



ANS Washington DC Section

Summer Newsletter | September 2020

Forming a Bond and Lasting Partnership - ANS DC Section and the USNA

Jim Behrens and Mark Murray

The U.S. Naval Academy (USNA), located in Annapolis, MD was created in 1845. Engineering is consistently ranked among the top undergraduate programs in the country.

One of the main buildings on the academy campus, called "The Yard," was named "Rickover Hall," after Admiral Hyman Rickover, Father of the Nuclear Navy. Ironically, the Naval Academy did not have a nuclear engineering major until 2014. How did this happen?

Efforts to create a nuclear engineering major had been ongoing for several decades. Prior to 1998, nuclear engineering topics were covered at the Academy as a part of the marine engineering major that was administered by the Naval Architecture, Ocean and Marine Engineering Department. In 1998, the nuclear engineering resources from marine engineering were transferred to the Mechanical Engineering Department. The transfer included courses, facilities, and faculty: the nuclear engineering courses were established as electives for mechanical engineering majors and other engineering and math/science majors. Professors Marty Nelson and Mark Harper taught the majority of the nuclear courses and advised the majority of student nuclear research projects. In August 2010, the Mechanical Engineering Department held an off-site, with part of the session dedicated to discussing the future of nuclear engineering. A majority of the department felt that nuclear engineering was not used to its full potential, so a sub-committee was established. They researched the history of nuclear engineering at USNA, resources currently available (physical, faculty, staff, and collaboration with other USNA and external organizations), and the likelihood of setting up and maintaining a successful program for up to 50 students. The sub-committee's findings were presented to the department with the majority of the department voting that nuclear engineering should progress in a more elevated status for consideration as a major.

In spring 2012, the department then voted to establish nuclear engineering as a major, and that fall a committee to develop the curriculum and path of study for the new major was established. Professor Mark Murray was appointed chairman, with the other members being CDR Brad Baker, CDR Stu Blair, Professor Marty Nelson, and Professor Marshall Millett.

The Nuclear Ship Savannah Update

Steve Mirsky

The Nuclear Ship (NS) Savannah was the world's first nuclear powered merchant cargo-passenger ship, launched in 1959. The Savannah (shown in photo below), now a National Historical Landmark, is berthed in Baltimore Harbor. It was in service from 1962 to 1972 and has recently been undergoing USNRC-licensed decommissioning activities. In 2019, the Savannah was towed to the Philadelphia Shipyard where the reactor compartment steam generators and primary coolant pumps were removed, along with other radiological and chemical abatement activities, and then returned to Baltimore.

Due to the pandemic, personnel allowed on the Savannah are currently limited to only the workers involved in the ongoing decommissioning activities at its Baltimore dock. The goal of all these activities is to, "preserve the historic and remove the toxic." These activities are expected to require fewer workers in the fall, at which time the ANS DC Section will be discussing the planning of tours of the Savannah with tour coordinator, Tom Osborne. The timing of such tours will be determined by the most current U.S. Government guidelines with respect to pandemic related activities.



In the past, I was privileged to participate in a tour of the Savannah that included fascinating views of the passenger common areas, bridge, captain's quarters, kitchen, control room, a close view of the reactor compartment through an opening in the containment, and the power conversion propulsion system. Stay tuned for future news on this exciting opportunity.

Thank you, DC Section Officers

Thank you to the 2019-2020 ANS DC Section officers and committee members for their hard work and accomplishments.

Executive Committee Officers 2019-2020

Chair - Jim Behrens
Chair Elect - Amber Johnson
Secretary - Jeff Gorman
Treasurer - Jeff Gorman

Directors-at-Large Marshall Millett

Committees and Chairmen

Communications - Peter Ewing and Brian Hallee
Education – Amber Johnson
Membership - Neal Mann
Nominations – Jim Behrens
Outreach- Amber Johnson
Program - Jeff Gorman and Jim Behrens

A schedule of meetings and events for the DC Section will be announced soon. Check the calendar of events on the DC section [website](#) for updates.

Executive Committee 2020-2021

Chairman - Amber Johnson
Chairman Elect – Jim Behrens
Secretary - Tracy Marc
Treasurer - Jeff Gorman

Directors-at-Large Gene Carpenter Steve Mirsky

Appointed Members

Executive Assistant - Val Vasilievas
Neal Mann

Committees and Chairmen

Communications - Tracy Marc
Education - Amber Johnson
Governance - Val Vasilievas
Membership - Neal Mann
Outreach – Amber Johnson
Program - Jim Behrens

A Proposal for the Future

Jim Behrens

The first nuclear-powered submarine was the USS Nautilus (SSN-571), which was launched in January 1954. The first nuclear-powered aircraft carrier was the USS Enterprise (CVN-65), which was launched in September 1960. Both of these ships are no longer in service for the U.S. Navy. Meanwhile, the U.S. Nuclear Navy continues to be the strongest in the world with new ships scheduled for construction over the next 50 years. The headquarters of the Naval Nuclear Propulsion Program resides at the Navy Yard in Washington, DC. This headquarters is within the geographical jurisdiction overseen by the DC Section.

The ninth U.S. ship named "Enterprise" is the USS Enterprise (CVN-80) and is currently under construction at Huntington Ingalls Industries, Newport News Shipbuilding in Virginia. The next class of nuclear submarines to be built will be the Columbia Class. The first submarine in this class will be USS Columbia (SSBN-826) which is scheduled to begin construction in 2021. It will be a follow-on to the Ohio class submarines currently in service to the Fleet.

It is proposed that we should take the necessary steps to support the USS Enterprise (CVN-80) (perhaps as "Friends of The Enterprise, CVN-80") and to position ourselves to also support, as "Friends of the Fleet," the upcoming Columbia class submarines as they are announced. This effort could initially involve the following USNA midshipmen and relevant engineering faculty:

- The Behrens Scholars
- The ANS USNA Student Chapter Members
- Midshipmen pursuing the Nuclear Engineering Major at the USNA
- USNA faculty that teach and or advise these midshipmen.

Financial support to the U. S. Naval Academy Foundation is provided from the following:

- The Behrens Family Fund
- The Washington, DC Section of the ANS

Similar to the situation with the NS Savannah, tours to see the Navy's aircraft carriers and submarines can only be done after the ongoing situation with Covid-19 is resolved and when proper approvals are granted.

The Behrens Family Scholars Program

Jim Behrens

The Behrens Family Scholars Program is instituted at the U.S. Naval Academy (USNA) in Annapolis, MD. In addition to the Behrens Family, this program is also linked to the Washington, DC Section of the American Nuclear Society (ANS) and to the ANS Student Chapter at the Naval Academy.

In March 2020, two new Behrens Family scholars were announced by the Naval Academy bringing the total number of Behrens Scholars to seven.

The American Nuclear Society has been affiliated with the U.S. Naval Academy for over 40 years. The USNA ANS Student Chapter was established and directed under the leaderships of Professors Peter Wiggins and Martin Nelson, and others since 1970. In 2013, the Naval Academy added VADM Joe Leidig (Ret.) to its "nuclear instructor" staff and a year later the Naval Academy created the Nuclear Engineering Major within its Mechanical Engineering Department. This program, under the leadership of Professor Mark Murray and other nuclear engineering faculty members, continues to maintain close ties with ANS. Jim Behrens, a long-time member of ANS and a retired Navy scientific technical advisor, joined this effort and a partnership was created involving the Behrens Family's philanthropic efforts and the Naval Academy.

As a result, the Behrens Family Scholars Program was established in 2016 for midshipmen to receive financial assistance in support of their individual research efforts while pursuing studies in the newly created nuclear engineering major. The first Behrens Scholar was selected in March 2017 and was commissioned in May 2018. The second scholar was commissioned in May 2019, and most recently the third and fourth scholars in May 2020. Midshipmen selected for the Behrens Scholars Program are usually announced at co-sponsored ANS Student Chapter and DC Section dinner meetings in Annapolis in March of each year. This year the annual dinner meeting was canceled due to Covid-19; however, two scholars were named and a total of seven midshipmen are now part of this program. The DC Section takes great pride in joining the Naval Academy and the Behrens Family in supporting efforts to provide our nation with future leaders in support of the nuclear enterprise.

The Lasting Partnership of the ANS DC Section and the USNA

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The following spring, a proposal to establish the new nuclear engineering (ENR) major was forwarded through the divisional and yard-wide curriculum committees and then to the academic dean for approval. The ENR major was officially established in January of 2014. With the establishment of the major, eight Mechanical Engineering majors from the class of 2016 transferred into ENR. The class of 2017 and 2018 added approximately 30 majors per class. A significant addition to the faculty occurred in the fall of 2014 when Joe Leidig took over as the Corbin McNeill Chair.

Some of the people involved in nurturing the infant program include Naval Academy Professors such as Wayne Eckley, Martin Nelson, Mark Murray, Marshall Millett, Peter Wiggins, Mark Harper, and Naval Officers Stu Blair, Brad Baker, Travis Chapman, and Norm Campbell. Then, with strong encouragement from Jim Behrens, the American Nuclear Society became involved by playing an important supporting role leading up to the successful creation of the Nuclear Engineering Program at the Naval Academy. This team effort would grow as it was picked up by the DC Section which has the Naval Academy within its geographical jurisdiction.

As mentioned above, there were several attempts to establish a nuclear program at the Academy, dating back to 1980; however, they were not successful. The current success story of support from outside the USNA goes back to 2013, when Jim Behrens had the idea to acknowledge the "75th Anniversary of the Discovery of Nuclear Fission" and to include the Navy's nuclear program in this important 75th anniversary acknowledgement. The plans and preparations for the 75th celebration are a follow-on to an earlier success by Behrens in 1989 to acknowledge the 50th anniversary in an ANS International Conference entitled, "50 Years with Nuclear Fission." The proceedings from the 1989 Conference were published as a two-volume set available for purchase from ANS on the website under the Publications tab in [Proceedings](#).

The 2013 ANS Winter Meeting was held in Washington, D.C. with the 75th Anniversary of Fission was an integral part of this ANS National Meeting. To cover the Nuclear Navy, Admiral John Richardson was invited by Behrens to speak at a Plenary Session. At this time Admiral Richardson was Director of the Naval Nuclear Propulsion Program and he became very supportive of the ANS.

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Join the ANS DC Section today

Washington DC Section Membership Cost: \$10

Duration: July 1, 2020 to June 30, 2021

Benefits:

- Reduced monthly meeting fees for in-person dinner meetings
- Networking with local members in the nuclear industry
- Announcements of regional nuclear events
- Outreach opportunities

Payment is easy and can be done online using under the [Members' Corner](#) of the website.

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If you have stories or ideas for the newsletter, please email us at ans.dc.section@gmail.com.

The Lasting Partnership of the ANS DC Section and the USNA

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Having the Admiral's support was key to what would follow, the successful creation of Nuclear Engineering Program at the Naval Academy.

In organizing the 2013 Winter Meeting and its 75th Anniversary of Fission, three men partnered. These men were Professor Martin Nelson, VADM Joe Leidig (Ret.), and Jim Behrens (U.S. Navy, Ret.). Following this successful meeting, a renewed effort was made by the team members mentioned above to help support the creation of a Nuclear Engineering Major at the Academy and a successful outcome resulted.

To acknowledge the newly created major, Behrens once again suggested a meeting in Annapolis to acknowledge the new major. ANS National passed their involvement to the Washington, DC Section thereby making it a local meeting, similar to a topical, or regional, meeting. The Institute of Nuclear Materials Management was contacted, and its Northeast Chapter joined the DC Section to conduct the meeting hosted by the Naval Academy in Annapolis. The resulting event, "The Annapolis Meeting," had an attendance of about 240 people and was highly successful. Again, Nelson, Leidig, and Behrens took major responsibilities in organizing this meeting. To celebrate this milestone event, a number of distinguished leaders joined to enrich the opening plenary. They include the following:

1. Vice Admiral Walter E. "Ted" Carter, Superintendent, U.S. Naval Academy
2. Admiral James F. Caldwell, Jr., Director, Naval Nuclear Propulsion Program
3. Admiral Michael S. Rogers, Commander, U.S. Cyber Command and Director, National Security Agency/Chief, Central Security Service
4. The Honorable William C. Ostendorff, Former Commissioner, Nuclear Regulatory Commission

If you are currently serving, or have ever served, on a nuclear-powered submarine or aircraft carrier, we ask you to continue showing your support by joining the DC Section. You will find an article in this current newsletter giving you instructions on several ways for paying the \$10 annual membership fee to become a member of the DC Section.

To those of you who are reading this article and are already members of DC Section, thank you for your support! To those who are joining us, welcome aboard!

Wishing all of you FAIR WINDS AND FOLLOWING SEAS!
GO NAVY!