



# GO NUKE!

A newsletter from the North American Young Generation in Nuclear

August 2003

- The President's Corner Page 2
- Earth Day Gets Pro-Nuclear Spin Page 4
- New Chapter News Page 6
- Roller Coaster Challenge A Hit Page 7



## Postcard From California

By Sherry Reilly and Lisa Shell

We are pleased to report that the 3<sup>rd</sup> Annual NA-YGN Workshop in Santa Monica was a splendid success. Over 70 participants representing more than 20 organizations from the U.S. and Canada attended.

"This year's NA-YGN workshop participants really embodied the growing enthusiasm and optimism about the future of nuclear energy," said Nuclear Energy Institute Executive Vice President Angie Howard. "It was exciting to see so many smart, talented and dedicated young professionals gathered together to ensure that the nuclear industry continues to thrive for future generations."

**ABOVE: NA-YGN members discuss the future of nuclear energy and have a little fun too at the 3<sup>rd</sup> annual workshop in Santa Monica.**

The workshop featured information-gathering sessions related to industry issues such as security, the environmental benefits of nuclear energy, and Yucca Mountain. While the key issues concerning the nuclear industry may not change very much from year to year, many of our speakers shared new and interesting perspectives on hot topics such as Yucca Mountain and

**Please See Postcard, Page 2**

# The President's Corner

## Opportunities Abound For Coming Year

I am happy to announce the newest addition to GoNuke!, a recurring column titled "The President's Corner." I hope to use this column to announce our plans for the year, update everyone on important nuclear science and technology issues, and solicit ideas on how we can make NA-YGN a well known and respected organization. In this first installment I would like to announce some of our plans for the coming year, welcome our newest core members, and say thanks to everyone for a great NA-YGN Communications Workshop.



Chris Comfort

Prior to the NA-YGN Communications Workshop the Core officers met to discuss the upcoming year. I believe that there are tremendous opportunities for NA-YGN to help its membership and the community. It is my hope that some of these ideas will improve the leadership and development of our membership and get

more people interested in Nuclear Science and Technology. Some of the plans for the upcoming year are:

- A trip to Yucca mountain to see the future of spent nuclear fuel
- Multiple e-mail listservs set up to link NA-YGN members to a pool of members with similar interests. This would allow a member to send questions to others in similar fields to help with their job, knowledge transfer, and overall communication.
- Moving the May 2004 NA-YGN meeting to Toronto to coincide with the IYNC conference.
- Finalize the NA-YGN panel discussions for the Winter ANS meeting in New Orleans.
- Work on developing better communication between the local chapter representatives and the NA-YGN officers.

I would like to welcome our newest core members, David Pointer and Mark Urso. I am happy to have Mark McIntyre, Shannon Bragg-Sitton, Sama Bilbao-y-Leon, Undine Shoop, and Anne Shatara return. Lastly, I would like to thank Sonja Simmons for all of her help and support as she departs. I hope that this year we will continue to grow, and with the new officers and the strength of our entire membership I think we can do great things this year.

Our NA-YGN Communications Workshop that we held last month in Santa Monica, Calif., was a great success. We had fabulous speakers including leaders of the nuclear industry, a politician from the heart of the Yucca Mountain debate, and a communications expert. I think the two day event was a learning experience for us all and I know I came away with ideas and skill to use in my career. For those that were unable to attend the NA-YGN Communication's Workshop in Santa Monica, Calif. I hope that you will be able to attend our panel discussions in New Orleans this November as part of the American Nuclear Society Winter Conference.

For everyone that is a part of NA-YGN, if there is something that you feel this organization should attempt to do or you are interested in helping with some of our initiatives please e-mail me at [comfort@na-ygn.org](mailto:comfort@na-ygn.org).

Once again, let's have a great year!

Thanks,  
**Chris Comfort**  
President, NA-YGN

## Postcard

From Page 1

the environmental benefits of nuclear energy. For instance, Commissioner Candace Trummell from Nye County, Nevada, reiterated her constituents' view that their county, as host to the Yucca Mountain Project, prefers to work constructively with the U.S. Department of Energy to ensure that the repository is safe and that it benefits the local populace.

Additional sessions provided an opportunity for participants to gain career advice from industry executives. Oliver Kingsley,

president and chief operating officer of Exelon Corporation said, "Each of you must take ownership of your careers. Don't let someone else dictate the direction your career will take. Many opportunities within our industry will be available to your generation of employees."

Many opportunities within our industry will be available to your generation of employees.

Oliver Kingsley  
Exelon Corp.  
president  
and CEO

Be sure to take advantage of each opportunity and work hard to reach your goals."

The group also participated in professional development discussions outlining strategies for communicating the benefits of nuclear technologies to decision-makers, the media, and within their company and their community. Vincent Covello in particular led a fascinating session that provided tips gleaned from scientific data for communicating in high stress situations.

Be sure to check out the slides from the workshop presentations, which have been posted on the NA-YGN Web site, <http://www.na-ygn.org>. We hope to see you at the next workshop!

# GO NUKE!

[info@na-ygn.org](mailto:info@na-ygn.org) / [www.na-ygn.org](http://www.na-ygn.org)

Editor  
David Pointer

Direct correspondence  
Young Generation  
P.O. Box 10014

Graphic Design  
Angie Pointer

La Grange, IL 60525  
1-877-52-NAYGN

## Young Generation Shares Insights Into Industry

By Dana M. Knee and Anne Shatara

**T**he nuclear industry. Knowledge transfer. When these two are placed side by side, what comes to mind? An aging workforce. Tribal knowledge passed from one generation to the next. On April 5, a knowledge transfer of a slightly different kind took place.

At the American Nuclear Society Student Conference, held at the University of California-Berkeley, students were given

the opportunity to speak with professionals close to their own age. Since the nuclear industry presently has a top heavy employee base, this interaction is typically a challenge at such conferences.

Four young nuclear industry professionals shared their experience from work in the industry with an audience composed of graduate and undergraduate nuclear engineering students. The panel consisted of two industry professionals and two students with industry intern experience. Anne Shatara of Pacific Gas and Electric and Dana Knee of Dominion Generation represented the industry with information about their respective companies' new hire programs. T. Jay Harrison from the University of Tennessee and Andrew Zilmer from the University of Wisconsin-Madison, pre-

sented their intern experiences at Westinghouse, Tennessee Valley Authority Watts Bar, and Point Beach Nuclear Plant.

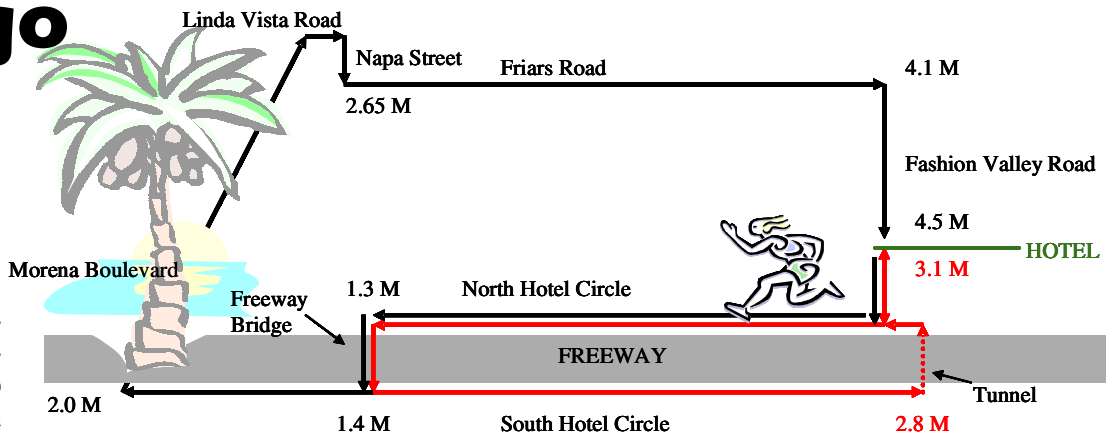
Each panel member provided a short synopsis of his or her work experience, advised attendees how to pursue the right job for an individual's skills, and described what to expect during the first year of full-time employment (lots of training!). The students' questions included: "Did you have a mentor?"; "What would you have done differently?"; and "Did you go straight to graduate school or enter the workplace first?"

The fundamental message shared among all panelists is that education does not end when nuclear engineers leave campus.

# Runners Tour Town & Country In San Diego

By Emmy Roos  
Race Director

The NA-YGN fun run in San Diego was a great success. Not only did we have 27 sportive souls (and bodies) showing up at the start line, we also had all 27 finish. That was a first! Obviously the race instructions were too easy. The race director will try to make the race map for New Orleans a bit more confusing, so we can go back to the usual one to two missing participants. We took a small knowledge test before the run. We asked for the capital of Kentucky. Obviously, a lot of you didn't really care much about geography in high school. How else can one explain answers such as Al Gore, Paducah, Louisville, Podunk (?!), Louivie (!?!), and Idaho Falls? One has to give some credit to someone who can weasel himself out of this one by saying "K" as



did **Antony Hechenova** (UNLV). It is also not Frankfort. The capital of Kentucky is Frankfort. Let that be engraved in your memory forever.

One minor detail that probably should be mentioned is that the race director was so excited to see all these fine runners take off she forgot to start the stopwatch for a while, but let's just keep that between us. It gives participants some bragging material when they talk running pace.

So let's quickly move on to the meat of things: the results. First things first, or as we say in NA-YGN fun runs,

first things last. **Ross Radel** (UW-Madison) for the men's race and **Tracy Globe** (Consumers Energy) for the women's race came in first and were disqualified for trying too hard.

**John Graham** (ETCetera) was almost run over by **Charlie Rombough** (CTR Services) who drove off by car after he had finished his run. That is taking competitiveness a bit far Charlie. The bonus points for emotional damage would have made John a good candidate for the winner of the race, were it not that he was also our official photog-

rapher and managed to lose all photos while transferring them to his computer.

After careful manipulation of the results, including penalties for wrong answers and for finishing first, as well as irrational bonus points for distances from San Diego and for foreign participants, the final winners of the race were **Pam Tilbrook** (spouse) for the women's race and **Glenn Sjoden** (University of Florida) for the men's race. Congratulations to both of you!

Thank you everyone for taking part and we hope to see you again in New Orleans.

# Alabama Earth Day Celebration Includes Pro-Nuclear Message

By Barry Smith

On April 13, YGN members from the Southern Nuclear Corporate Office volunteered at Earth Day at the Gardens 2003. This annual event, held at the Birmingham Botanical Gardens, brings together over 60 environmentally conscious organizations from around central Alabama to celebrate Earth Day.

Amy Greene, Rachel Grimes, Barbaro Quintero-leyva, and Barry Smith staffed an information table. The display included information and literature that described nuclear power generation, explained radiation and its presence in the environment, and promoted the environmental benefits of nuclear power. Numerous attendees approached the display with curiosity, asking questions about nuclear power as well as nuclear science and technology as a whole. Southern Nuclear YGN members were happy to answer all questions while explaining the truth behind many public misconceptions.



YGN's participation in Earth Day at the Gardens was well received by the event organizers and participants. The group plans to become a regular participant in this annual event.

**Top:** From left, Barry Smith, Rachel Grimes, Amy Greene and Barbaro Quintero-leyva represented YGN at an Earth Day event in Alabama. **Bottom:** Amy Greene, left, and Rachel Grimes answer questions about nuclear power.

## Virginia Section Educates Teachers

By Carl Tarantino

The 2003 Science Teacher Workshop, held Feb. 8 in Lynchburg, Va., was nearly cancelled by the cold and snowy forces of Mother Nature. Fortunately, the workshop was deemed a "go" as sunny, cold weather prevailed. Twenty-six elementary, middle and high school science teachers gathered at Framatome's Advanced Nuclear Power facility to attend a 7-hour workshop titled "Understanding Nuclear Radiation." The teachers were predominantly from Lynchburg and the neighbor-

ing counties, but included one group from the Tidewater-Newport News area.

The teachers were awarded 7 contact hours for the workshop, which could then be applied for Continuing Education Credits in their respective districts.

In addition to grants provided by the Power Reactor Section, the Health Physics Society and the American Nuclear Society, this year's workshop was sponsored by Dominion Resources, Framatome, the Thomas Jefferson National Accelerator Facility, ICN Biomedicals, and

Canberra Industries. The workshop included talks, activities, and discussions with an opening address by the Chief Executive Officer of Framatome ANP Tom Christopher. Members of NA-YGN assisted the workshop staff in many ways -- performing check-ins, serving as visitor escorts, and giving presentations.

Based upon previous teacher evaluations, a special breakout session was added at the end of the day, which was facilitated by Mary Hobbs, recipient of the 2000 Outstanding Science Teacher of the Year Award. The teachers

were divided into groups arranged by grade levels, and, after being prompted by some initial questions, a very beneficial information exchange took place. The teachers were fully engaged in these discussions and expressed their thoughts and ideas on how we can continue to improve the workshops and assist them in the classroom.

The Virginia Chapter of HPS, Virginia Section of ANS and NA-YGN deeply appreciate the help of the volunteers and sponsors who were instrumental in making the workshop an outstanding success.

# Nuclear Power Plant Security Doesn't Need The Airport Security Approach

By Jonathan Wert and  
Patrick W. O'Hara

A "standardized" approach to problem solving has never seemed to work for the nuclear power industry. Advancements in nuclear safety and operational performance have been largely the result of careful study to reveal and correct root causes that were often plant specific, rather than addressing only symptoms.

Framing the problem of airport security in terms of labor policy was a bold move for the federal government, and one that may actually improve airline security in the long run by attracting higher quality employees, raising wages and providing a career path — thus improving employment longevity. Security work at this level obviously requires a high-quality employee and a learning curve that benefits from long-term employment relationships. However, a root cause analysis on security problems would likely lead away from front-line employees, and focus more on policies and regulations established and administered by both airline security management and the federal regulator.

The same congressional momentum seems to be directed at the federalization of nuclear power plant security. Nuclear power plant security is already highly regulated with defined security program criteria and rigid suitability requirements for nuclear security officers. Nuclear security officers are subjected to minimum education and experience requirements, a series of civil and criminal background checks, physical and psychological testing, drug testing, and

strict training and qualification requirements — all of which are conducted prior to hiring, and annually thereafter while employed. In fact, these requirements are often so stringent that it makes recruiting new employees difficult. Nuclear security officers are already among the highest paid uniformed security force in the U.S. An important consideration is whether federalization will create a downward pressure on wages or provide a means to circumvent the suitability requirements already in place through the use of federal employment programs.

Policymakers are quick to state that federalization of nuclear power plant security will give the government more control of security operations, ameliorating the public's concern about nuclear safety. The reality, however, is that the federal government already has that authority and oversight through its regulatory programs and enforcement actions. Federalization of the worker is unlikely to change regulatory requirements or enforcement: it may actually put subtle collusive pressure on the government to ease regulatory oversight to demonstrate that federalization is working.

Like any other system in nuclear power operations, maintaining high-levels of security while focusing on the safe operation of the power plant is a complex issue. The current security program is based on a design basis threat determined by the Nuclear Regulatory Commission, and is designed to address both internal and external threats. An important foundation of this security program is the background checks and security clearances for all personnel working in

the plant, which has proven effective against the internal threat.

The assumption of policymakers is that federalization will bolster the ability to defend against external threats. The reality though, is that defending against this threat is truly the last stand in a defense-in-depth concept. More attention should be placed on defending against external threats prior to the plant level, placing the emphasis on federal intelligence and law enforcement agencies rather than plant security guards. This is prudent because it increases the reactionary gap, which is often the key to maintaining multiple levels of defense. Managing these improvements should be a central focus of the Office of Homeland Security.

As for improvements in plant-level security, changes are needed. Enhancing programs to defeat the insider threat requires the professionalization of the nuclear security function, which involves further strengthening of suitability and training requirements. This should be accomplished through strict regulation of current programs, rather than replacement of private security workers by a federal bureaucracy. Safe operation of nuclear power plants relies on all workers having the same mindset — what sociologists have coined the safety culture or a safety-conscious work environment. The introduction of a new federal bureaucracy may actually undermine safe work practices and the high-performance systems that have yielded operational improvements in the nuclear industry in recent years.

Jonathan Wert, Ph.D. is president of Management Diagnostics Inc. of Port Royal, Penn. — a management consulting firm specializing in safety and culture assessments in the nuclear power industry. Patrick W. O'Hara is a policy analyst specializing in nuclear security and worker safety issues. Both are researching the effects of labor policy on high-performance work systems in the nuclear power industry. Comments or questions may be directed to [jwert@mdi-wert.com](mailto:jwert@mdi-wert.com) or [p.ohara@verizon.net](mailto:p.ohara@verizon.net).

## Don't Miss IYNC 2004!



**What:** 2004 International Youth Nuclear Congress

**When:** May 9-13, 2004

**Where:** Toronto, Canada

**Deadline:** Summaries should be submitted by **Sept. 30, 2003**. For details and the complete call for papers, visit [www.iync.org](http://www.iync.org).

## NA-YGN Arrives In Lone Star State

By Robert Tapia and Deborah Farnsworth

The Comanche Peak chapter of the NA-YGN (CP-YGN) has recently been launched and is proud to be the first official NA-YGN chapter in Texas. Our membership includes young professionals from engineering, operations, maintenance, chemistry, radwaste, and information technology. In addition, we have several seasoned employees that have become honorary alumni.

The chapter already has 32 members and 20 honorary alumni after only a few months of existence!

CP-YGN's first general meeting took place on Jan. 30, 2003, featuring guest speaker Lance Terry, senior vice president and principal nuclear officer at Comanche Peak.

Since the first meeting, the newly formed chapter has been very active. CP-YGN held its first professional development meeting,

where Nick Rakos from Comanche Peak's project SATURN (Strategic Alliance for Technology Upgrades and Reliability Now) group discussed the future digital upgrades at Comanche Peak and instrumentation and control technology in general. The chapter has also visited multiple area schools where members have spoken with students ranging from 5<sup>th</sup> grade to 12<sup>th</sup> grade about topics such as the importance of math education, what engineers do, and what people do at Comanche Peak.

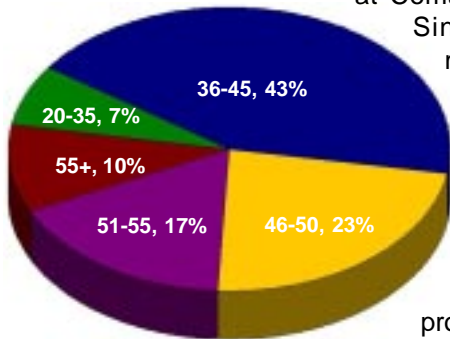
CP-YGN membership continues to grow and our members are very excited about the opportunities that CP-YGN can offer.

During our next meeting, we will discuss a condensate motor trip that we experienced earlier this year and how it affected the plant.

If anyone has any questions about our branch please e-mail [hbrown2@txu.com](mailto:hbrown2@txu.com).



At the meeting, we also announced our appointments for NA-YGN Midlands: Mark Fecteau, executive sponsor, Amy Buu, president, Michael Lewis, vice president and Marci Rapp, administrative officer, pictured from left to right. Communications Officer Jackie McCoy was out of town.



## Midlands Chapter Kicks Off

By Amy Buu

NA-YGN Midlands is finally official! NA-YGN Midlands is a joint chapter between Westinghouse's Columbia Nuclear Fuel Manufacturing Facility and South Carolina Electric & Generation's V.C. Summer Plant. The kick-off meeting was attended by more than 30 people, including local American Nuclear Society and Women in Nuclear representatives.

The meeting began with a greeting by the chapter's executive sponsor Mark Fecteau, who is Columbia's plant manager. The 27 Columbia professionals and 3 V.C. Summer professionals had the chance to talk to one another and discuss the benefits that the NA-YGN Midlands chapter will provide, including opportunities to gain technical and professional expertise, visit area schools, educate the public about the nuclear industry, and learn from our peers. "It's good to have NA-YGN to reach out especially to high school students since NA-YGN can show them that being an engineer or working in the nuclear industry can be exciting" said Laura Livingston, chair of the WIN local section.

### Tips For Developing New Chapters

- 1) Get an executive sponsor!
- 2) Link-up with local ANS and WIN chapters.
- 3) Kick-off with a PC to have the NA-YGN Web site online so people can sign up right there!
- 4) Get members to complete a member information form. We found out that a lot of new members want to become managers, learn more about the entire nuclear fuel cycle, want to get their FE/PE license, like to get scuba diving and more!
- 5) Pizza, Pizza, Pizza!

# Westinghouse Chapter Hosts Roller Coaster Challenge

*Activities Part Of 2003 Take Our Children To Work Day*

**By Kara Prentice**

The Westinghouse Electric Company Energy Center site Activities Committee sponsored the 2003 Take Our Children to Work Day on April 25, 2003. A group of volunteers from the Westinghouse NA-YGN Community Initiatives Team supported events held during this day.

The program for the student activities was centered around the theme of "Engineering is Everywhere." Tony Greco, vice president of human resources and corporate relations at Westinghouse, welcomed the students and emphasized the importance of educating today's students to become the nuclear industry

workers of tomorrow. Nearly 40 students gathered to hear an overview presentation providing information on engineering career opportunities. Then the students were provided a case study focusing on an engineering problem that they had to work through in teams to solve.

The project, "Take the Roller Coaster Challenge" required the students to assume the role of theme park engineers involved in the design, construction, testing and naming of a roller coaster for a nuclear theme amusement park.

The primary objective of the roller coaster project was to help the students understand the principles of

potential and kinetic energy as applied during roller coaster operation. Each team was provided vinyl tubing, dial rods with wooden bases and twist ties for their track and support structure materials.

BBs served as the train cars that traversed the track.

Each team's final product was judged on creativity of design and ride name, quality of construction and efficiency

of operation. The exercise was helpful in teaching nuclear terminology and project management principles including planning and execution.

The winner of the Roller Coaster Challenge was the team that built the Mushroom Cloud of Terror. Other

ride entries were Nuclear Thingy, Make U Vomit Vortex, Fusion Confusion, Nuclear Twister and Atomic Flyer. At the end of the session, the students conducted a project close out and reviewed what they learned from the project by participating in several rounds of an Energy Bowl contest in the style of the popular game show, Jeopardy. Five student teams competed including Really Smart Kids, Sugar Daddies, You Can't Win, Honey Bunches of Oats, and Yes We Can. The appropriately named winning team was Yes We Can.

Both students and Westinghouse volunteers agreed that the morning program was successful and beneficial to the students' overall understanding of engineering career opportunities and they look forward to participating in another unique program for the 2004 Take Our Children to Work Day.

**The primary objective of the roller coaster project was to help the students understand the principles of potential and kinetic energy as applied during roller coaster operation.**

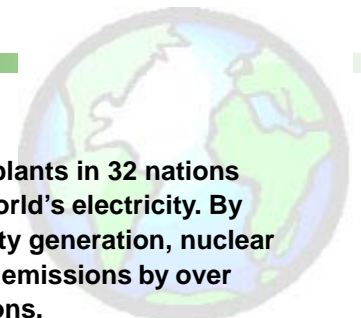
## **Mark Your calendar!**

Look for the NA-YGN sessions at the American Nuclear Society Winter Meeting to be held in New Orleans on Nov. 16-20.

## **FACT OF THE QUARTER**



Worldwide, 441 nuclear power plants in 32 nations produced 16 percent of the world's electricity. By replacing fossil fuels in electricity generation, nuclear plants in 2001 reduced carbon emissions by over 600 million metric tons.



**Source: Nuclear Energy Institute  
www.nei.org**

# EVENTS

## Deadlines

**Sept. 30, 2003** Summary submissions due for International Youth Nuclear Congress 2004 (IYNC 2004). For details, see [www.iync.org/submit](http://www.iync.org/submit).

## National and International Events

**Aug. 25-29, 2003** OECD Halden Reactor Project International Summer School, "Design and Evaluation of Human-System Interfaces HSIs." Halden, Norway. [http://www.ife.no/english/aktuelt/aktuelt\\_display.jsp?docId=2385](http://www.ife.no/english/aktuelt/aktuelt_display.jsp?docId=2385)

**Sept. 15-19, 2003** International Conference on Global Environment and Advanced Nuclear Power Plants (GENES4/ANP2003). Sponsored by Atomic Energy Society of Japan (AESJ) and the American Nuclear Society. Kyoto, Japan. <http://genes4-anp2003.nuclear.jp>

**Oct. 5-8, 2003** Advances In Nuclear Fuel Management III. Hilton Head, S.C. [www.ans.org](http://www.ans.org)

**Oct. 14-18, 2003** International Meeting on Applied Physics (APHYS-2003). Badajoz, Spain. [www.formatex.org/aphys2003/aphys2003.htm](http://www.formatex.org/aphys2003/aphys2003.htm)

**Nov. 16-20, 2003** ANS/ENS International Winter Meeting and Nuclear Technology Expo. New Orleans, La. [www.ans.org](http://www.ans.org)

**Feb. 8-12, 2004** Space Technologies and Applications International Forum (STAIF-2003); 21st Symposium on Space Nuclear Power and Propulsion. Albuquerque, N.M. <http://www.unm.edu/~isnps/staif/>

**Feb. 8-11, 2004** HPS Midyear Topical Meeting. Augusta, Ga. [www.hps.org](http://www.hps.org)

## 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 e-mail to [gonuke@na-ygn.org](mailto:gonuke@na-ygn.org).

**March 21-25, 2004** 14th Pacific Basin Nuclear Conference. Honolulu, Hawaii. [www.ans.org](http://www.ans.org)

**April 1-3, 2004** ANS Student Conference. Madison, Wis. [www.ans.org](http://www.ans.org)

**April 25-29, 2004** International Conference on Nuclear Engineering (ICONE 12). Crystal City, Va. [www.asme.org](http://www.asme.org)

**May 9-13, 2004** International Youth Nuclear Congress. Toronto, Ontario, Canada. Hosted by the NA-YGN and the Canadian Nuclear Society. [www.iync.org](http://www.iync.org)

**June 13-17, 2004** American Nuclear Society Annual Meeting. Pittsburgh, Penn. [www.ans.org](http://www.ans.org)

**July 11-15, 2004** Health Physics Society Annual Meeting. Washington, D.C. [www.hps.org](http://www.hps.org)

**July 25-29, 2004** American Association of Physicists in Medicine Annual Meeting. Pittsburgh, Penn. [www.aapm.org](http://www.aapm.org)



Young Generation  
P.O. Box 10014  
La Grange, IL 60525