

Conference on Nuclear Training and Education –

CONTE 2009 & TECHNOLOGY EXPO

American Nuclear Society: Topical Meeting



*“Education, Training and Workforce Development –
The Global Path to the Nuclear Energy Future”*

February 8-11, 2009
Jacksonville, Florida

Hyatt Regency Jacksonville Riverfront Hotel



OFFICIAL PROGRAM

our most sincere *thanks* to the *following sponsors* for their support of the

Conference on Nuclear Training and Education – **CONTE 2009**

“Education, Training and Workforce Development – The Global Path to the Nuclear Energy Future”

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Thank You!

American Nuclear Society: Topical Meeting



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*“Education, Training and Workforce Development –
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February 8-11, 2009 • Jacksonville, Florida
Hyatt Regency Jacksonville Riverfront Hotel

UPDATED: JANUARY 25, 2009

- 4** **Conference Officials**
- 5** **Conference Information**
Find important information about hotel accommodations, meeting registration,
the conference proceedings and social events that are scheduled.
- 6** **Conference Schedule**
- 7-9** **Technical Sessions**
- 10-11** **Vendor Technology Exhibit**

American Nuclear Society: Topical Meeting

Conference on Nuclear Training and Education – CONTE 2009

“Education, Training and Workforce Development – The Global Path to the Nuclear Energy Future”

GENERAL CHAIR

Jeff Gasser

Southern Nuclear Operating Company

TECHNICAL PROGRAM CO-CHAIR

Kent W. Hamlin

Institute of Nuclear Power Operations

TECHNICAL PROGRAM CO-CHAIR

Brian K. Hajek

Ohio State University

TECHNICAL PROGRAM COMMITTEE

Thomas E. Anderson – Tennessee Valley Authority

Dr. Philip Beeley – HMS SULTAN, UK and ENS NESTet

Harry B. Bernhard – Excelsior College

Carol L. Berrigan – Nuclear Energy Institute

Patrick J. Berry – Entergy Nuclear

Dr. Gilbert J. Brown – University of Massachusetts – Lowell

Dr. Richard P. Coe – Excelsior College

Michael P. Desilets – Entergy Nuclear

Randy L. Etter – University of Missouri Research Reactor

Dr. Arthur H. Friedman – Exelon Nuclear

David W. Helling – Westinghouse

Richard Holman – DOE – Idaho National Lab

Andrey Kossilov – International Atomic Energy Agency

Dr. Jane A. LeClair – Excelsior College

Dr. Michael A. Robinson – Bettis Atomic Lab

Irina Vorobieva – Obninsk State University for Nuclear Power Engineering

David E. Weaver – Omaha Public Power District

Dr. Terry M. Williams – TMW Consulting LLC

Ann D. Winters – Institute of Nuclear Power Operations

Conference Registration

Registration is required for all attendees and presenters. Badges are required for admission to all events.

The **Full Conference Registration Fee** includes admission to all technical sessions, Opening Reception, Monday Luncheon, Tuesday Awards Luncheon, Wednesday Closing Luncheon and the conference proceedings.

The **Student Registration Fee** includes admission to all technical sessions and the conference proceedings. A full time student i.d. is required.

NOTE: Additional tickets can be purchased at the ANS registration desk for the Opening Reception, Monday Luncheon, Tuesday Awards Luncheon, and the Wednesday Closing Luncheon.

Registration Hours

The ANS registration desk and message desk will be located in the Grand Ballroom Foyer, second level of the Hyatt Regency Jacksonville Riverfront Hotel. You may register, purchase tickets for events, or pick up your registration packet during the following hours:

SUNDAY, FEBRUARY 8, 2009 • 12:00 PM - 6:00 PM

MONDAY, FEBRUARY 9, 2009 • 7:30 AM - 6:00 PM

TUESDAY, FEBRUARY 10, 2009 • 7:30 AM - 6:00 PM

WEDNESDAY, FEBRUARY 11, 2009 • 7:30 AM - 12:00 PM

Conference Proceedings

Each conference registrant will receive a copy of the proceedings with their registration material. Additional copies may be purchased at the conference registration desk for \$180.00. To purchase copies following the conference, you may contact the ANS Accounting Department at 708-579-8210 (phone); 708-579-8314 (fax); accounting@ans.org (email); or submit your request in writing to: American Nuclear Society, 97781 Eagle Way, Chicago, IL 60678-9770. Payment information must accompany all orders.

PLEASE NOTE: When sending something to ANS with express mail or with an overnight service provider such as FedEx, UPS, DHL, etc., please use the following address only: American Nuclear Society, 555 North Kensington Avenue, La Grange Park, IL 60526, U.S.A. Do not use the Eagle Way address in Chicago for express and overnight mail as it will be returned to sender and this will result in a processing delay.

SOCIAL FUNCTIONS

OPENING RECEPTION

Sponsored by Southern Nuclear Operating Company

SUNDAY, FEBRUARY 8, 2009 • 6:30 PM – 8:00 PM

Location: Grand Ballroom Foyer

Each full conference registrant will receive a ticket for the reception. Additional tickets may be purchased at the ANS registration desk for \$60.00.

MONDAY BREAKFAST

Sponsored by Constellation Energy

MONDAY, FEBRUARY 9, 2009 • 7:00 AM – 8:00 AM

Location: Grand Ballroom Foyer

MONDAY CONFERENCE LUNCHEON

MONDAY, FEBRUARY 9, 2009 • 11:30 AM – 1:00 PM

Location: Grand Ballroom 5

KEYNOTE SPEAKER:

“Touching Zero in Human Error,”

Lt. Col. Doug Slocum (*162 FW Chief of Safety*)

Each full conference registrant will receive a ticket for the luncheon. Additional tickets may be purchased at the ANS registration desk for \$50.00.

MONDAY RECEPTION

Appetizers co-sponsored by Entergy Nuclear and Exelon Nuclear

MONDAY, FEBRUARY 9, 2009 • 6:30 PM – 8:00 PM

Location: Grand Ballroom Foyer

TUESDAY BREAKFAST

TUESDAY, FEBRUARY 10, 2009 • 7:30 AM – 8:30 AM

Location: Grand Ballroom Foyer

TRAINING EXCELLENCE AWARDS AND CONFERENCE APPRECIATION AWARDS LUNCHEON

TUESDAY, FEBRUARY 10, 2009 • 11:30 AM – 1:00 PM

Location: Grand Ballroom 5

SPEAKERS:

- Dr. William E. Burchill (*President, American Nuclear Society*)
- Dr. Richard Coe

PRESENTATION OF THE 2008 TRAINING EXCELLENCE AWARDS:

The awards are given by the ANS Education and Training Division in recognition of distinguished contributions and services in the field of Nuclear Training and Education.

2008 AWARD RECIPIENTS:

- Kent W. Hamlin (*INPO*)
- Dr. Michael A. Robinson (*Bechtel-Bettis*)

Each full conference registrant will receive a ticket for the luncheon. Additional tickets may be purchased at the ANS registration desk for \$50.00.

TUESDAY RECEPTION

Appetizers sponsored by General Physics Corporation

TUESDAY, FEBRUARY 10, 2009 • 6:30 PM – 8:00 PM

Location: Grand Ballroom Foyer

WEDNESDAY BREAKFAST

WEDNESDAY, FEBRUARY 11, 2009 • 7:30 AM – 8:30 AM

Location: Grand Ballroom Foyer

CLOSING CONFERENCE LUNCHEON

WEDNESDAY, FEBRUARY 11, 2009 • 12:00 PM – 1:00 PM

Location: Grand Ballroom 8

Conference Schedule

SUNDAY, FEBRUARY 8, 2009

6:30 P.M. – 8:00 P.M. OPENING RECEPTION (*Sponsored by Southern Nuclear Operating Company*)

MONDAY, FEBRUARY 9, 2009

7:00 A.M. – 8:00 A.M. MONDAY BREAKFAST (*Sponsored by Constellation Energy*)

8:00 A.M. – 9:00 A.M. OPENING PLENARY SESSION

9:00 A.M. – 9:30 A.M. BREAK

9:30 A.M. – 11:30 A.M. TECHNICAL SESSION: Knowledge Retention
TECHNICAL SESSION: Industry Training Practices and Initiatives—I

11:30 A.M. – 1:00 P.M. CONFERENCE LUNCHEON
Featuring Lt. Col. Doug Slocum, 162 FW Chief of Safety

1:00 P.M. – 2:45 P.M. TECHNICAL SESSION: Workforce Development—I

2:45 P.M. – 3:00 P.M. BREAK

3:00 P.M. – 4:45 P.M. TECHNICAL SESSION: Government Support Programs for University Faculty and Students
TECHNICAL SESSION: University Programs for Nuclear Industry Growth—I

5:00 P.M. – 6:30 P.M. WORKSHOP: Experiences in Problem-Based, Web-Delivered Curriculum Design for the Nuclear Industry: Demonstration of the U.S. Department of Labor Funded Radiation Protection Technology Curriculum

6:30 P.M. – 8:00 P.M. RECEPTION in the Expo (*Appetizers co-sponsored by Entergy Nuclear and Exelon Nuclear*)

TUESDAY, FEBRUARY 10, 2009

7:30 A.M. – 8:30 A.M. TUESDAY BREAKFAST

8:30 A.M. – 9:45 A.M. TECHNICAL SESSION: Industry Training Practices and Initiatives—II
TECHNICAL SESSION: Leveraging Resources Through Partnerships—I

9:45 A.M. – 10:15 A.M. BREAK

10:15 A.M. – 11:30 A.M. TECHNICAL SESSION: Industry Training Practices and Initiatives—III
TECHNICAL SESSION: Leveraging Resources Through Partnerships—II

11:30 A.M. – 1:00 P.M. CONFERENCE LUNCHEON
Training Excellence Awards and Conference Appreciation Awards

1:00 P.M. – 2:45 P.M. TECHNICAL SESSION: Workforce Development—II

2:45 P.M. – 3:00 P.M. BREAK

3:00 P.M. – 4:45 P.M. TECHNICAL SESSION: Applications of Technology in Training and Education—I
TECHNICAL SESSION: Training for New Reactors

5:00 P.M. – 6:30 P.M. WORKSHOP: Generational Differences, Bob Pike Group

6:30 P.M. – 8:00 P.M. RECEPTION in the Expo (*Appetizers sponsored by General Physics Corporation*)

WEDNESDAY, FEBRUARY 11, 2009

7:30 A.M. – 8:30 A.M. WEDNESDAY BREAKFAST

8:30 A.M. – 11:00 A.M. TECHNICAL SESSION: University Programs for Nuclear Industry Growth—II
TECHNICAL SESSION: Applications of Technology in Training and Education—II

11:15 A.M. – 12:00 P.M. CLOSING PLENARY

12:00 P.M. – 1:00 P.M. CLOSING CONFERENCE LUNCHEON

MONDAY, FEBRUARY 9, 2009 • 8:00 A.M.

Opening Plenary. *Session Chairs:* Brian Hajek (*The Ohio State Univ*), Kent Hamlin (*INPO*)

Grand 5

OPENING REMARKS:

Brian Hajek and Kent Hamlin (*CONTE 2009 Technical Program Chairs*)

WELCOME:

- Jeff Gasser (*Executive Vice President and CNO, Southern Nuclear Operating Company*)
- Dr. William E. Burchill (*President, ANS*)

KEYNOTE SPEAKER:

Dr. Dale E. Klein, Chairman (*U.S. Nuclear Regulatory Commission*)

MONDAY, FEBRUARY 9, 2009 • 9:30 A.M.

Knowledge Retention. *Session Chair:* Jane A. LeClair (*Excelsior College*)

Grand 6

9:30 a.m.

Job Aid Methodology: A Critical Tool for Knowledge Transfer, C. L. Turner, T. E. Braudt (*Professional Services CATADR, Inc.*)

9:50 a.m.

Implementation of a Knowledge Management Pilot Project at Zaporozhzhie Nuclear Power Plant, J. LeClair (*Excelsior College*), A. Kazennov (*IAEA*), V. Gedz (*Zaporozhzhie Nuclear Power Plant*)

10:10 a.m.

Leaders Training Leaders—Nuclear Leadership Training for Front Line Supervisors, Juliette Turcotte, Mary MacCafferty (*AECL*)

10:30 a.m.

To Effectively Adapt and Renew Workforce Competencies, Pascal D. Pezzani (*EDF/DPI/DPN*)

10:50 a.m.

Lessons Learned when Using Contractors for NRC Exam Development, Thomas Mayfield (*Energy Nuclear*)

Industry Training Practices and Initiatives—I. *Session Chair:* Patrick J. Berry (*Energy Nuclear*).

Grand 7

9:30 a.m.

The Future of Learning Initiative, Peter M. Knoetgen (*INPO*)

9:50 a.m.

Nuclear Power Plant-Referenced Simulator Scenario Based Testing Methodology, Gregg W. Ludlam (*Exelon*)

10:10 a.m.

A Training Course Based on a PWR Basic-Principal Simulator, F. Brechenmacher, C. Leo (*CORYS TE.S.S.*)

10:30 a.m.

The Role of Instructional Technologists in the Development of a Problem-Centered Radiation Protection Technician Curriculum, William H. Miller, David H. Jonassen, Rose Marra, Gayla M. Neumeyer, Randy Etter, Matthew A. Easter, Matthew M. Schmidt, Holly Henry, Ioan G. Ionas (*Missouri Univ*)

10:50 a.m.

Your Full Scope Simulator—Put It on A Memory Stick, Stanley Chan, Jody Ryan (*CORYS Thunder, Inc.*)

MONDAY, FEBRUARY 9, 2009 • 1:00 P.M.

Workforce Development—I. *Session Chair:* Carol L. Berrigan (*NEI*)

Grand 6 and 7

1:00 p.m.

Recruiting to the Nuclear Religion, Bruce A. Meffert (*Linn State Technical College*)

1:20 p.m.

Skills Renewal in the Nuclear Industry, Laurent Stricker, Dominique Louvel, Michel Bonnet (*EdF*)

1:40 p.m.

Summer Experience Perceptions: North Carolina State's Nuclear Engineering Students, Lisa Marshall, Mohamed A. Bourham (*NCSTU*)

2:00 p.m.

Fast Track for Nuclear Engineers into the Nuclear Utility Industry, E. S. "Tom" Tomlinson III (*RETAQS, Inc.*), Edward McVey (*Exelon Nuclear*)

MONDAY, FEBRUARY 9, 2009 • 3:00 P.M.

Government Support Programs for University Faculty and Students. *Session Chair:* John P. Gutteridge (*NRC*)

Grand 7

3:00 p.m.

Establishing Partnerships and Leveraging Funds via the NRC University Education Grant Program, John Gutteridge (*NRC*)

3:20 p.m.

Enhancing a Proven Nuclear Utility/College Scholarship Program for Providing A Quality Entry Level Technician Workforce, James R. Sherrard (*TRCC*), Trad A. Horner (*Dominion Nuclear Training, Milestone Power Station*)

3:40 p.m.

The Radiation Safety Information Computational Center—A Resource for Training the Next-Generation Engineers and Scientists, Bernadette L. Kirk (*ORNL*)

4:00 p.m.

NRC Grant Program: New Educational Partnerships—University/Industry/Government, Randi Neff (*NRC*)

4:20 p.m.

The Advanced Test Reactor National Scientific User Facility Education Program, J. B. Benson, M. C. Thelen, T. R. Allen, J. A. Foster, F. M. Marshall, M. K. Meyer (*INL*)

University Programs for Nuclear Industry Growth—I. *Session Chair:* Gilbert J. Brown (*Univ of Massachusetts, Lowell*)

Grand 6

3:00 p.m.

RAP-NIS Program—5 Years Experience: The Essential Program Elements and Lessons Learned, Irina Vorobieva, Dmitry Klinov (*Obninsk State Technical University for Nuclear Power Engineering (IATE)*), Eduard Kryuchkov (*Moscow Physics and Engineering Univ (MEPhI)*)

Technical Sessions

3:20 p.m.

UCD/MNRC's Training Program in Reactor Operation, Safety and Nuclear Applications, Mohamed Boussoufi, Walter Steingass, H. Ben Liu (*Univ of California, Davis*)

3:40 p.m.

Enhancing Cooperation Between U.S. Nuclear Faculty, The French Nuclear Industry, and Graduate Education: The Nuclear Facilities Tour de France, Brian Hajek (*The Ohio State Univ*), Dominique Greneche (*AREVA NC/DTRI*), Paul Murray (*AREVA*)

4:00 p.m.

Nuclear Engineering Education at the Universidad Nacional Autónoma de México, J. B. Morales-Sandoval, J.-L. François-Lacouture, C. Martín-del Campo-Márquez, E. Salazar-Salazar, C. Chávez-Mercado, P. F. Nelson-Edelstein, Manuel Gonzalez-Cuesta (*Universidad Nacional Autónoma de México*)

4:20 p.m.

The Development of a Training Course on Risk and Reliability Analysis for Nuclear Engineers, M. D. Pandey (*Univ of Waterloo*)

MONDAY, FEBRUARY 9, 2009 • 5:00 P.M.

Workshop: Experiences in Problem-Based, Web-Delivered Curriculum Design for the Nuclear Industry: Demonstration of the U.S. Department of Labor Funded Radiation Protection Technology Curriculum

Grand 6 and 7

TUESDAY, FEBRUARY 10, 2009 • 8:30 A.M.

Industry Training Practices and Initiatives—II. *Session Chair:* Terry M. Williams (*TMW Consulting*)

Grand 6

8:30 a.m.

Integrated Plant Process Control Training for I&C Technicians, Dave Helling (*Westinghouse*)

8:55 a.m.

Use of NANTel®: Opportunities to Maximize Industry Value, Lisa Brattin (*INPO*)

9:20 a.m.

Leadership Assessment Program, Frank S. Tsakeres (*NWT Consulting*)

Leveraging Resources Through Partnerships—I. *Session Chair:* Randy L. Etter (*Univ of Missouri Research Reactor*)

Grand 7

8:30 a.m.

New Educational Partnerships Prove Successful, James H. Auld (*FP&L*)

8:55 a.m.

Center for Advanced Energy Studies: A University, Industry, Government Collaboration, Ray Grosshans (*INL*)

9:20 a.m.

Growing Your Own Talent with Online Education and College Partnerships, Scott Allen Bates (*EPCE*), Kevin Holmstrom (*BSC*)

TUESDAY, FEBRUARY 10, 2009 • 10:15 A.M.

Industry Training Practices and Initiatives—III. *Session Chair:* Philip Beeley (*HMS Sultan*)

Grand 6

10:15 a.m.

Future of Learning in the Nuclear Industry, Mark Beckstrom (*IBM*)

10:35a.m.

Nuclear Disciplines in Response to Industry and Regulatory Needs Through the European Nuclear Education Network Association, P. Beeley (*CEA/INSTN and DCMT*), J. Safieh, P. De Regge, R. Kusumi (*CEA/INSTN*)

10:50 a.m.

Reactor Experiments Training at Critical Assembly (BFS), Dmitry Klinov, Irina Vorobieva (*Obninsk Technical University for Nuclear Power Engineering (IATE)*), Igor Matvenko (*FEI*)

11:10 a.m.

Task Proficiency Evaluation Process and Progress, Brozia Clark, Don Cullers (*EPRI, Charlotte*), Burl McCosh (*INPO*)

Leveraging Resources Through Partnerships—II. *Session Chair:* Randy L. Etter (*Univ of Missouri Research Reactor*)

Grand 7

10:15 a.m.

Partnerships: A Holistic Approach to Workforce Replenishment, Steven K. Martin (*Entergy*)

10:35 a.m.

A Novel Radiochemistry Partnership Between Florida Memorial University and the University of Texas, M. J. Elliott, Ayivi Huisso, Rose Mary Stiffin, Dimitri Tamalis (*Florida Memorial Univ*), Sheldon Landsberger (*Univ of Texas, Austin*)

10:55 a.m.

A New Nuclear and Radiation Engineering Undergraduate Certificate for Industry and Nuclear Regulatory Commission Educational Training, S. Landsberger, S. Biegalski, E. Popova, K. Foltz-Biegalski (*Univ of Texas, Austin*)

TUESDAY, FEBRUARY 10, 2009 • 1:00 P.M.

Workforce Development—II. *Session Chair:* Ann D. Winters (*INPO*)

Grand 6 and 7

1:00 p.m.

South Carolina State University Summer Nuclear Science Institutes for High School Students and High School Guidance Counselors, Kenneth D. Lewis, Zheng Chang, April Moorer, Musa Danjaji, Kenneth Okafor (*South Carolina State Univ*)

1:25 p.m.

Addressing the Human Capital Crisis in the Nonproliferation Community, Sarah Frazar (*PNNL*), John McClelland-Kerr (*NNSA*)

1:50 p.m.

Nuclear Human Resources Development Activities for Asian Countries at JAEA/NuTEC, Jun Sugimoto, Hiroyuki Murakami, Ryuichi Sakamoto, Toshihiro Yamamoto (*JAEA*)

2:15 p.m.

Idaho State University Education and Training for the Nuclear Renaissance, Jason T. Harris, George Imel, Richard Brey (*Idaho State Univ*)

TUESDAY, FEBRUARY 10, 2009 • 3:00 P.M.

Applications of Technology in Training and Education—I. *Session Chair: Richard Holman (INL)*

Grand 7

3:00 p.m.

Welcome to the Virtual World of ANS Student Chapters, Jane LeClair, Franklin Hutto (*Excelsior College*)

3:20 p.m.

20 Years Experience of Delivering Distance Learning to a Nuclear Power Plant, Mitty Plummer (*Univ of North Texas*)

3:40 p.m.

Japan Nuclear Education Network, A Multi-Directional Education System Among JAEA and Several Universities, A. Yasuhiko Fujii (*Tokyo Institute of Technology*), Takashi Nakanishi (*Kanazawa Univ*), Takuo Fukui (*Univ of Fukui*), Hiroshi Kato, Hisao Ojima (*JAEA*)

4:00 p.m.

Innovations in Distance Learning at University of South Carolina Nuclear Engineering Program, Travis W. Knight (*Univ of South Carolina*)

4:20 p.m.

A Virtual Environment for Simulation of Radiological Accidents, Tadeu Augusto de Almeida Silva (*IRD*), Oscar Luiz Monteiro de Farias (*UERJ*)

Training for New Reactors. *Session Chair: Thomas E. Anderson (TVA)*

Grand 6

3:00 p.m.

AREVA NP Global Training Task Force, Amy L. Napior (*AREVA NP Inc.*)

3:20 p.m.

ESBWR Operator Training Program—Standardization and Collaboration, Julia Longfellow (*GE Hitachi Nuclear Energy*)

3:40 p.m.

Training for New Nuclear Power Facilities, Rob Brixey, Frank S. Tsakeres (*NWI Consulting*)

4:00 p.m.

Development of a Nuclear Reactor Systems Laboratory Using the Advanced Plant Experiment Facility, Brian G. Woods (*Oregon State Univ*)

4:20 p.m.

New Nuclear Plant Training: Challenges and Solutions, Michael Marler (*STPNOC*), Charlie Nesbitt (*Southern Nuclear Operating Company*)

TUESDAY, FEBRUARY 10, 2009 • 5:00 P.M.

Workshop: Generational Differences, Bob Pike Group

Grand 5

Training Across the Generations, Priscilla Shumway (*The Bob Pike Group*)

WEDNESDAY, FEBRUARY 11, 2009 • 8:30 A.M.

University Programs for Nuclear Industry Growth—II. *Session Chair: Richard P. Coe (Excelsior College)*

Grand 7

8:30 a.m.

New MS Degree in Energy Engineering: Meeting Education Needs in Nuclear Learning and Infrastructures, Oum Keltoum Bouhelal (*National School of Mineral Industry*)

8:55 a.m.

Educational Programme in Nuclear Security, R. Abedin-Zadeh, A. Braunegger-Guelich, P. Colgan, M. Gregoric, V. Rukhlo (*IAEA*)

9:20 a.m.

IDB—A New Chapter in Nuclear Technology Education in Argentina, Carla Notari (*Instituto de Tecnología Nuclear Dan Beninson (CNEA-UNSAM)*)

9:45 a.m.

Creation of a Nuclear Criticality Safety Certificate Program, Jesse McBurney-Rebol, Fred Gunnerson, Akira Tokuhiko, Lee Ostrom (*Univ of Idaho*)

10:10 a.m.

Prior Learning Assessment/Portfolio Development—Earning a College Degree for What You Know, Richard P. Coe (*Excelsior College*)

10:35 a.m.

Graduate Level Instruction in Nuclear Systems and Components, Larry Foulke (*Univ of Pittsburgh*), David Helling (*Westinghouse*), David Haser (*Beaver Valley Power Station*)

Applications of Technology in Training and Education—II. *Session Chair: Michael A. Robinson (Bechtel Bettis)*

Grand 6

8:30 a.m.

Assessment of Radiation Awareness Training Methods: CBT with VR versus CBT-only, Vaughn E. Whisker (*Pennsylvania State Univ*)

8:55 a.m.

Innovative Training Tools for Improved Human Performance, Chen Xi, Mohammed Khasawneh, Rizwan Uddin (*Univ of Illinois*)

9:20 a.m.

Full-Scale Virtual Mockups for Next Generation NPP Training, Vaughn E. Whisker (*Pennsylvania State Univ*), Charles W. Sawyer (*Duke Energy*)

9:45 a.m.

Live Webcast of a Nuclear Engineering Laboratory, Wu Hsingtzu, Rizwan Uddin (*Univ of Illinois*)

10:10 a.m.

LaNuVi: Virtual Laboratory for Basic Nuclear Technology Education, J. B. Morales-Sandoval, C. Chávez-Mercado, E. Salazar-Salazar, J. Valle-Hernández, A. Plata-Miranda (*Universidad Nacional Autónoma de México*)

10:35 a.m.

Developing a Reactor Engineering Online Course, Lorraine N. Matisko, Donald M. Scheef (*Westinghouse*)

WEDNESDAY, FEBRUARY 11, 2009 • 11:15 A.M.

Closing Plenary

Grand 6 and 7

KEYNOTE SPEAKER:

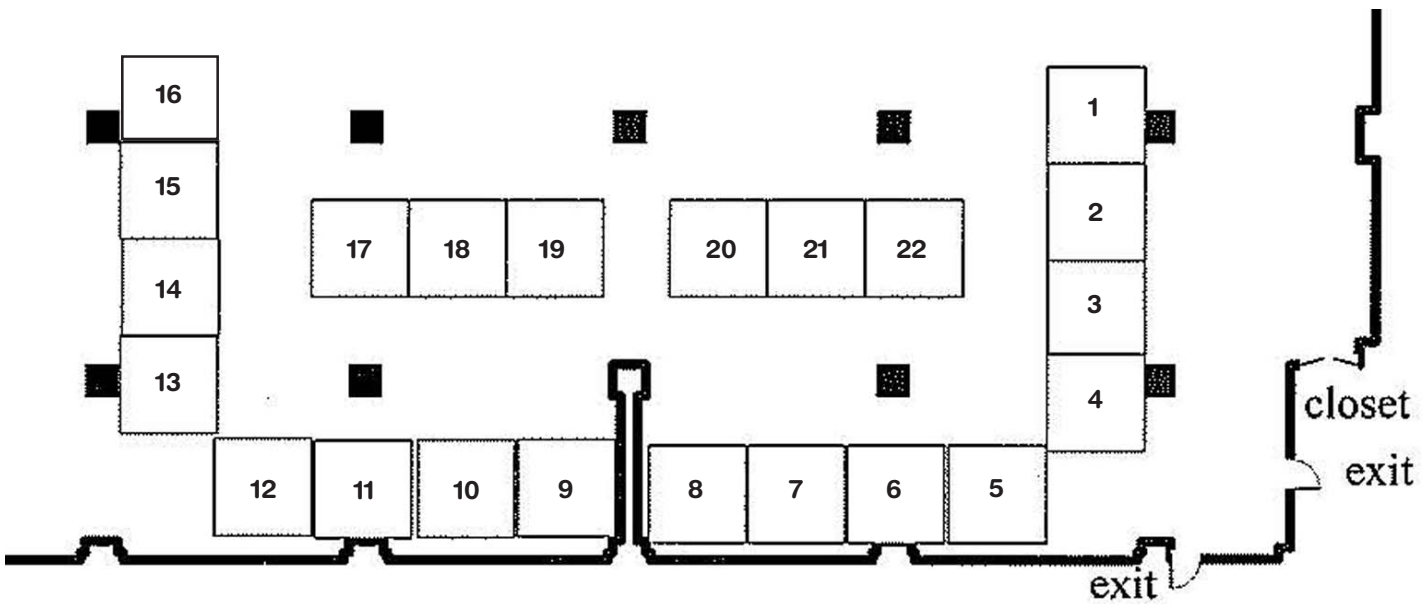
Dr. Philip N. McCullough (*Vice President, Industry Training and Accreditation, INPO*)

WEDNESDAY, FEBRUARY 11, 2009 • 12:00 P.M. – 1:00 P.M.

Closing Luncheon

Grand 8

CONTE 2009 VENDOR TECHNOLOGY EXPO: FLOOR PLAN



We would like to extend a special thanks to the following organizations who have made an outstanding contribution to the success of the **CONFERENCE ON NUCLEAR TRAINING AND EDUCATION (CONTE 2009) VENDOR TECHNOLOGY EXPO**

BOOTH 1: Exelon Nuclear, Warrenville, IL

Exelon Nuclear is a business unit of Exelon Corporation. It operates the largest nuclear fleet in the nation and the third largest fleet in the world. Exelon's ten nuclear power stations – with 17 reactors – represents approximately 20 percent of the U.S. nuclear industry's power capacity. Exelon Nuclear's generating units produced a total of 132.3 million net megawatt-hours of electricity in 2007. The fleet also achieved an average capacity factor of 94.5 percent – the seventh year in a row the capacity factor was greater than 92 percent. Exelon Nuclear's plants prevented 121 million metric tons of carbon dioxide emissions by eliminating the need for an equivalent amount of coal-based generation. There are approximately 9,000 nuclear professionals working in Exelon Nuclear. Whether working at a site or Exelon Nuclear headquarters, these professionals implement industry best practices to ensure safe, reliable operations throughout the fleet.

BOOTH 2: Oak Ridge National Laboratory, Oak Ridge, TN

ORNL is a national lab managed by UT- Battelle for the U.S. Department of Energy (DOE). It is DOE's largest science and energy lab and does research on numerous energy areas.

BOOTH 3: The Curators of the University of Missouri, Columbia, MO

The NETWork Center was created to respond to the nuclear industry's significant need for well-trained technical specialists in fields supporting the current and next generation fleet of nuclear power plants, medical facilities, national laboratories, and other research facilities. NETWork Center staff provides technical and organizational support to current and prospective collaborators in implementing degree programs and building government-industry-academic collaborations to ensure successful workforce education that is benchmarked against applicable industry training standards (e.g., ACAD, DOE, ANSI, and others). NETWork activities focus primarily on

development of web-based curricular resources for instructor-led course delivery to support excellence in teaching and learning. Starting with a curriculum in Radiation Protection Technician education at the two-year associate's level, NETWork collaborations now include development of curricula and expertise in other technical occupations needed by the nuclear industry, including: Nuclear Quality Control Technicians; Instrumentation and Controls Technicians; and Reactor Operations Technicians. We also are developing coursework as an educational bridge between secondary and higher education as a pipeline for students interested in nuclear occupations.

BOOTH 4: Energy Solutions, LLC, Salt Lake City, UT

Alphas, Betas, Gammas, Oh My! Energy Lessons/Presentations/Activities/Labs, created by teachers for teachers for use in junior high and high school classrooms to teach concepts related to energy. CD materials are no cost to anyone.

BOOTH 5: Florida Power & Light (FPL), Juno Beach, FL

Florida Power & Light's booth features a plasma video screen, laptop computer and posters. It will present looping video detailing our highly successful Nuclear Power Plant Technician Pipeline Partnership with Indian River State College and Miami Dade College. The plasma screen will exhibit interns and program graduates performing skilled tasks at Florida Power & Light's Nuclear Power Plants. Our college partners will exhibit information concerning their respective colleges, the program, and admission requirements. Complimentary items available.

BOOTH 6: GSE Systems, Sykesville, MD

Training and Simulations Solutions to meet the shortfalls in Nuclear Power personnel.

BOOTH 7: Westinghouse Electric Company, Madison, PA

Westinghouse offers training programs in the following areas: Operations, Maintenance, Engineering and Instrumentation & Control for PWR, CE & BWR Plants. By providing the latest advanced student-centered educational techniques and online learning methods, the student's learning and knowledge retention are increased. Westinghouse's training staff consists of engineers, education specialists, certified senior reactor operators (SROs) and expert I&C trainers.

BOOTH 8: PSEG Nuclear LLC, Hancocks Bridge, NJ

PSEG Nuclear LLC in Lower Alloways Creek, NJ, a subsidiary of Public Service Enterprise Group (PSEG), is the one site in the country that offers both PWR and BWR technologies and the nuclear corporate organization in a single site. Come hear about our new Salem Community College Partnership as well as our college recruiting efforts.

BOOTH 9 & 10: CORYS Thunder, Inc., St. Marys, GA

CORYS Thunder, Inc. located in St. Marys, Georgia, offers the most sophisticated products and technology in the simulation industry. CTI engineers pioneered Windows and PC based simulation technology as well as the THR advanced thermal hydraulics and neutronics models. Most of the nuclear plant training simulators in the U.S. as well as several in Europe, rely on CORYS Thunder technology to meet critical training simulator fidelity, reliability and training requirements.

BOOTH 11: IAEA Careers - Argonne National Laboratory, Argonne, IL

The International Atomic Energy Agency (IAEA) in Vienna, Austria is the world's center for cooperation in the nuclear field committed to promoting safe, secure and peaceful uses of nuclear technology. IAEA offers opportunities to engage current, meaningful issues of global peace, security and development while working in a multicultural workplace.

BOOTH 12: The Westwind Group, Inc., Wilmington, NC

The Westwind Group, Inc. is a multifaceted consulting firm specializing in training and personal support solutions, technical and information technology services and management support. Our mission is to equip our clients with solutions that measurably contribute to productivity in the work place by: building collaborative values; evaluating, supplementing or developing processes and procedures that ensure quality, incorporate best practices and emphasize management standards and expectations; applying a systematic approach; developing client in-house skills to maintain and extend the solution. The Westwind Group seeks to provide clients with services that innovate and adapt to develop new solutions. Our staff is focused on working efficiently, managing costs and building relationships. We have extensive experience and can provide services that result in turn-key solutions or be engaged on a staff augmentation basis.

BOOTH 13: NWI Consulting, LLC, Knoxville, TN

NWI Consulting, LLC is a professional consulting firm specializing in power generation performance improvement services, specialized learning interventions, computer-based training, organizational development, accreditation renewal/recovery, and professional staff augmentation. NWI has a broad portfolio of U.S. and international clients in the electric generation industry and is headquartered in Knoxville, TN. NWI's power plant services includes supporting such areas as Operations, Training, Outage Management, Nuclear Oversight, Maintenance, Radiation Protection, Chemistry and Emergency Preparedness. NWI has assisted clients in other more specialized efforts including Leadership/Management Development, Executive Coaching, Conflict Resolution, Multi-Discipline Assessments, Root Cause Analyses, NRC 95-002 & 3 Preparations and specialized Safety Analyses (50.59).

BOOTH 14: Progress Energy, Raleigh, NC

Progress Energy, headquartered in Raleigh, NC is a Fortune 250 energy company with more than 21,000 megawatts of generation capacity and \$9 billion in annual revenues. The company is observing its 100th anniversary in 2008. Progress Energy includes two major utilities that serve 3.1 million customers in the Carolinas and Florida. Progress Energy serves two growing areas of the country, and is pursuing a balanced strategy for a secure energy future that includes aggressive energy efficiency programs, investments in renewable energy technologies and a state-of-the-art electricity system.

BOOTH 15: New Mexico Junior College, Hobbs, NM

New Mexico Junior College provides industry and NRC aligned certificate and degree programs. The Nuclear Technician and Radiological Control program are available in a 100% online format. The programs are ideal for entering the nuclear field as a technician.

BOOTH 16: Excelsior College, Albany, NY

Transfer up to 52 credits from trainings you've completed at nuclear facilities accredited by NANT. Excelsior College's TAC-ABET accredited Bachelor of Science, Nuclear Engineering Technology degree allows professionals to develop individualized programs to meet career goals. Excelsior also boasts the first virtual student chapter of the American Nuclear Society (ANS).

BOOTH 17 & 18: L-3 Communications MAPPS, St. Laurent, QC Canada

Products/Services: Simulators, training

Whether nuclear, fossil or natural gas fired, count on L-3 MAPPS to effectively deliver a simulator solution that best suits your training or engineering needs. We offer simulators ranging from classroom trainers to system trainers to full scale simulators - all designed and aimed at unlocking value for your organization.

BOOTH 19: Energy Providers Coalition for Education (EPCE), Denver, CO

EPCE is a collaboration of utilities, unions, associations, and contractors working together to develop and provide quality online energy education. The Nuclear Power programs are designed to prepare the next generation to join the industry and upgrade the skills of the existing workforce. Courses are entirely online, and students can complete their coursework when their schedule permits, allowing them to meet work and other personal commitments.

BOOTH 20: Western Technical Services, Inc., Goodyear, AZ

Western Technical Services, Inc. provides a wide spectrum of Operations examination development services and products, including NRC and facility audit examination development, test item and exam bank development, exam production software, and a full array of assessment and consulting services that support the operator licensing process.

BOOTH 21: The Bob Pike Group, Eden Prairie, MN

Since 1983, The Bob Pike Group works with clients to optimize the transfer and application of training. We introduce our Participant-Centered Model, adult learning theory in action, to our clients' instructional systems through our on-site workshops, public seminars, and design consultancy. Clients learn interactive training methods to successfully train across generations and to all learning styles.

BOOTH 22: Idaho National Laboratory, Idaho Falls, Idaho

Idaho National Laboratory is the U.S. Department of Energy's leading center of nuclear energy research and development where more than 3,500 researchers and support staff work with national and international governments, universities, and industry partners to deliver energy and national security solutions and expand the frontiers of science and technology.



American Nuclear Society *meetings and conferences*
are the best way to keep current with the ever changing
fields of nuclear science and technology.

3 WAYS TO KEEP UP-TO-DATE

- 1) The national meetings feature comprehensive technical programs, professional development workshops, exhibits, tours and special events
- 2) Executive conferences and workshops focus on timely issues and topics regarding the implementation, operation and regulation of the nuclear industry
- 3) Topical meetings provide in-depth coverage of selected technical subjects



2009 ANS Annual Meeting • Atlanta, Georgia



2009 ANS Winter Meeting • Washington, D.C.

The opportunity to meet other professionals and discuss issues with recognized authorities will enrich your professional development.

Make plans now to attend!

2009 NATIONAL MEETINGS

DATE	TITLE	LOCATION
Jun 14-18, 2009	2009 ANS ANNUAL MEETING <i>"Advancing Nuclear Technology for a Greater Tomorrow"</i> and EMBEDDED TOPICAL MEETING NUCLEAR AND EMERGING TECHNOLOGIES FOR SPACE (NETS—2009; Formerly Space Nuclear Conference)	Atlanta, Georgia <i>Hyatt Regency Atlanta Hotel</i>
Nov 15-19, 2009	2009 ANS WINTER MEETING AND NUCLEAR TECHNOLOGY EXPO and EMBEDDED TOPICAL MEETING RISK MANAGEMENT and EMBEDDED TOPICAL MEETING 2009 YOUNG PROFESSIONALS CONGRESS	Washington, D.C. <i>Omni Shoreham Hotel</i>

2009 TOPICAL AND OTHER IMPORTANT MEETINGS

DATE	TITLE	LOCATION
Apr 5-9, 2009	6 TH INTERNATIONAL TOPICAL MEETING ON NUCLEAR PLANT INSTRUMENTATION CONTROL AND HUMAN MACHINE INTERFACE TECHNOLOGY (NPIC&HMIT2009)	Knoxville, Tennessee <i>Knoxville Marriott</i>
Apr 6-10, 2009	8 TH INTERNATIONAL CONFERENCE ON METHODS AND APPLICATIONS OF RADIOANALYTICAL CHEMISTRY (MARC VIII)	Kailua-Kona, Hawaii <i>King Kamehameha's Kona Beach Hotel</i>
Apr 12-15, 2009	ADVANCES IN NUCLEAR FUEL MANAGEMENT IV	Hilton Head, South Carolina <i>Hilton Oceanfront Resort</i>
May 3-7, 2009	2009 INTERNATIONAL CONFERENCE ON MATHEMATICS, COMPUTATIONAL METHODS, AND REACTOR PHYSICS	Saratoga Springs, New York <i>Knolls Atomic Power Laboratory</i>
Aug 2-5, 2009	UTILITY WORKING CONFERENCE AND VENDOR TECHNOLOGY EXPO	Amelia Island, Florida <i>Amelia Island Plantation</i>
Aug 23-27, 2009	14 TH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL DEGRADATION OF MATERIALS IN NUCLEAR POWER SYSTEMS	Virginia Beach, Virginia <i>Hilton Virginia Beach</i>
Sep 13-17, 2009	NUCLEAR CRITICALITY SAFETY: REALISM, ROBUSTNESS AND THE NUCLEAR RENAISSANCE	Richland, Washington <i>Shilo Inn Suites Hotel</i>