virginia Commonwealth University Student Section of the American Nuclear Society (VCU-ANS) to host the 2019 ANS Student Conference.

VNEC is a private, non-profit, corporation established by the Commonwealth of Virginia to study and seek ways to enhance Virginia's thriving nuclear industry. In carrying out our mission, we are particularly attentive to the successes of our universities and their students. The VCU student section has been very engaged with VNEC's initiatives and their support and involvement is valuable and well recognized by VNEC's members and by Virginia legislators.

This spring VNEC and VCU-ANS organized a very well attended session on "Nuclear Legislation 101 in Virginia". This was followed up by a "Day at the Virginia Hill" for VCU nuclear engineering students, where the students were recognized with a standing ovation by the Virginia Senate.

VCU-ANS students are active in all nuclear-related activities in Virginia, are knowledgeable about the issues and strive to coordinate with all the other Virginia stakeholders.

In summary, I am convinced that the VCU Student Section of the American Nuclear Society is fully capable of organizing a very successful 2019 ANS Student Conference in Richmond and I enthusiastically support their bid. I urge you to do the same.

Sincerely,



Marshall Cohen
Executive Director
VNEC

I pledge my support to the American Nuclear Society Student Section of Virginia
Commonwealth University in hosting the 2019 ANS Student Conference

| NAME | SIGNATURE |
|---------------------|--------------------|
| Don Cinestro | Don Cinestro |
| Sarah Morgan | S Morgan |
| Hunter Kobrinetz | Hunter Kobrinetz |
| Brooke Bates | Brooke Bates |
| Brandon Dadd | Brandon Dadd |
| Tristan Villaseal | Tristan Villaseal |
| Hubert Coburn | Hubert Coburn |
| Nana Nolina II | Nana Nolina II |
| Michael Woods | Michael Woods |
| IVAN CANO | Ivan Cano |
| Collins Mabeed | Collins Mabeed |
| Dimitris Killinger | Dimitris Killinger |
| Andrew Villanueva | Andrew Villanueva |
| BEN BRADY | Ben Brady |
| Cody Lloyd | Cody Lloyd |
| Michael Cartwright | Michael Cartwright |
| Sarah Strickler | Sarah Strickler |
| Hunter Andrews | Hunter Andrews |
| Joshua Dillion | Joshua Dillion |
| Karthik Munnidiseti | K. Karthik |
| Brian Gulleksen | Brian Gulleksen |
| Reggie Jones | Reggie Jones II |

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| Meredith Eaneart | Meredith Eaneart |
| Heather Heppner | Heather Heppner |
| ANNA SISSON | Anna Sisson |
| FREDERICK RENIFFON | Frederick Reniffon |
| Juan Carlos | Juan Carlos |
| Meriem Murphy | Meriem Murphy |
| Samuel Powers | Samuel Powers |
| Paul Anhalt | Paul Anhalt |
| Anderson English | Anderson English |
| Jason Beve | Jason Beve |
| Amine B. Mehari | Amine B. Mehari |
| Joshua Harding | Joshua Harding |
| Brandon Fisher | Brandon Fisher |
| Brandon Kang | Brandon Kang |
| Connor Mann | Connor Mann |
| Daniel Harlow | Daniel Harlow |
| Jenna Garper | Jenna Garper |
| Saad Almutairi | Saad Almutairi |
| Jonathan Park | Jonathan Park |
| Dustin Pierce | Dustin Pierce |

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| Jonathan Mittelstadter | <i>Jonathan Mittelstadter</i> |
| Jacob Lewit | <i>Jacob Lewit</i> |
| Jay Khander | <i>Jay Khander</i> |
| Ryan Walker | <i>Ryan Walker</i> |
| Adel Ayad | <i>Adel Ayad</i> |
| Adam Walker | <i>Adam Walker</i> |
| João Gabriel | <i>João Gabriel</i> |
| Jonathan Castro Aguilera | <i>Jonathan Castro Aguilera</i> |
| Daniell Tincher | <i>Daniell Tincher</i> |
| Danail Bond | <i>Danail Bond</i> |
| Miraj Patel | <i>Miraj Patel</i> |
| Liam Carlson | <i>Liam Carlson</i> |
| Ethian Downing | <i>Ethian Downing</i> |
| Salman Bengheyaam | <i>Salman Bengheyaam</i> |
| Jason Willis | <i>Jason Willis</i> |
| Alhajeri, Enah | <i>Alhajeri, Enah</i> |
| ROMAN MORTARTY | <i>Roman Mortarty</i> |
| Rachel Sachs | <i>Rachel Sachs</i> |
| Paden King | <i>Paden King</i> |
| Erin Vales | <i>Erin Vales</i> |
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| John Littlepage | |
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| Robert Hathaway | |
| Naval Valliani | |
| Eric Theisen | |
| Daniel Smith | |
| Abhishek Nigam | |
| Darius Stucke | |
| Jamie Park | |
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Appendix E: Special Thanks

We wanted to give another thank you to the folks that helped us put this bid together. Thanks to Elizabeth Gardiner, Zack Lepine, Allison Murphy, Dylan Philips, Melody Song and Elly Taura for their work on our theme images and concept. Thanks to Richmond Region Tourism for helping our team get in touch with all the facilities, caterers, and the mayor in order to ensure we are able to host a large conference. Thanks to the faculty of Mechanical and Nuclear Engineering at VCU for helping us coordinate and finish the bid in a timely fashion.