



Message From The Chair



My experience with the American Nuclear Society has brought me to the very exciting position of the 2013-2014 Chair of the Young Members Group. This position is a great honor and I am excited for the year to come. We are continuing with many of our efforts to integrate and involve young member throughout the society. Past-Chair Gale Hauck is passionate about the goal she set during her term to implement an improved mentoring process with the society.

I have set a similar goal for my term to get young members involved in every division. Every division is supposed to have a Young Members Group Liaison, which ensures that young members have a voice in the divisions. With the ANS Winter meeting quickly approaching and the Young Professional Congress, the ANS Young Members Group have been busy little bees. The planning committee has put a great effort into providing sessions that will engage and empower young professionals in their professional development. I look forward to the coming year and cannot wait to get started with all the amazing things we have planned.

Allison Miller
YMG Chair, 2013

Awards

Young Member Excellence Award

The [Young Member Excellence Award](#) recognizes “a young member who has demonstrated overall excellence in a variety of areas.” It is granted to an actively involved ANS YMG member who “advances the goals of the ANS YMG, displays outstanding non-technical skills as well as technical or managerial ability, is recognized by others in their field, demonstrates high quality and safety standards, and positively represents nuclear science and technology to the general population.”



This year, YMG is delighted to announce that Dr. Piyush Sabharwall is the recipient of the 2013 Young Member Excellence Award.

Dr. Sabharwall is a staff research scientist working in the Thermal Hydraulics and Reactor Safety Division under Nuclear System Design and Analysis Division Idaho National Laboratory (INL).

His recent work has focused on developing and optimizing a heat exchanger for the next generation of gas- and fluoride-cooled reactors, and on developing a method for validating computational fluid dynamic safety codes using the Matched Index of Refraction (MIR) facility at INL. The uncertainty quantification method developed in this study will lead to high quality MIR data with accurate and reliable uncertainty

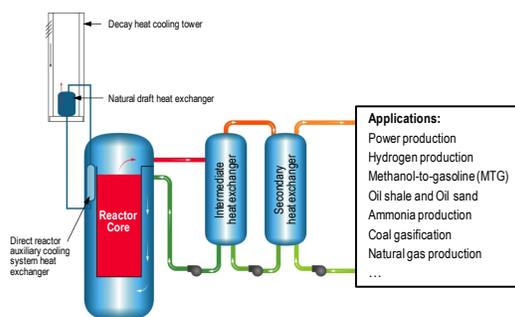


quantification, a valuable asset in validating advanced computational methods.

Dr. Sabharwall earned his undergraduate degree in Mechanical Engineering from Wilkes University in Pennsylvania, his master's degree in nuclear engineering with a minor in mechanical engineering from Oregon State University (OSU). Finally, he received a fission fusion INL research scholarship with which he pursued his Ph.D. in nuclear engineering at the University of Idaho.

As an active member of Idaho Section of the American Nuclear Society and Idaho Section of the American Society of Mechanical Engineers, Dr. Sabharwall helps educate the public and promote nuclear energy by participating in educational and community fairs.

Dr. Sabharwall was involved in the secondary heat exchanger (SHX) design for the molten salt cooled Advanced High Temperature Reactor. The SHX provides the interface between the intermediate coolant and the power conversion system or process application, as shown in the Figure below.



The identification of a viable SHX concept is based on the options for the power conversion

scheme or the process heat application design needs. While the IHX serves as the primary coolant boundary, the SHX also serves as the coolant boundary and must be constructed to maintain system integrity under normal, off-normal, and accident conditions. The difference in pressure required in the power-conversion system and process heat applications imposes stringent requirements on the heat exchanger design.

He was also involved in design and development of two-phase thermosyphon in order to transport thermal energy from the reactor to chemical industrial plant, almost isothermally (i.e. with negligible temperature loss).

Currently he is leading the development of chemical heat pump for temperature amplification for nuclear hybrid energy systems and current fleet of light water reactors (LWRs). Dr. Sabharwall also serves as a co-principal investigator for engineered zircaloy cladding modification for improved accident tolerant fuel for LWRs. The modification of the surface should prove to be sustainable at higher temperatures and under high neutron fluence.

Young Members Advancement Award

The [Young Members Advancement Award](#) “recognizes an individual or group that has made a significant contribution towards integrating young members into ANS as a whole.”



This year, the recipient of that award is recent ANS President, Dr. Eric P. Loewen. The Young Members Group is proud to recognize, with this award, the unique contributions Dr. Loewen has made to young members across the society.

During his ANS presidency in particular, Loewen supported young member involvement in ANS by investing extensive time in visits to student chapters across the US. This tangible connection building between ANS and its student chapters has certainly contributed to the growing success of the student conferences, which benefit powerfully from support at the ANS national level.

He also spent time during his presidency advocating for student and young professional voices in the Society's governance as a whole. By encouraging young professionals to take part in Division governance as well as local chapter activities in their communities, he strengthened the future of the Society.

ANS Landis Young Member Engineering Achievement Award

The ANS Landis Young Member Engineering Achievement Award is given by ANS national to one of its young members. Benoit Forget, Associate Professor of Nuclear Science and Engineering at the Massachusetts Institute of Technology (MIT), was honored with the 2013 Landis Award. The award recognizes

outstanding achievement in which engineering knowledge has been effectively applied to yield a new principle, concept, design, safety improvement, method of analysis, or product utilized in the nuclear energy enterprise.



Professor Forget, the 2010-2012 Chair of the [ANS Reactor Physics Division](#), pursues a suite of research topics related to computational methods in reactor physics and advanced reactor design.

A [full interview](#) with Professor Forget can be found at the ANS Nuclear Café Blog, where he was asked what advice he had for young members of the nuclear community who may see him as a role model. He said,

“The nuclear industry has a skewed age distribution, which sometimes makes communication between generations difficult. Too often we encounter people who believe that everything has been solved and refuse to consider new ideas, or revisit old ones. I find it important to identify good mentors that understand the legacy of nuclear power, but still have an eye towards the future. These are the people that will help you thrive in your research career and push the frontiers of nuclear power.”



Highlights from the ANS Annual Meeting in Atlanta

The needs of the young generation were discussed at length at this year's ANS Annual Meeting. Conversations took place at the Young Members Group meeting, student events, and most notably, the "*Young Blood - Integration and Retention of the Next Generation*" panel sponsored by the ANS Operations and Power Division (OPD), organized by Gale Hauck. This panel included nearly a dozen young members in academia, the US national laboratories, and the private sector who shared a number of their unique experiences and needs as new faces in the nuclear field.

Within the *Young Blood* panel and beyond, *mentorship* was a main theme of conversation. Questions about the effectiveness of current mentorship programs in the private sector, as well as in ANS, were met with some ambivalence. While a few good experiences were shared, a number of suggestions for areas of improvement were also expressed. It seemed that successful pairing between mentors and mentees was the primary stumbling block for most programs. Some of the panelists had been lucky with mentors found through their institution's mentoring program, but most seemed to have had stronger positive experiences with mentors they discovered more organically.



Reflecting on her experience as a member of the *Young Blood* panel, Rachel Slaybaugh shared an unexpected sentiment with her peers. She said, "The biggest thing I learned is that everyone wanted to feel like their work was valued and valuable. I knew I felt that way, but the consistency of that message was strong across the panel."

"That idea," she said, "can be incorporated by management in a variety of ways, such as explaining the rationale behind and impact of work assignments."

She suggested positive as well as negative feedback could contribute, suggesting that institutions would do well by "ensuring employees get credit for their hard work at higher levels, communicating larger company decisions and initiatives, and explaining 'how you fit' into those." She heard many of her peers valued knowing how their work contributed to the broader goals of the organization and she suggested that employees, employers, and mentors should, "Keep revisiting the conversation to ensure everyone is still on the same page as their careers evolve."

As ANS, the private sector, the national labs, and academia seek to retain and integrate new members, employees, and researchers, Rachel's simple suggestion is likely to serve everyone well: "Keep revisiting the conversation!"



ANS Winter Meeting : YMG Events

Day	Date	Time	What	Where	Who
Sat.	11/9	8am-5:30pm	YPC	Omni	YPC attendees
Sat.	11/9	6-8pm	YPC Social	Open City	YPC attendees
Sun.	11/10	various times	Division meetings	Omni	All young members
Mon.	11/11	11:30am-1pm	YMG Exec Meeting	Omni	All young members
Tues.	11/12	TBD	YMG Working Meeting	TBD	All young members
Wed.	11/13	7-9pm	Nuclear Pride Social	Nellie's Bar	LGBTQ & Allies
Thurs.	11/14	9-5	Storm the Hill	Capitol Hill	All young members

ANS Winter Meeting in DC

YMG sponsored events, like YPC, Storm the Hill Day, social activities and working meetings (official or unofficial) occur before, during, and after the ANS conference. Feel free to participate and bring others along.

Now that details for participating in all of these have been announced, you may find attending these opportunities well worth extending your trip – but you'll have to be prepared!

The Young Professionals Congress

On Saturday November 9, many young professionals interested in new skills and networking opportunities will gather for the ANS Young Professionals Congress. YMG hosts

the Young Professionals Congress (YPC) every 2 years during the ANS Winter Meeting in odd years (2013, 2015, etc). This year, with the North American Young Generation in Nuclear (NAYGN), we will sponsor a one-day program to provide a unique opportunity for young professionals in the nuclear industry. The [Young Professionals Congress](#) sessions promise to “provide actionable skills development and broad networking opportunities for all attendees.”

General Chair Gale Hauck, Program Chair Peter Shaw, and other organizers have now released this year's [ambitious program](#). The schedule includes a number of skill sessions addressing topics such as professional communication, project management, and work-life balance. Additionally, the valued voices of attendees will be heard in sessions such as the *National Energy Policy Panel* and the *Voice of the Young Generation* discussions.



How to Prepare for YPC

First of all, you'll have [to register](#). Members of ANS and NAYGN are encouraged to attend. While registration is complimentary if you register for the full ANS Winter Meeting, please note that attendance for the full ANS meeting is not required to attend the YPC. YPC-only registration is only \$35 for ANS members and \$75 for non-members.

Once you've registered, be sure to check the schedule of events and plan to arrive at the Omni Shoreham a day ahead of time. The YPC meeting is on Saturday November 9th.

Storm the Hill Day

For ANS members interested in affecting our nation's energy policy, the capstone of the meeting will be Capitol Hill Day, on Thursday November 14th.

Whether interested in improving Congress' understanding of the Nuclear Waste Administration Act, or curious about the status of our nation's budgets, many ANS members are passionately motivated to engage with their legislators. One of the best opportunities for ANS members to do so is a day of Capitol Hill Visits (a.k.a. 'Storm the Hill Day') on November 14th. During this capstone event of the American Nuclear Society Winter Conference, all ANS meeting attendees are invited to spend a day meeting with their representatives on Capitol Hill as well as their staff.

How To Prepare for Storm the Hill Day



First of all, alerting the Hill Day organizers that you intend to participate will help the visits go smoothly.

The [registration form](#) for the ANS meeting includes a space to mark your intent to participate in the Capitol Hill visits. Once you've marked your intent, the organizers will be prepared to facilitate your visit to Capitol Hill. If you've already registered for the meeting, but forgot to mark your intent to participate in the Hill Day visits, you can still let the organizers know by [contacting ANS](#).

Next, to make the most of your time with your representatives and their staff, attendees are encouraged to brush up on communication techniques as well as current legislative issues. Doing research at home before the meeting will earn bonus points. In addition, a Hill Day Pre-Briefing and a Policy and Communications Workshop have been organized to prepare everyone fully for Hill Day. The Pre-Briefing on Wednesday, November 13 at 4:00 PM will provide a crash course on the logistics of the visit and key current issues. At 5:00 PM, the ANS Policy and Communications Workshop will follow the Pre-briefing. This workshop is a great resource of general information, tips, and techniques for communicating about nuclear policy.



American Nuclear Society
Young Members Group

Winter 2013 Newsletter

On behalf of the ANS Young Members Group,
we look forward to seeing you at these great
events in Washington, DC.

Newsletter Prepared by
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