NA-YGN

GO NUKE!

A newsletter from the North American Young Generation in Nuclear April 2002

Nuclear Plant License Renewal

What Does it Mean to the Young Generation In Nuclear?

It has been nearly 45 years since the first commercial nuclear power plant went on-line in Shippingport, Pennsylvania. Over the years, the commercial application of nuclear power in the United States waxed to its zenith in the mid-to-late1970's and suffered a severe decline in the 1990's. The decline reached the point that nuclear power plants were put up for auction, and bought at fire-sale prices. The costs to decommission the facilities dominated the economic forecast for the units, and several were shutdown early in the belief that they would never turn a profit. One large plant in the Northeast was placed into decommissioning because $120 Million could not be found to upgrade the facility.

This was the negative outlook in 1995. But all was not so grim.

Recognizing that great value remains in the nuclear power fleet, the American Nuclear Power Industry and the US Nuclear Regulatory Commission have revitalized a section of Title 10 of the Code of Federal Regulations, 10 CFR 54, to enable re-licensing of our nation's nuclear power plants. This regulation enables nuclear power licensees to apply for re-licensing of their power plants, gaining up to 20 additional years of operation. At present, four nuclear stations have successfully applied for an extended operating term, the NRC is processing five more applications, and more applications are expected in the coming year. All of the US nuclear power plant types are represented in these applications. The latest success is Plant Hatch, a two-unit 1800 MWe BWR facility near Baxley, Georgia.

What impact does re-licensing have on those pursuing a career in nuclear power? What do these activities mean to the newly graduated engineer? The effects are all positive, and they extend from the economic, to the social, to the physiological aspects of an engineer's life.

Economic effects are obvious: the re-licensing of these assets means that an engineer can have a full 40 year career in nuclear power. The wages earned in these jobs are at the leading edge for all engineering jobs. Nuclear power plants are vital economic profit centers for strong utilities, which make excellent employers of career-minded engineers. When you make presentations to students and you are asked, "is there a career for me in Nuclear Power?" you can truthfully and emphatically say, "Yes!"

The positive social effects are not so obvious. Nuclear Power stations are major employers in their home counties. They represent a huge tax base that impacts thousands of people, providing money for cultural activities, schools, and public service projects. They provide high paying local jobs that would not exist otherwise. As a result, the standards of living in these rural communities are higher than in surrounding counties.

Physiologically, the benefit of nuclear power is tremendous. Nuclear power plants are "green" facilities. They have no traceable noxious emissions, as fossil fuel plants do, and they are compact, requiring much less space for storage of fuel and waste byproducts. Our children can breathe easier as a result. So can we all.

By William P. Evans, PE, Southern Company

Plant E. I. Hatch, recently relicensed.

NA-YGN Workshop at NEI's Nuclear Energy Assembly

In late April, NA-YGN is hosting its second annual professional development workshop in conjunction with the Nuclear Energy Institute's Nuclear Energy Assembly (NEA) in Naples, Florida. **The workshop is scheduled directly preceding the NEA on April 30 and May 1.** Last year, 114 young professionals gathered in Washington, DC for our communications workshop in connection with the NEA. We are hoping for similar success this year in Naples.

The theme of the communications workshop is entitled "The Future of Nuclear is ***Now!***" The program reflects the most pressing topics currently facing the industry such as security, Yucca Mountain and transportation of nuclear materials. We will feature team-building exercises on conflict resolution and the group will have the opportunity to meet industry leaders by participating in the NEA welcoming reception.

As we discovered at last year's workshop, this meeting presents a great opportunity for young professionals to increase their contacts within the industry while renewing and sharing their enthusiasm. "Our company had just completed a merger. It was extremely useful to be able to meet my counterparts working with our newly formed corporation and discuss professional issues surrounding the merger and the job. I still use contacts today that I made at the workshop in May of last year." said Jeffrey Atkins, System Engineer, Exelon Nuclear.

We must build on the relationships that have been created as a result of NA-YGN chapters springing up at universities and companies throughout North America. There will be how-to sessions outlining in detail how to form an NA-YGN chapter at your organization. Additionally, the group will be introduced to recently elected NA-YGN officers in the positions of Vice President, Treasurer and Professional Development Chair. You can volunteer to sit on national committees to influence NA-YGN policy decisions and participate in policy discussions. Nicole Faulk, Maintenance Support Engineer, with Southern Nuclear Operating Company said after attending the 2001 Workshop, "It was a great opportunity for me to meet and share experiences with my peers in the industry. The workshop also allowed me to return to my company with detailed, current industry news to share with my local NA-YGN chapter, co-workers and my community on important topics that shape the public's perception of our industry."

If you should have any questions about the workshop, please contact Sonja Simmons directly at 202.739.8042 or **sss@nei.org**. Details about the workshop such as registration forms, program and travel information are posted on the NA-YGN website at **www.na-ygn.org/pd/2002/NEA** or NEI's member's only website at member.nei.org.

Thank you, and see you in Naples!

1st NA-YGN Core Reload

With the completion of our first regular annual election, NA-YGN would like to thank outgoing Core members Mark McIntyre, Emmy Roos, and Nicole Faulk for all their hard work and dedication to getting NA-YGN off the ground.

Continuing Core members would like to welcome new members **Chris Comfort**, **Anne Shatara**, and **Lisa Shell**. We are looking forward to working with you in the coming year! With these changes in place, the current NA-YGN Core is:

Past President:	**Sonja Simmons**, NEI
President:	**Undine Shoop**, US NRC
Vice President:	**Chris Comfort**, Southern Company
Treasurer:	**Anne Shatara**, PG&E
Prof. Development:	**Lisa Shell**, Dominion Generation
Public Information:	**Sama Bilbao y Leon**, Dominion Generation
Communications:	**Shannon Bragg-Sitton**, University of Michigan

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Virginia Local Section Participates in "Careers in Engineering Day"

Six members of the Virginia local section of NA-YGN participated in "Careers in Engineering Day" at the Science Museum of Virginia in Richmond on Sunday, February 24, 2002. The event provides middle and high school students with access to engineers and scientists to discuss college and career opportunities. The event format included a few science experiments (e.g., egg drop, popsicle stick bridge strength) to energize the kids and display tables covering a wide range of engineering disciplines and organizations. The NA-YGN display focused on careers in nuclear sciences and engineering, but also included multiple visual aids to educate students and parents about specific nuclear applications. The NA-YGN activities included:

- A demonstration PWR fuel assembly to illustrate nuclear engineering design concepts.
- A poster-size schematic of a nuclear power plant to show the connection between fission and electricity generation.
- An operating radiation detector with different sources of radioactivity (lantern mantles and smoke detectors). Lead, wood, and cardboard were used to demonstrate shielding principles.
- A slideshow depicting nuclear science applications and design issues faced by nuclear engineers.

An estimated 75 students and their parents visited the NA-YGN display. We distributed literature describing nuclear careers and shared technical facts about radiation and power generation. At one point, we amused the students with a spirited battle over which alma mater had the best nuclear engineering program (Wisconsin is still better than Florida, Chris!). Yucca Mountain was the focus of some questions from parents, no doubt from its daily news appearances. Finally, some educators from local schools expressed interest in seeing our NA-YGN Road Show, so expect more reports on public information outreach from the Virginia section. It was a successful afternoon of public education and a rewarding experience for the NA-YGN participants.

By Dana Knee, Dominion Generation

Right: Taylor was a fixture at our table thanks to the sounds from the Geiger counter. Above: NA-YGN Virginia local section members before the storm of students.

Back to the Future of Nuclear Engineering

What are you doing April 10th to the 13th!? Penn State is holding the best student-oriented conference of the year. Students from all over the globe have already signed up and bought their boarding passes. Have you? Students will be presenting their research and meeting fellow students, as well as professionals. The conference is packed with fun activities ranging from wine tours to late night concerts and the ever-famous night scene of Happy Valley.

The conference is your best chance to meet recruiters from every facet of the nuclear industry. Exelon, Westinghouse, Bettis Atomic Power Labs, Dominion Generation, and many more will be in attendance. Don't miss this opportunity!!

All conference information is posted on the Web, so check us out at **http://ans.mne.psu.edu/conference.html** for any late breaking conference news.

Inspiring Young Minds

Division I winners from La Cueva HS proudly display their project entitled "The Columbus".

On February 4, 2002, I was given the opportunity to speak to some very bright junior high and high school age students at the Secondary School Special Session at the Space Technologies and Applications International Forum (STAIF) in Albuquerque, NM. Most students attending the session were competitors in the Student Space Design Competition. This competition is held annually in conjunction with the Symposium on Space Nuclear Power and Propulsion, associated with the University of New Mexico's Institute for Space and Nuclear Power Studies (ISNPS). Students in the state of New Mexico are invited to participate in the competition as individuals, team pairs, or classes. The objective of this year's project was to design a robotic mission to Mars capable of searching for life in several likely, but widely separated, locations. The creativity that these students displayed was very inspiring!! Young minds are capable of thinking out-of-the-box so well!

As a member of the nuclear field working in the area of space nuclear power and propulsion, I was asked to give a talk to help inspire the kids to keep working hard in science and technology, despite all the tough classes they might encounter in high school and college. Being a nuclear engineer, I naturally steered the discussion to the nuclear field! To break the ice a bit and to wake the kids up – my talk was at 8:30 am!! – I showed a film of a very special experience in my own educational path.

As an undergrad at Texas A&M University, I helped design, build, and test a microgravity phase separator as a part of the 1997 NASA Reduced Gravity Student Flight Opportunities Program. This project led me to the most exciting laboratory I can think of (on Earth, that is!) – the NASA KC-135, which is more affectionately known as the 'Vomit Comet'. The KC-135 achieves microgravity conditions in about 30 second stretches by flying in a parabolic fashion (~40 parabolas are flown in each trip), offering the opportunity to test experiments in a true microgravity environment without the expense of sending them to space.

Well, I think my film made an impact!! Now that I had the students' attention, I was able to talk to them about how nuclear technology can be applied in space to accomplish some really exciting missions. I think I inspired at least a few of the students to keep up the hard work in math and science, and to perhaps become the future scientists and engineers developing new nuclear technology for space travel. It certainly can't hurt to encourage a few dreams in today's youth!!

For more information about future STAIF conferences, please visit **www.unm.edu/~isnps**.

By Shannon Bragg-Sitton, Univ. of Michigan/NASA MSFC

Sharing the Division I title with Ian and Tom was Brian McConnell of Wilson Middle School

Coming soon to a classroom near you

Where do kids learn the most about the sciences? In class, of course! That's why the Virginia Health Physics Society and American Nuclear Society have sponsored an annual Science Teachers' Workshop at Dominion's Innsbrook facility for several years. The 2002 workshop was held on February 9, and this year the Virginia section of NA-YGN participated. Forty-four dedicated Virginia science teachers attended the workshop to learn about nuclear energy and technology and how to teach the subjects in their classrooms. Virginia section members on hand to help coordinate activities and answer questions included Todd Flowers, Rebecca Kepler, and Tom Psuik. In addition, two members gave presentations as a part of the workshop curriculum: Lisa Shell began the day with a presentation on the basics of radiation and Sama Bilbao y Leon followed later to describe the beneficial uses of nuclear technology. Other presentation topics included the Biological Effects of Radiation, Nuclear Radiation Activities for the Classroom, Commercial Nuclear Energy, and Using a Geiger Counter in the Classroom. At the end of the day, the teachers participated in breakout group discussions to share ideas for incorporating what they learned into lesson plans. Each teacher took home copies of the presentation materials and a wealth of other reference information including the book "Nuclear Power: Villain or Victim?" by Max W. Carbon, donated by the Virginia section of NA-YGN. As a special bonus, each school represented at the workshop received a working Geiger counter.

Feedback about the workshop has been very positive. One teacher wrote, "... I enjoyed the workshop and will be able to teach my students much more about nuclear energy as a result... The Geiger counters were so cool!! I brought mine right home and showed my husband how it works. The workshop was certainly worth giving up a Saturday. Thanks again!!!"

By Rebecca Kepler and Lisa Shell, Dominion Generation

Participants learn how to use Geiger Counters.

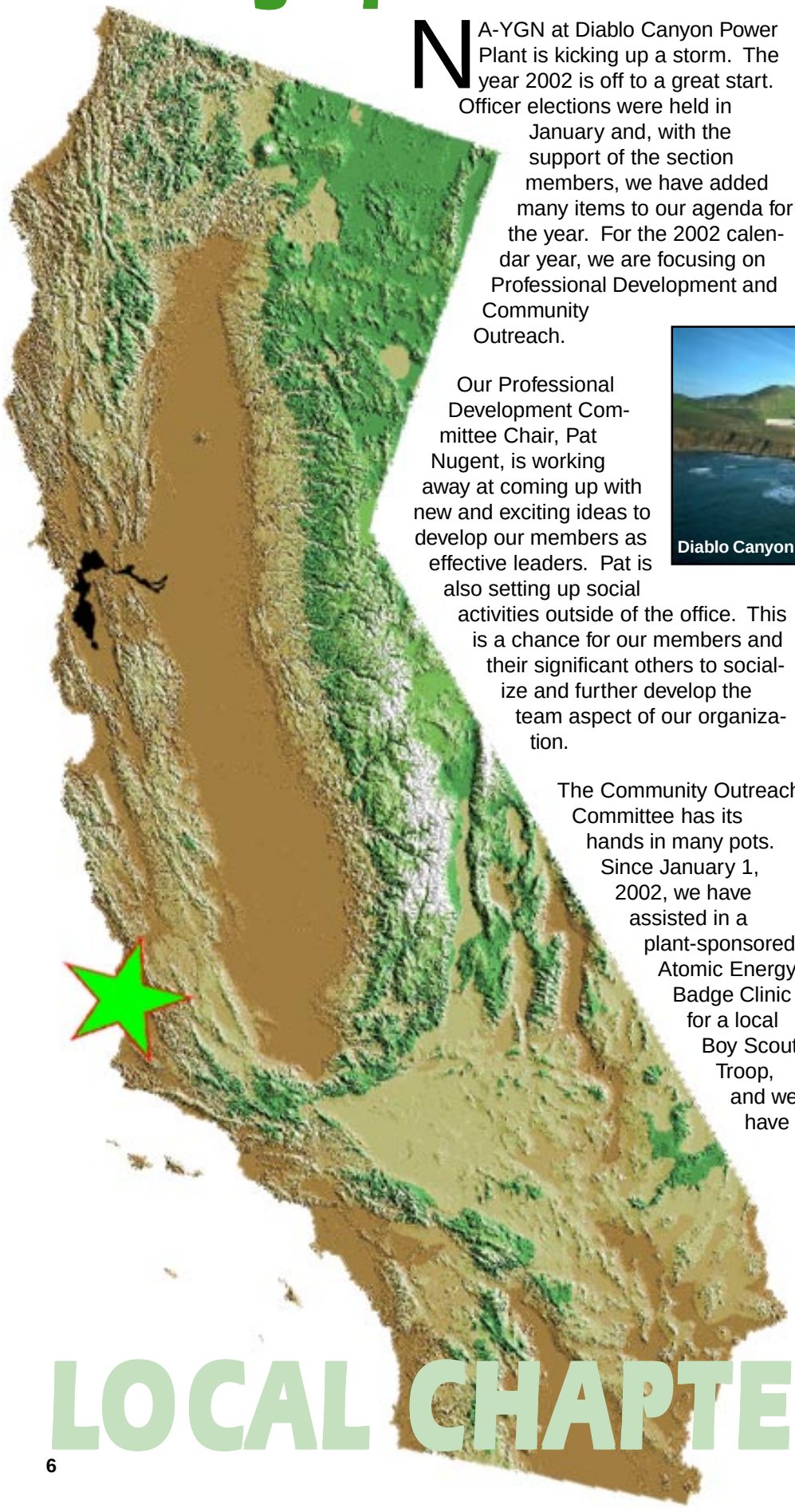
YG at High School Youth Summit

Ryan Birge, Darrin Gard, and Courtney Rose from the Southern Company's Farley Nuclear Plant Chapter of the Young Generation in Nuclear recently participated in the 2002 High School Youth Summit for Young Men held at Wallace College in Dothan, AL. High School Senior young men from local schools were presented with both technical and professional career options around the area. The Farley Nuclear Plant display presented information on nuclear science and technology, as well as providing discussion about a career in the nuclear industry. In addition to browsing booths set up in the gymnasium, students participated in panel discussions in the technical, medical, and aerospace fields. Students were excited to learn about careers in the local area that involve nuclear science and technology.

By Ryan Birge, Southern Company

(l to r) Ryan Birge, Darrin Gard, and Courtney Rose speak with a local youth counselor.

Kicking Up a Storm in California



NA-YGN at Diablo Canyon Power Plant is kicking up a storm. The year 2002 is off to a great start. Officer elections were held in January and, with the support of the section members, we have added many items to our agenda for the year. For the 2002 calendar year, we are focusing on Professional Development and Community Outreach.


Diablo Canyon Power Plant

Our Professional Development Committee Chair, Pat Nugent, is working away at coming up with new and exciting ideas to develop our members as effective leaders. Pat is also setting up social activities outside of the office. This is a chance for our members and their significant others to socialize and further develop the team aspect of our organization.

The Community Outreach Committee has its hands in many pots. Since January 1, 2002, we have assisted in a plant-sponsored Atomic Energy Badge Clinic for a local Boy Scout Troop, and we have been actively involved in the recruitment of new permanent employees and summer interns through attendance at various career fairs and "Dinners with Industry." As committee chair, I am starting a very ambitious program to develop classroom presentations on nuclear technology for grades K-12. This month, we are speaking with high school juniors during their Career Exploration Day about job opportunities in the nuclear power industry. Currently, we are arranging speaking engagements on nuclear power and career options in nuclear technology with various engineering clubs at the local universities. NA-YGN at DCPP is getting the word out that nuclear power is far from dead!

In May and June, 13 summer interns will be starting work at Diablo Canyon. Our members will serve as mentors to assist them in getting settled and adjusting to work at a power plant. In July, 10 new hires will start the New Engineer Program at Diablo Canyon. NA-YGN will be there to welcome them and help them get through the first few ropes. We are setting up social gatherings and providing many opportunities for them to ask us questions. For many of our members, it wasn't long ago we were in their position - new and overwhelmed.

With the full support and guidance of senior management at Diablo Canyon, NA-YGN is establishing itself as a productive and beneficial employee organization. We are bringing the exuberance, enthusiasm, and energy of youth back to the power plant.

By Anne Shatara, PG&E, Diablo Canyon Power Plant

LOCAL CHAPTER NEWS

LOCAL CHAPTER NEWS

Kick-off Meeting at Framatome ANP.

Virginia Chapter Welcomes Lynchburg

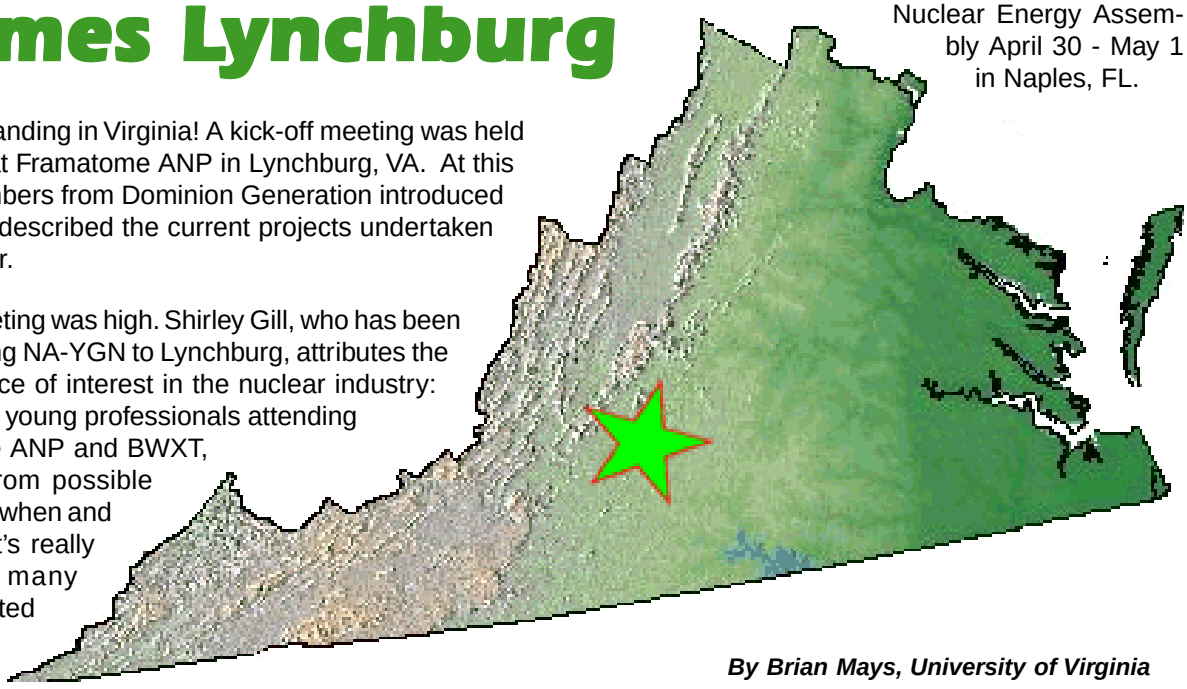
NA-YGN is expanding in Virginia! A kick-off meeting was held February 21 at Framatome ANP in Lynchburg, VA. At this meeting, members from Dominion Generation introduced NA-YGN's goals and described the current projects undertaken by the Virginia chapter.

Attendance at the meeting was high. Shirley Gill, who has been instrumental in bringing NA-YGN to Lynchburg, attributes the turnout to a resurgence of interest in the nuclear industry: "With more than thirty young professionals attending from both Framatome ANP and BWXT, we moved straight from possible interest in NA-YGN to when and where do we meet. It's really exciting to see so many young people interested in the future of nuclear power and nuclear-related industries."

Since the kick-off event, the Framatome employees have held a follow-up meeting to plan a local NA-YGN chapter. Mehmet Saglam, one of the organizers of this meeting, commented, "The overall response has been quite encouraging. We feel that the NA-YGN chapter can serve as a vehicle to interact with our peers in other companies and can also play an important role in facilitating networking among our group in Framatome/Lynchburg."

Already the group has established several short-term goals, including participating, via conference call, in the monthly meetings held at the Innsbrook Technical Center in Richmond. One of the projects under development by the Virginia chapter is to use teleconferencing to coordinate its members, who are scattered throughout the state.

Other activities being planned by the Lynchburg group include reaching out to primary and secondary students in central Virginia to teach the benefits of Nuclear Power and participation in the upcoming NA-YGN Communications Workshop, to be held in conjunction with the Nuclear Energy Assembly April 30 - May 1 in Naples, FL.



By Brian Mays, University of Virginia

EVENTS EVENTS EVENTS

Deadlines

April 3 New registration deadline for IYNC 2002! Visit www.iync.org for details.

April 15 Deadline for registration to the NA-YGN Communications Workshop at NEA. Naples, Florida, April 30 - May 1, 2002.

National & International Events

April 10-13 ANS/ASME National Student Conference: "Back to the Future of Nuclear Engineering". Penn State University, State College, PA. http://ans.mne.psu.edu/conference.html

April 14-18 10th International Conference on Nuclear Engineering. Arlington, VA. www.asmeconferences.org/icone10

April 16-20 International Youth Nuclear Congress (IYNC2002). Daejeon, South Korea. www.iync.org

April 30-May 1 NA-YGN Communications Workshop: The Future of Nuclear is Now!. Naples, FL. www.na-ygn.org/pd/2002/NEA

May 1-3 Nuclear Energy Assembly (NEA), sponsored by Nuclear Energy Institute. Naples, FL. www.nei.org

June 1-5 International Nuclear Conference. Palm Beach, FL. Contact: Ralph Branscomb/Quadrex, Quadrexusa@hotmail.com

June 2-5 23rd Annual Conference of the Canadian Nuclear Society. Toronto, Ontario, Canada. www.cns-snc.ca

Get Noticed!

Upcoming events and deadlines that you would like to be included in the *Calendar of Events* can be submitted at any time for posting on the web. Include the date, location, title of the event, and the event host or sponsor in an email to calendar@na-ygn.org.

June 4 NA-YGN Mini Professional Development Seminar. Toronto, Ontario, Canada. Contact: Mark McIntyre, mcintyre@na-ygn.org

June 9-13 American Nuclear Society Annual Meeting. Hollywood, FL. www.ans.org

August 18-20 Conference on Nuclear Training and Education. Orlando, FL. www.conteonline.com

September Annual Meeting of the Mexican Nuclear Society. Ixtapa, Zihuateanejo, Mexico. Contact: Gustavo Alonso, galonso@nuclear.inin.mx.

October 6-10 International Topical Meeting on Probabilistic Safety Assessment. Detroit, MI. www.ners.engin.umich.edu/PSAConf

November 17-21 ANS Winter Meeting. Washington, DC. www.ans.org

November 19 NA-YGN Professional Development Workshop. Washington, DC. Contact: Emmy Roos, roos@na-ygn.org

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