

Nominations for NNTG Leadership

Interested in getting actively involved in nonproliferation and the ANS? Nominations are now being sought for the Nuclear Nonproliferation Technical Group's Executive Committee (EC) as well as Officers of NNTG.

EC members serve a three year term, and are expected to attend a majority of the six meetings that will occur during their term. EC members are involved in development of our technical program, review of position statements, and establishing the direction of the NNTG. From those actively involved in the NNTG, we solicit nominations for Officers. In established divisions, officers generally have an unofficial progression, starting with Treasurer, and then moving to Secretary, Vice Chair, and then Chair over a period of four years.

Nominations will be reviewed by the Nominating Committee, who prepare a slate of candidates for election by the membership. No formal qualifications are involved.

If you think you are interested in taking a more active role in the NNTG, then contact John Dewes, Nominating Committee Chair, at john.dewes@srnl.doe.gov or 803-725-9200.

NNTG is Looking for a New Web Content Manager

NNTG's website <http://nn.ans.org> was started by NNTG Founding Chair John Gunning. However, John would like to transfer the responsibility for maintaining the content of this site to some new blood. This position is intentionally not called a Webmaster, because one does not necessarily need to be fluent in html. The responsibilities are primarily to receive raw content from NNTG Members, Officers, and Committee Members, as well as creating content from participation in NNTG meetings, and molding this material into readable and logical content using the program of your choice, such as Word. John as always provided this material to a Webmaster who does the appropriate html conversion, and this method can be continued. However, if a volunteer would also do all the html-ing, that would also be great. If you are interested, please contact John Gunning at gunningje@ornl.gov or 865-576-8113.

Have a Story to Tell?

Member contributions to the newsletter are always welcome. We are interested in member written articles about interesting conferences, trainings, insights into current events, or anything else you think other members would like to read. If you would like to be considered for the next newsletter, please contact Michaela Hoffman (eddy.michaela@gmail.com) by February 2014 for publication in the April newsletter.

Information in this newsletter reflects the knowledge and perspective of individual contributors and should not be construed as an official position of the Nuclear Nonproliferation Technical Group, the American Nuclear Society, or contributors' employers.

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Michaela Hoffman, Editor

NNTG website: <http://nn.ans.org/>



American Nuclear Society
Nuclear Nonproliferation Technical Group



ANS

NNTG News

A newsletter of the ANS Nuclear Nonproliferation Technical Group

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Your NNTG Leadership Team

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A Message from the Chair

End of summer greetings to the membership of the Nuclear Nonproliferation Technical Group (NNTG). I will take advantage of the chair's "bully pulpit" to cover three topics that I hope you will find both interesting and useful.

First, let me put in a big plug for the upcoming American Nuclear Society (ANS) Winter Meeting in Washington, DC November 10-14. NNTG will hold program and governance meetings from 2-4 pm on Sunday afternoon and I encourage every member to attend if available. The opening plenary on Monday has a great slate of speakers, including Secretary of Energy Ernie Moniz, former Secretary of State (and many other things) George Shultz, Dr. Sid Drell, and former Senator (and current chief executive of the Nuclear Threat Initiative) Sam Nunn. The President's Special Session on Monday afternoon also has very distinguished speakers, including DOE Assistant Secretary for Nuclear Energy Pete Lyons, Director Emeritus of Los Alamos National Laboratory John Browne, and Susan Eisenhower (note that 2013 is the 60th anniversary of President Eisenhower's "Atoms for Peace" speech). There will be a Monday night banquet celebrating the meeting's theme "The 75th Anniversary of the Discovery of Nuclear Fission," and author Richard Rhodes will be the featured speaker. Of course, the real highlight of the meeting will be the NNTG's inaugural topical meeting. Topical Meeting General Chair John Gunning and Technical Co-Chairs Jeff Chapman and Chris Robinson have put together a great program. Joyce Connery helped assemble a great opening plenary session that includes Laura Holgate, Senior Director on the National Security Council and Rose Gottemoeller, Undersecretary for Arms Control and International Security. Yes, I am name dropping, but that's the point. In addition to these great headliners, the technical program is chock-full, setting a new record for papers at an ANS national meeting. I know these meetings are not cheap and getting funding and travel authorization can be difficult these days, but I assure you this is one ANS Winter Meeting you will not want to miss.

Also, I'll bring a few items from the nuclear nonproliferation world to your attention, if they aren't already there. Russia recently completed the blend down of the final batch of high enriched uranium of the "Megatons to Megawatts" program. Over the past 20 years, this hugely successful nonproliferation initiative resulted in conversion of 500 metric tons of Russian weapons grade uranium into fuel nuclear power reactors around the world. There was also some discouraging news in the area of material disposition; with the release of its 2014 budget request in April, the Obama Administration announced it will slow work on the mixed oxide fuel

fabrication plant at Savannah River and consider other options for accomplishing the weapons grade plutonium disposition mission. In addition, recent news reports indicate that North Korea is probably restarting its 5 megawatt-electric gas-graphite plutonium production reactor. Finally, if you haven't read the recent report "Plutonium Mountain" published by Harvard's Project on Managing the Atom, you should. It tells the story of how the efforts of a few dedicated scientists and officials led to the an operation that cleaned up and secured a large amount of weapons-usable material and related technology that was orphaned in Kazakhstan at the end of the Cold War. The report is available at <http://belfercenter.ksg.harvard.edu/files/Plutonium%20Mountain-Web.pdf>.

Lastly, I propose a new initiative for NNTG and solicit your involvement in it. One of our objectives as an ANS technical group is to "provide information to ANS members, the technical community at large, opinion leaders, and decision makers to improve their understanding of nuclear nonproliferation issues." I would like to see our technical group develop a broadly useful package of material on nuclear nonproliferation. My vision is about a one hour presentation on nuclear proliferation covering the history, key institutions and agreements, current challenges and prospects for the future. The material could be used as a "plug and play" addition to a university course on nuclear engineering or technology, and it could also be the starting point for a presentation on nonproliferation tailored toward a specific group or audience. We would make the material available to ANS members and beyond via our website. I solicit the involvement of any member of NNTG (and others) – just send me an e-mail indicating your interest and willingness to help. We'll get a group together and go to work.

In conclusion, thank you for your involvement in ANS and your interest in nuclear nonproliferation. I hope to see you in Washington at the Winter Meeting in November.



Steve Nesbit, Chair

ANS High-Level Waste Report

The 2013 International High-Level Radioactive Waste Management Conference (IHLRWM) took place in Las Vegas, NV, April 28 to May 2. IHLRWM annually brings together experts and practitioners of waste management technology and research. Its importance, even in present times, was indicated by its Opening Plenary session speaker, NRC Chair, Dr. Allison Macfarlane.

Dr. Macfarlane's speech was a familiar one. She emphasized the importance of community and state buy-in as essential to choice of a location for a future repository. While Dr. Macfarlane often refers to WIPP as an example of community acceptance, of the 300 in the auditorium, perhaps several dozen were unaware of the opportunistic national opposition, the lack of any referendum, the political fighting, or the deal-making, including a ban on any commercial waste, that finally led to Governor Richardson allowing WIPP to go ahead.

Professor Per Peterson followed with further insights into the work of the Blue Ribbon Commission on which both he and Dr. Macfarlane served. There were no comments on the charter for the Blue Ribbon Commission, which ruled out any consideration of Yucca Mountain or even of the project. Nor was there any mention of the lawsuit which has since then been judged by an Appeals Court in opposition to the NRC's position on the Safety Report Review.

Next, I presented along with Paul Dickman and Michael Voegle. Paul observes and analyzes nuclear waste issues in Washington, DC. Michael has been involved with waste management all his career, including many years on the Yucca Mountain Project, WIPP, and more. Each reviewed the past year.

My remarks were titled "How Did We Get into This Mess?" Nuclear power hit its cliff on April 7, 1977 when President Jimmy Carter, still in his first 100 days in office, announced an indefinite hold on reprocessing of spent commercial nuclear fuel. That marked the end of the closed fuel cycle, the abandoning of all the years of research, design, analysis, reviews, Congressional hearings and preparation for a Generic Environmental Impact Statement (GESMO) for closing the fuel cycle, preparing waste for disposal, future breeder reactors and a growing role for nuclear power in the US and in many other nations.

Carter thought his policy would protect the world from nuclear weapons proliferation. He had been told that reprocessing and recycle were "uneconomic." He also said that the US would lead the world by example and that nuclear power would go ahead just fine. He was wrong on all counts. Carter had been sold his story by a combination of academics, arms control experts, and environmental activists whose followers Carter saw as his "base". Four decades later, we are still haunted with the perennial charge: "How can they expect to build more nuclear power plants when after all these years they still don't know what to do about their radioactive waste."

When India tested its first nuclear device on May 18, 1974, the US Congress swung into action. The issue was debated in hearings through 1975 and 1976 and Jimmy Carter raised concerns about proliferation in campaign speeches while attacking Gerald Ford for "doing nothing." Less than 100 days into his presidency, wanting to set an example to all other nations to prevent proliferation, Carter issued an Executive Order that reprocessing would be deferred indefinitely. The repercussions impacted the entire future of safe disposal of nuclear wastes.

Written by: **Dave Rossin**

Dave Rossin was the Department of Energy Assistant Secretary for Nuclear Energy in 1986-87 and the ANS President in 1992-93.

Summer Nonproliferation Short Courses

This summer graduate students from around the country, and some from abroad, participated in short courses aimed at furthering their understanding on nuclear nonproliferation, safeguards, and nuclear policy issues. I surveyed students from three of these programs to share their experiences. The students surveyed participated in Brookhaven National Laboratory's Nuclear Nonproliferation, Safeguards, and Security (NNSS); University of California San Diego's Public Policy and Nuclear Threats; and/or Monterey Institute of International Studies' International Nuclear Safeguards Policy Course.

A common theme among participants in these programs was the value of interacting in an interdisciplinary setting and sharing their knowledge with their peers from other backgrounds. Both technical and non-technical students expressed great respect for the perspectives and skills the other brought to the table. Adam Hoffman, a recent PhD graduate in Nuclear Engineering and Radiological Sciences at the University of Michigan, learned from the non-technical students in NNSS and PPNT new ways to think about proliferation and the language to use in discussing these issues. While Brian Starks, a Masters student in International Policy at the University of Georgia and NNSS participant, valued the ability of the technical students to explain physical constraints that would limit effectiveness of policies. Ariane Tabatabai, a PhD candidate in War Studies at King's College London and PPNT attendee, also valued the ability of her peers to explain technical issues as well as the opportunity to revisit political science concepts while explaining them to the technical students.

Susan Haynes, a PhD candidate in Political Science at George Mason University, recommended PPNT for students at all academic stages because "Students that attend early on in their schooling will be able to come away with a thorough understanding of the field and the prominent scholars in each area. They most likely will also leave with a half a dozen legitimate research questions that they can explore for later research papers/projects. Students that attend later in their academic career will be able to fine tune their knowledge and present their research in front of subject matter experts."

Nic Wondra, a recent graduate of International Economics & International Relations at Johns-Hopkins-SAIS and attendee at NNSS and MIIS International Nuclear Safeguards Policy Course, most valued the interactions with hard scientists and would have valued even more exposure to reactor engineering and fuel cycle science. He and Beyza Unal, a graduate student at Old Dominion University in International Studies/Conflict and Cooperation, said the most memorable part of their summer experience was the hands-on exercises at Brookhaven National Laboratory including radiation detection and design information verification.

The value of these programs does not stop when the students return home. As an alumni of PPNT (class of 2008) and NNSS (class of 2009) I can attest to the longevity and strength of the personal and professional relationships forged through these intensive interdisciplinary programs. Patricia Schuster, a graduate student in Nuclear Engineering at UC Berkeley and PPNT attendee, said her most memorable part of the program was running on the beach with other participants and Allyn Milojevich who participated in NNSS emphasized the people she met through the program were very much worth the three weeks away from home—responses that particularly resonated with me as I think of my friends and colleagues whom I met through these programs.

Written by: **Michaela Hoffman**

Invitation to PBNC-2014

The Canadian Nuclear Society, the Canadian Nuclear Association, and Natural Resources Canada are proud to host the 19th Pacific Basin Nuclear Conference (PBNC-2014) in Vancouver, British Columbia, Canada, under the aegis of the Pacific Nuclear Council. The conference will be in August 2014 and is co-sponsored by the ANS.

The theme of PBNC-2014 is "Fulfilling the Promise of Nuclear Technology around the Pacific Basin in the 21st Century". Authors are encouraged to submit papers on any topic in nuclear technology for oral presentation in technical sessions at PBNC-2014.

Please visit the PBNC-2014 website at <http://pbnc2014.org> for more information, to submit papers, and to register!

NNTG on Social Media

For more ways to stay in touch with NNTG, join our Facebook or LinkedIn groups.

<http://www.facebook.com/groups/ansnntg/>
<http://www.linkedin.com/groups/Nuclear-Nonproliferation-Technical-Group-6509997/about>

Nonproliferation Embedded Topical in Washington DC

NNTG will host our first embedded topical meeting during the 2013 Winter ANS Meeting in Washington DC. The theme is "Nuclear Nonproliferation—First Fission to the Future" and will kick-off with the opening plenary Tuesday November 12 at 8:00 am and continue thru Thursday November 14 with twelve additional sessions.

The conference program and registration information is available at http://www.ans.org/meetings/c_1.

If you have questions or need additional information, feel free to reach out to the General Chair, John Gunning (gunningje@ornl.gov), or either co-Technical Program Chair, Jeff Chapman (chapmanja@ornl.gov), or Chris Robinson (robinsonrc@y12.doe.gov).

How to Propose Conference Sessions

Chris Robinson of Y-12 National Security Complex (robinsonrc@y12.doe.gov) is the Program Committee Chair for NNTG. However, you can think of the entire NNTG as the Program Committee. Any member can propose, organize or chair a session at an ANS meeting, just follow the steps below. Have a great idea but don't want to chair the session? That's OK; we probably have another member willing to help out.

1. Write a ~100-word description about the intended session/topic. Specify if it will be a panel or paper session.

2. Submit the summary at the Program Committee meeting or send it to anyone on the leadership team to represent it for you. Sessions are decided on a year in advance (In November 2013 we choose sessions for the November 2014 meeting).

3. Solicit experts to submit summaries by the deadline (usually about six months in advance) of the meeting in which the session will occur.

4. Inform the Program Chair of who will chair the session at the meeting.

Technical sessions for June 2014 Meeting in Reno, NV

The call for papers is out for the 2014 Summer ANS Meeting in Reno, NV. Below are the planned sessions along with the organizers to contact for more information. Summaries are due January 10, 2014.

1. Nuclear Nonproliferation Technical Group (NNTG): General (Organizer: Alan S. Icenhour, ORNL)

2. Plutonium Disposition – The Clear and Present Danger, 20 Years Later (Organizer: Steve Nesbit, Duke Energy Corp.)

3. Nevada National Security Site (NNSS): Role and Contributions to the Nonproliferation and Global Security Community (Organizer: Howard Hall, Univ. of Tenn.)

4. Integration of Safety-Security-Safeguards (3S) in Nuclear Facilities: Examining the Synergies while Exploring the Differences (Organizer: Stephen V. Mladineo, PNNL)

5. Addressing the Insider, Outsider, and Cyber Threats on Nuclear Security and Nonproliferation (Organizer: Joseph R. Stainback IV, Univ. of Tenn.)

6. University Education Programs in Nuclear Security (Organizer: Oluwatomi A. (Tomi) Akindele, TAMU)

7. Improving the Assessment of Proliferation Risk of Nuclear Fuel Cycles – Panel (Organizer: Luc VAN DEN DURPEL, Areva)

8. Nuclear Industry Role in Nonproliferation Initiatives – Panel (Organizer: Everett Redmond II, NEI)