



### Message From the Chair By Alan E. Levin

To say that it has been an eventful year, so far, for the nuclear technology community is something of an understatement. As those of us in the U.S. were supporting our friends and colleagues in Japan in their efforts to recover from the devastation of March's earthquake and tsunami and the accident at Fukushima, we were faced with our own challenges resulting from extreme natural phenomena. Tornadoes in the Southeast, massive floods in Nebraska, hurricanes on the East Coast, and a historic earthquake in Virginia: all of these posed threats to our nuclear power plants. That those plants withstood those threats with minimal damage and no impact on public health and safety is a testament to their robust engineering and excellence in operation. But it is also a reminder to all of us in NISD that while we have made significant strides in improving the reliability and safety of our plants, and substantially reduced the risk associated with "internal" events, we cannot control the weather and other environmental hazards; we can only anticipate them and design our plants to withstand them. The insights we gain from our assessments of the events at Fukushima must be used to help ensure that's the case, both for the existing fleet and the new plants that will come on line in the future.

But the news has not been all bad. In the past few months, many countries have reaffirmed their intention to deploy new nuclear plants. In the U.S., the past few weeks have seen the first NRC licensing hearings in decades, and the first "combined" licenses, for new units at Vogtle and Summer, may be issued early in 2012. Public support for nuclear power remains strong, and while the "renaissance" may be moving more slowly than first hoped, the progress is evident.

I mentioned above our responsibility to learn from the events at Fukushima as part of our commitment to safety as the primary consideration in plant design, construction, and operation. But for those of us who have been in this business for awhile, there is another responsibility as well: to pass along the lessons we've learned previously to the next generation of nuclear professionals. The upcoming Winter Meeting provides an excellent opportunity to do that, by means of the embedded Young Professionals Congress. In that regard, NISD is supporting a YPC panel session that will provide a look back at the accidents at Three Mile Island and Chernobyl, as well as an update—by Mike Corradini—on the activities of ANS's special committee on Fukushima. (It is interesting to reflect on the fact that a significant number of our young professionals were born after the TMI accident.) Please help support the young generation—and, of course, encourage them to join NISD! See you in Washington, D.C.

### Message From the Vice-Chair By Anthony J. Baratta

Late breaking news, in addition to the session on Adjudication in the Licensing Process, the Chairman of the US NRC, Gregory Jazcko will be speaking on Fukushima. The session will precede the President's session and start at 1:00 PM Monday. Hi talk is entitled [Nuclear Safety in a post-Fukushima World.](#)

### Program Committee By Kevin O'Kula

The NISD will sponsor nine sessions at the Fall 2011 meeting, as follows:

- ANS President's Special Session: Adjudication in the Licensing Process— Fact and Fiction, Mon. p.m. (1:00-2:30 p.m.)
- General Safety, Mon. p.m.
- Applications of Probabilistic Safety Assessment, Tues. a.m.
- The Effect of Selected Aging Topics on Nuclear Reactor Safety—Panel, Tues. p.m.
- Regulatory Gaps for the Sodium Reactor, a DOE Perspective—Panel, Tues. p.m.
- Molten Salt Reactor Safety, Tues. p.m.
- Tutorial on Proposed ANS 10.7, Non-Real Time, High Integrity Software for the Nuclear Industry—Requirements for Software Developers, ANSI/ANS-10.7-201X, Wed. p.m.
- High Reliability Organizations—Panel, Thurs. a.m.
- Emerging Issues in Nuclear Facility Safety, Thurs. p.m.

The Preliminary Program for the Annual Meeting can be accessed through the ANS Website at [http://www.new.ans.org/meetings/m\\_77](http://www.new.ans.org/meetings/m_77)

### Honors and Awards By Phillip Elison

The NISD Executive and Honors and Awards Committee is pleased to announce the awarding of the 2011 Tommy Thompson and George C. Laurence awards to two individuals who have made significant technical contributions to nuclear safety.

Dr. Hans K. Fauske was awarded the George C. Laurence award for 2011. The George C. Laurence award recognizes an individual who has made outstanding pioneering contributions in the field of nuclear reactor safety. The George C. Laurence Pioneering Award is not given on an annual basis; it is given only when the NISD Executive and Honors and Awards Committee deem such recognition to be appropriate. The George C. Laurence award is the most prestigious award given in the area of nuclear reactor safety.



Dr. Michael L. Corradini was award the 2011 Theos J. "Tommy" Thompson award. The Tommy Thompson award, established in 1980 recognizes an individual who made outstanding contributions to nuclear reactor safety. The Tommy Thompson award is made yearly to an individual who has provided exceptional insight and direction to the world's nuclear safety activities. Mike was one of 18 individuals who were nominated in 2011 to receive this award.



Please welcome the achievements and contributions of Hans and Mike who made and continue to make pioneering and outstanding technical contributions to nuclear safety.

Mike will receive the Tommy Thompson Award during the Honors and Awards Luncheon at the 2011 winter meeting. Hans will receive the George C. Laurence Award during the spring 2012 meeting in Chicago. NISD members may wish to attend



the Honors and Awards luncheon to congratulate and welcome Hans and Mike's contributions to nuclear safety.

Nominations for these awards are open on a continuous basis. Nominations should be submitted to the NISD Honors and Awards Committee Chair by January 30<sup>th</sup> 2012. In addition the committee is also accepting nominations for ANS fellows in nuclear safety.

The Honors and Awards committee is looking for two new members. If you're interested in serving on the NISD Honors and Awards Committee please send a short E-mail of interest to Phillip.Ellison@ge.com.

## European Effort On Integrated Deterministic-Probabilistic Safety Analysis By Tunc Aldemir

A major effort is being initiated in Europe for deployment of the methods of integrated deterministic probabilistic safety analysis (IDPSA) into practice of safety and licensing analysis. IDPSA is a new terminology for the family of methods which use tightly coupled probabilistic and deterministic approaches to address aleatory and epistemic uncertainties in a consistent manner. What has been referred to in the past as dynamic PSA (DPSA) belongs to the family of IDPSA methods. The effort is being led by the Royal Institute of Technology – KTH (Sweden), Scandpower (Sweden) and VTT (Finland). Other potential European participants are EdF (France), PSI (Switzerland), ENEA (Italy), Fortum (Finland), TVO (Finland), CSN (Spain), GRS (Germany), ENEL (Italy), Lithuania, VUJE (Slovakia), Vattenfall (Sweden), NRG (Holland) and AREVA.

A workshop was held in Helsinki, Finland during October 3-5, 2011 with about 60 participants for the definition of a research agenda for this effort which included representatives from the organizations listed above, as well as other European regulators, utilities and vendors. The main motivation for the effort is that the classical PSA has well known limitations in resolving time dependent interactions between physical phenomena, control logic and operator actions and equipment failures. A growing number of cases have been identified when assumed "success" paths end up with core damage and "failure" scenarios lead to no damage. IDPSA is a complementary to the traditional PSA and is intended to help in:

- resolving time dependent interactions between physical phenomena, control logic, operator actions and equipment failures,
- identification and characterization of a-priori unknown vulnerable scenarios "sleeping threats",
- systematic treatment of uncertainties, and,
- reduction of reliance on expert judgment and assumptions about interdependencies, and potential reduction of the cost of PSA.

A proposal is being put together to European Community (EC) to establish a network of IDPSA users and assess possibilities of joint efforts based on national interests. U.S. partners for collaboration in the framework of this EC project are also being sought. Interested parties can contact Dr. Pavel Kudinov (pkudinov@kth.se) at KTH for more information.

## 2012 Student Conference

The ANS Student Section at the University of Nevada, Las Vegas will host the 2012 ANS Student Conference in Las Vegas on April 12-15, 2012. The UNLV Organizers are soliciting industry wide Sponsorship of various forms; details of which may be identified at the conference website accessible at <http://www.conference.unlvans.org/>. The organizers are also soliciting candidate student papers and poster sessions as identified at the same website.

## TopSafe 2012

TopSafe 2012 will provide a forum for addressing the current status and future perspectives with regards to safety at nuclear installations worldwide. The conference will be held in Helsinki, Finland on April 22-26, 2012. The conference website may be accessed at:

[www.euronuclear.org/events/topsafe/topsafe2012/index.htm](http://www.euronuclear.org/events/topsafe/topsafe2012/index.htm)

## Scheduled NISD Meetings

All NISD members are welcome to attend the following NISD committee meetings at the June 2011 Meeting in Hollywood, FL:

- Executive Committee: Sunday, 7:30 P.M. – 9:30 P.M.  
LOCATION: East Parlor #300
- Program Committee: Sunday, 4:00 P.M. – 6:00 P.M.  
LOCATION: East Parlor #300

The Executive and Program Committees invite NISD members to express their interest in serving on those committees, particularly by participation in one or both of the indicated meetings.

Members may also wish to attend the Honors & Award Luncheon on Tuesday November 1, 11:30am-1:00pm in the Regency Ballroom. Tickets can be purchased in advance or on-site at the ANS Registration Desk for \$65.

## Student Scholarships Sponsored By NISD

The Saul Levine and Raymond DiSalvo Memorial Scholarships are fully funded. Descriptions of these scholarships can be accessed at the NISD Website (see below for address). Undergraduate students interested in applying for these scholarships can access the Eligibility Requirements and Application Form at <http://www.ans.org/honors/scholarships>.

## NISD Website

NISD sponsored Panel Discussion at the annual meetings can be viewed on the Website by clicking on the "Panel Presentations" button. The NISD Website may be accessed directly at <http://nisd.ans.org> or indirectly at <http://www.ans.org>.



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