



CONFERENCE ON NUCLEAR TRAINING & EDUCATION 2013 CONTE

American Nuclear Society: Topical Meeting
Co-sponsored by the: European Nuclear Society



*“An International Forum
for the Discussion of Issues
Facing Nuclear Energy Training
and Education”*



**February 3-6, 2013
Jacksonville, Florida**

**Hyatt Regency
Jacksonville Riverfront**



CONTRIBUTING ORGANIZATIONS

The organizations listed below have made an outstanding contribution to the success of the 2013 CONTE Conference on Nuclear Training & Education and to the enjoyment of the attendees and their guests through their generous sponsorship.

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TRILINK SYSTEMS
UNIVERSITY OF MISSOURI RESEARCH REACTOR (MURR)

SUNDAY, FEBRUARY 3, 2013:

EXCELSIOR COLLEGE (Opening Reception)

MONDAY, FEBRUARY 4, 2013:

THOMAS EDISON STATE COLLEGE (Monday Breakfast)

ENTERGY NUCLEAR (Monday Lunch)

EXELON NUCLEAR (Monday Reception)

TUESDAY, FEBRUARY 5, 2013:

TVA (Tuesday Breakfast)

WESTINGHOUSE (Tuesday Awards Lunch)

L-3 MAPPS (Tuesday Reception)

WEDNESDAY, FEBRUARY 6, 2013:

NEXTERA ENERGY (Wednesday Breakfast)

SOUTHERN NUCLEAR OPERATING COMPANY
(Wednesday Lunch)

THANK YOU!



Conference on Nuclear Training and Education

CONTE 2013

American Nuclear Society: Topical Meeting

*“An International Forum for the
Discussion of Issues Facing
Nuclear Energy Training and Education”*

February 3-6, 2013
Hyatt Regency Jacksonville Riverfront
Jacksonville, Florida, USA

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GENERAL CHAIR:

Dr. Audeen Fentiman
*Associate Dean of Engineering
Purdue University*

TECHNICAL PROGRAM CO-CHAIR:

Jane LeClair
Excelsior College

TECHNICAL PROGRAM CO-CHAIR:

Patrick Berry
Entergy

TECHNICAL PROGRAM COMMITTEE

Dr. Philip Beeley
Khalifa University

Patrick Berry
Entergy

Joel Bohlmann
Institute of Nuclear Power Operations

Dr. Gilbert Brown
University of Massachusetts – Lowell

Dr. Richard Coe
Thomas Edison State College

Russell Coon
Exelon

Michael Desilets
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Dr. Jason Harris
Idaho State University

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Westinghouse

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INPO

Richard Holman
Idaho National Lab

Dr. Jane LeClair
Excelsior College

Gregg Ludlam
Exelon

Elizabeth McAndrew-Benavides
Nuclear Energy Institute

Renee Milner
TVA

Brian Molloy
IAEA

Jeff Place
Institute of Nuclear Power Operations

Julie Sickle
Constellation Energy

Adrian Skinner
Excelsior College





LEARN ABOUT

- Current Nuclear Energy Issues and Challenges
- The Status of Nuclear Energy in Newcomer Countries
- New Education & Training Techniques
- Establishing the Training Conscience
- Developing the Future Workforce
- Leadership Development
- Innovations in Education and Training Delivery
- Education and Industry Partnering
- Emerging Industry Trends in Training

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 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 and the Tuesday Awards 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 3, 2013	3:00 PM - 8:00 PM
Monday, FEBRUARY 4, 2013	7:30 AM - 6:00 PM
Tuesday, FEBRUARY 5, 2013	7:30 AM - 6:00 PM
Wednesday, FEBRUARY 6, 2013	7:30 AM - 12:00 PM

HOTEL ACCOMMODATIONS

The Hyatt Regency Jacksonville Riverfront Hotel, located at 225 Coast-Line Drive East, Jacksonville, Florida, 32202, will be the location for 2013 CONTE, where all meeting activities and technical sessions will take place.

The special room rate for the meeting is: \$169.00/night (single / double rate).

Reservations can be made on their website at:

https://resweb.passkey.com/Resweb.do?mode=welcome_ei_new&eventID=5453435

To register by phone for a guest room: 888-421-1442.

Attendees must identify themselves as part of the American Nuclear Society to receive the group rate.

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 \$95.00. 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 & Super Bowl Party

(Sponsored by Excelsior College)

SUNDAY, FEBRUARY 3, 2013 • 6:30 PM – 9:00 PM

LOCATION: GRAND BALLROOM FOYER 5–8

Each full conference registrant will receive a ticket for the reception. Additional tickets may be purchased on-site at the ANS registration desk for \$85.00.

CONTE Super Bowl Party – Don't miss a moment of game play!

Join us for the CONTE Opening Reception on Sunday, February 3, 2013, 6:30 – 9:00 pm in the Grand Ballroom Foyer of the Hyatt Regency Jacksonville Riverfront Hotel. There will be large screen TVs, great food and drink, gifts, prizes and chances to win with our fabulous football pool. See you there!

Conference Luncheon

(Sponsored by Entergy Nuclear)

MONDAY, FEBRUARY 4, 2013 • 11:30 AM – 1:00 PM

LOCATION: GRAND BALLROOM 4

SPEAKERS:

- Commissioner Ostendorff (USNRC)
- Mariam Ibrahim Al Mahmoud (Federal Authority for Nuclear Regulation, UAE)

Each full conference registrant will receive a ticket for the luncheon. Additional tickets may be purchased on-site at the ANS registration desk for \$55.00.

CASH BAR RECEPTION IN THE EXPO

(Sponsored by Exelon Nuclear)

MONDAY, FEBRUARY 4, 2013 • 6:00 PM – 7:30 PM

LOCATION: GRAND BALLROOM FOYER 5–8

CONTE AWARDS LUNCHEON

(Sponsored by Westinghouse)

TUESDAY, FEBRUARY 5, 2013 • 11:45 AM – 1:00 PM

LOCATION: GRAND BALLROOM 4

SPEAKERS:

Dr. Eric Loewen, Past ANS President

PRESENTER OF ROBERT L. LONG TRAINING EXCELLENCE AWARDS:

Richard Holman (Chair, ANS ETWDD)

RECIPIENT:

Ronald Allen Knief

Each full conference registrant will receive a ticket for the luncheon. Additional tickets may be purchased on-site at the ANS registration desk for \$55.00.

CASH BAR RECEPTION IN THE EXPO

(Sponsored by L-3 MAPPS)

TUESDAY, FEBRUARY 5, 2013 • 6:00 PM – 7:30 PM

LOCATION: GRAND BALLROOM FOYER 5–8

CLOSING CONFERENCE LUNCHEON

WEDNESDAY, FEBRUARY 6, 2013 • 11:45 PM – 1:00 PM

LOCATION: GRAND BALLROOM 4

(Sponsored by Southern Nuclear Operating Company)

SPEAKERS:

- David Igyarto, Vice President, Industry Training and Accreditation (INPO)
- Dr. Jane LeClair, Technical Program Co-Chair
- Patrick Berry, Technical Program Co-Chair (Director of Training, Entergy Nuclear)

Each full conference registrant will receive a ticket for the luncheon. Additional tickets may be purchased on-site at the ANS registration desk for \$55.00.

Conference Schedule

SUNDAY, FEBRUARY 3, 2013

6:30 P.M. – 9:00 P.M. Opening Reception / SUPER BOWL XLVII (Sponsored by Excelsior College)

MONDAY, FEBRUARY 4, 2013

7:00 A.M. – 8:00 A.M. CONFERENCE BREAKFAST (Sponsored by Thomas Edison State College)
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: Impact of Fukushima
TECHNICAL SESSION: IAEA/Developing Workforce/Newcomer Countries
TECHNICAL SESSION: Nuclear Uniform Curriculum Program/Partnerships—I
11:30 A.M. – 1:00 P.M. CONFERENCE LUNCHEON (Sponsored by Entergy Nuclear)
1:00 P.M. – 2:45 P.M. TECHNICAL SESSION: Nuclear Security and Safeguards Training and Education
TECHNICAL SESSION: Personnel Training/Qualification/Education—I
TECHNICAL SESSION: Engineering Education—I
2:45 P.M. – 3:00 P.M. BREAK
3:00 P.M. – 4:45 P.M. TECHNICAL SESSION: Leadership Development—I
TECHNICAL SESSION: Personnel Training/Qualification/Education—II
6:00 P.M. – 7:30 P.M. RECEPTION (Sponsored by Exelon Nuclear)

TUESDAY, FEBRUARY 5, 2013

7:00 A.M. – 8:00 A.M. CONFERENCE BREAKFAST (Sponsored by TVA)
8:00 A.M. – 9:45 A.M. TECHNICAL SESSION: Engineering Education—II
TECHNICAL SESSION: Personnel Training/Qualification/Education—III
TECHNICAL SESSION: Nuclear Uniform Curriculum Program/Partnerships—II
9:45 A.M. – 10:00 A.M. BREAK
10:00 A.M. – 11:45 A.M. TECHNICAL SESSION: Leadership Development—II
TECHNICAL SESSION: Personnel Training/Qualification/Education—IV
11:45 A.M. – 1:00 P.M. CONFERENCE AWARDS LUNCHEON (Sponsored by Westinghouse)
1:00 P.M. – 2:45 P.M. TECHNICAL SESSION: Training for New Nuclear Plants
TECHNICAL SESSION: Nuclear Uniform Curriculum Program/Partnerships—III
TECHNICAL SESSION: Holding the Line on SAT—I
2:45 P.M. – 3:00 P.M. BREAK
3:00 P.M. – 4:45 P.M. TECHNICAL SESSION: Engineering Education—III
TECHNICAL SESSION: Simulator Changes in the Industry
TECHNICAL SESSION: Personnel Training/Qualification/Education—V
6:00 P.M. – 7:30 P.M. RECEPTION (Sponsored by L-3 MAPPS)

WEDNESDAY, FEBRUARY 6, 2013

7:00 A.M. – 8:00 A.M. CONFERENCE BREAKFAST (Sponsored by NextEra Energy)
8:00 A.M. – 9:45 A.M. TECHNICAL SESSION: Reactor Operator Licensing Focus Group—Challenges to Licensed Operator Training and Licensing—Panel
TECHNICAL SESSION: Engineering Education—IV
TECHNICAL SESSION: Nuclear Uniform Curriculum Program/Partnerships—IV
9:45 A.M. – 10:00 A.M. BREAK
10:00 A.M. – 11:45 A.M. TECHNICAL SESSION: Leadership Development—III
TECHNICAL SESSION: Personnel Training/Qualification/Education—VI
TECHNICAL SESSION: Holding the Line on SAT—II
11:45 A.M. – 1:00 P.M. CLOSING CONFERENCE LUNCHEON (Sponsored by Southern Nuclear Operating Company)



MONDAY, FEBRUARY 4, 2013, 7:00 A.M.–8:00 A.M.

Conference Breakfast

Grand Ballroom Foyer 5-8

(Sponsored by Thomas Edison State College)

MONDAY, FEBRUARY 4, 2013, 8:00 A.M.–9:00 A.M.

Opening Plenary Session

Grand Ballroom 5

WELCOME:

- Jane LeClair, Technical Program Co-Chair (*Dean, School of Business and Technology, Excelsior College*)
- Patrick Berry, Technical Program Co-Chair (*Director of Training, Entergy Nuclear*)

SPEAKERS:

- Introduction: Audeen Fentiman, Program General Chair (*Purdue Univ*)
- Robert F. Willard (*President and CEO of INPO*)

MONDAY, FEBRUARY 4, 2013, 9:00 A.M.–9:30 A.M.

Refreshment Break

Grand Ballroom Foyer 5-8

MONDAY, FEBRUARY 4, 2013, 9:30 A.M.–11:30 A.M.

Impact of Fukushima

Grand Ballroom 8

Chair: Joel Bohlmann (*INPO*)

Recommended Approach for Emergency Response Organization Training and Qualification, Post Fukushima, Jim Maddox (*INPO*)

Fukushima: Operator Training for Accidents in Excess of Design Basis, Robyn L. Brixey (*Rob Brixey, Inc.*), invited

Fukushima's Impact—Beyond the SAMGs and New Equipment Training, R. Steven White (*GSE Systems Inc.*), invited

Lessons Learned from Emergency Preparedness Review Visits, Jim Maddox (*INPO*)

Browns Ferry Operators Respond to Significant Natural Disaster—A Personal Perspective, Christopher L. Vaughn (*TVA-Browns Ferry Nuclear Plant*)

IAEA/Developing Workforce/Newcomer Countries

Grand Ballroom 7

Chair: Zoltan Pasztory (*IAEA*)

Building University Nuclear Programs to Support the UAE Nuclear Energy Program, Philip Beeley (*Khalifa Univ*)

Developing a Nuclear E&T Program—Cooperation between Newcomers and Experienced Nuclear Energy Countries a Success Story?, Gabriel Lazaro Pavel, Petre Ghitescu (*Univ "Politehnica" of Bucharest*)

INEC—International Nuclear Energy Certificate Program, Paulo Barretto (*Texas A&M*), Karel Katovsky, Jiri Martinec (*Brno Univ of Technology*), Radek Skoda (*Czech Technical Univ in Prague*)

New Nuclear Energy Curriculum Development in Thailand, Vutthi Bhanthumnavin (*Shinawatra Univ*), Duchduen Bhanthumnavin (*National Institute of Development Administration*)

Education, Workforce Planning and Nuclear Knowledge Management for Newcomer Countries, Zoltan Pasztory, Brian R. Molloy (*IAEA*), invited

The Gulf Nuclear Energy Infrastructure Institute (*GNEII*): Two Years On, Philip Albert Beeley (*Khalifa Univ of Science, Technology and Research*), Robert J. Finch (*SNL*), Abdelaziz M. Al Madhloum (*Khalifa Univ of Science, Technology & Research*), Michael Schuller, David R. Boyle (*Texas A&M*), Amir Mohagheghi, Faraj Ghanbari, Adam David Williams (*SNL*), Byung Koo Kim (*Khalifa of Science, Technology & Research*)

Nuclear Uniform Curriculum Program/Partnerships—I

Grand Ballroom 6

Chair: Richard Coe (*Thomas Edison State College*)

Technician Education using 21st Century Learning Tools by RCNET, Kevin E. Cooper (*RCNET*), invited

Tennessee Valley Authority Internship Program, Shunyale L. Griffin, Susan Stout (*TVA*)

Training and Education Activities within the Frame of EURATOM, Andrea Bucalossi (*European Commission*)

Fueling the Local Industry through the Summer Nuclear Science Institutes at South Carolina State University, April N. Hutton-Moorer, Kenneth Okafor, Zheng Chang, Musa B. Danjaji (*South Carolina State Univ*)



MONDAY, FEBRUARY 4, 2013, 11:30 A.M.–1:00 P.M.

Conference Luncheon

Grand Ballroom 4

(Sponsored by Entergy Nuclear)

SPEAKERS:

- Commissioner Ostendorff (*USNRC*)
- Mariam Ibrahim Al Mahmoud (*Federal Authority for Nuclear Regulation, UAE*)

MONDAY, FEBRUARY 4, 2013, 1:00 P.M.–2:45 P.M.

Nuclear Security and Safeguards Training and Education

Grand Ballroom 6

Chair: Jason Harris (*Idaho State Univ*)

Preparing the Next Generation Nuclear Security Personnel, Patrick Daniel Lynch (*Univ of Tennessee/ORNL*)

Developing Next Generation Nuclear Security Personnel in Jordan, Patrick Daniel Lynch (*ORNL*), Salaheddin Malkawi (*JUST*)

International Nuclear Security Education Network (*INSEN*): Past Accomplishments and Future Plans, Jason Timothy Harris (*Idaho State Univ*), Christopher Hobbs (*King's College London*), Dmitriy Nikonov (*Univ of Georgia*), Andrea Braunegger-Guelich (*IAEA*)

Developing Nuclear Security Curriculum in Morocco: Lessons Learned, Patrick Daniel Lynch (*ORNL*), Not yet determined (*National Center for Energy Sciences and Techniques (CNESTEN)*)

Promoting Nuclear Security in the Academic Community in South Africa, James Larkin (*Univ of Witwaterstrand*)

Personnel Training/Qualification/Education—I

Grand Ballroom 7

Chair: Jeff Place (*INPO*)

Best Practices in Initial License Operator Candidate Preparation, Kostas M. Dovas (*Exelon Generation*)

Training the Masses, Robert O. Byford (*Entergy*)

A Study on the Automation of Humans by Procedure and Effective Context Management, Kara Anne Schmitt (*Florida Institute of Technology*), Thomas Waicosky (*Duke Energy*)

Improving Operator Fundamentals, Tammy S. Love (*INPO*), invited

Advanced Learning in Nuclear Training, Phillip M. Polefrone (*GSE Systems Inc.*)

Engineering Education—I

Grand Ballroom 8

Chair: David Helling (*Westinghouse*)

Future Risk Management Training, Jodi Lynn Bergeron, Nathan Porter (*Xcel Energy Monticello*), invited

Building a Comprehensive Nuclear Education in Sweden, Anders Nordlund, Teodora Retegan, Christophe Demazière, Stefan Allard, Paolo Vinai, Christian Ekberg (*Chalmers University of Technology*)

Nuclear Engineering Education at National Tsing Hua University in Taiwan, Ge-Ping Yu, Shiang-Huei Jiang (*Tsing Hua University*)

CORONA Project as a European Cooperation Network, Hanna Tauru (*Fortum*)

Education and Training in SARNET Network on Severe Accidents, Sandro Paci (*Pisa Univ*), Jean-Pierre Van Dorsselaere (*IRSN*)

MONDAY, FEBRUARY 4, 2013, 2:45 P.M.–3:00 P.M.

Refreshment Break

Grand Ballroom Foyer 5-8

MONDAY, FEBRUARY 4, 2013, 3:00 P.M.–4:45 P.M.

Leadership Development—I

Grand Ballroom 8

Chair: Russ Coon (*Exelon*)

“What it Means to be a Nuclear Training Leader” Training Course, Julie Ann Sickel (*CENG*), Lisa Brattin (*INPO*), invited

The Redesign/Refresh of INPO’s Leadership Seminars, William A. Russell (*INPO*)

Improving Leadership Skills Through Immersive Simulation, Catherine Susan Brown (*INPO*), Kathy Larson (*The Regis Company*)

Shift Manager Professional Development, Thomas Francis McElhinney (*Entergy Nuclear-Pilgrim Station*), invited



Personnel Training/Qualification/Education—II

Grand Ballroom 7

Chair: Gregg Ludlam (*Exelon*)

Alleviating Redundancy Using EPRI's Standardized Task Evaluations, Don W. Cullers (*EPRI*), Burl McCosh (*INPO*)

Perspectives on Improving Human Performance, Catherine Susan Brown (*INPO*), Richard D. Holman (*INL*)

Accelerating Comprehension and Improving Retention with 3D Interactive Visualization, Hal D. Paris (*TriLink Systems*)

Maximizing Your Dynamic Flow Loop Simulator, Kevin L. Stupak, Ken Milligan (*Entergy*)

MONDAY, FEBRUARY 4, 2013, 6:00 P.M.–7:30 P.M.

Cash Bar Reception in the Expo

Grand Ballroom Foyer 5-8

(Sponsored by *Exelon Nuclear*)

TUESDAY, FEBRUARY 5, 2013, 7:00 A.M.–8:00 A.M.

Conference Breakfast

Grand Ballroom Foyer 5-8

(Sponsored by *TVA*)

TUESDAY, FEBRUARY 5, 2013, 8:00 A.M.–9:45 A.M.

Engineering Education—II

Grand Ballroom 8

Chair: Jason Harris (*Idaho State Univ*)

Development and Team-Teaching of “Computers and Nuclear Energy” Course For Non-Nuclear Engineering Students, Charles Kim (*Howard Univ*), Deborah Jackson (*NRC*), Peter Keiller (*Howard Univ*)

Development of New EPRI Training Courses on Probabilistic Risk Assessment, Douglas Hance, Stuart R. Lewis (*EPRI*), Douglas E. True (*ERIN Engineering & Research*)

Educational Activity of Kinki University Teaching and Research Reactor, Sin-ya Hohara, Kengo Hashimoto, Tetsuo Itoh (*Kinki Univ Atomic Energy Research Institute*)

Fostering and Networking Nuclear Education: IAEA activities, Maria Monica Scaffoni (*IAEA*), Andrey Kosilov (*Consultant, IAEA*)

Personnel Training/Qualification/Education—III

Grand Ballroom 7

Chair: Patrick Berry (*Entergy*)

Operator Generic Fundamentals, Kathryn T. Davis (*INPO*)

Improving Marginal Performing Operators with Full-Circumference Assessments, Cynthia DeVita-Cochrane (*The Westwind Group, Inc.*), Heather Davis (*Nine Mile Point Nuclear Station*)

The MISSISSIPPI Index, Dale R. Jennings (*Hyperspring*)

Improving Licensed Nuclear Operator Medical Certification Requirements, George B. Rombold (*Scientech*)

Accelerating Experience—Utility Sector Case Studies in Training and Knowledge Management, Cherie Claudia Ferrari (*Kinectrics Inc*)

Nuclear Uniform Curriculum Program/Partnerships—II

Grand Ballroom 6

Chair: Michael Desilets (*Entergy*)

Are We There Yet? An NUCP Partnership Update, Robert M. Collins (*Southern Nuclear Company/ Plant Vogtle Units 3 & 4*), invited

Unique Collaborative NUCP Partnership Ensures Online Degree Remains Leading-Edge, Christine Carpenter (*EPCE*), Steven Gackstetter (*Exelon Generation*)

Benchmarking Model—Nuclear Uniform Curriculum Program, James (Vince) V. Gilbert (*EXCEL Services Corp*)

Outreach to Stimulate Interest in STEM Education, John W. Poston (*Texas A&M*), V. G. Segovia, J. H. Haines (*Nuclear Power Institute*), K. L. Peddicord (*Texas A&M*)

TUESDAY, FEBRUARY 5, 2013, 9:45 A.M.–10:00 A.M.

Refreshment Break

Grand Ballroom Foyer 5-8



TUESDAY, FEBRUARY 5, 2013, 10:00 A.M.–11:45 A.M.

Leadership Development—II

Grand Ballroom 8

Chair: Julie Sickle (*Constellation Energy*)

Training Manager Succession Planning at Entergy Nuclear, Patrick J. Berry (*Entergy Nuclear*)

Developing Leaders for Superior Performance in Nuclear Power, Joe Carella (*Eckerd College Leadership Development Institute*), Christopher J. Schwarz (*Entergy Arkansas Nuclear One*)

Developing Station Leaders, Peter A. McSparran (*APS*), invited

Personnel Training/Qualification/Education—IV

Grand Ballroom 7

Chair: Richard Holman (*DOE-INL*)

Evaluating Alternate Paths During Task Performance, Marios Kafantaris (*PSEG Nuclear*)

Advances in the Delivery of Nuclear Power Plant Simulation Based Learning, John R. Smith (*Western Services Corp*)

Fully-Interactive Virtual Labs for Training and Education, Imran Jabeer Haddish, Rizwan Uddin, Ye Li (*Univ of Illinois*)

Improving Industrial Safety Performance at Indian Point, Frank Anthony Inzirillo (*Indian Point Energy Center*)

Training Courses on Safety and Security of Radioactive Material Packages, Yung Y. Liu, R. Fabian, V. Shah, R. Pope (*ANL*), J. Shuler (*DOE*)

TUESDAY, FEBRUARY 5, 2013, 11:45 A.M.–1:00 P.M.

Conte Awards Luncheon

Grand Ballroom 4

(Sponsored by Westinghouse)

SPEAKERS:

- Dr. Eric Loewen, Past ANS President
- Training Excellence Awards - Richard Holman (*Chair, ANS ETWDD*)

TUESDAY, FEBRUARY 5, 2013, 1:00 P.M.–2:45 P.M.

Training for New Nuclear Plants

Grand Ballroom 7

Chair: William Hendy (*PG&E*)

New Nuclear Plant Training Challenges, Charles D. Nesbitt (*Vogtle Units 3&4*), invited

Implementation of a UK Training Strategy for Nuclear New Build, Simon Earp (*EDF Energy Nuclear New Build*)

Initial Accreditation—Industry Update, Michael David Llewellyn (*INPO*)

Nuclear Uniform Curriculum Program/Partnerships—III

Grand Ballroom 6

Chair: Renee Milner (*TVA*)

Regional Center for Nuclear Education and Training Support of the Nuclear Uniform Curriculum Program, Natalia Chekhovskaya (*Regional Center for Nuclear Education and Training*), invited

Training the Next Generation of Environmental Restoration and Nuclear Industry Workforce, Leonel E. Lagos (*Florida International University's Applied Research Center*)

Maturing 18-25 Year Olds to Work in the Nuclear Industry, Bruce Albert Meffert (*Linn State Technical Coll*)

College Credit for Qualified Training and Testing: A Winning Partnership, Thomas G. Devine (*Thomas Edison State Coll*)

Holding the Line on SAT—I

Grand Ballroom 8

Chair: Adrian Skinner (*Excelsior College*)

Sustainability of Nuclear Training Programs—Focused Leadership Actions, Bryce L. Shriver, Bryan Shriver, Brandon Shriver (*Three Seven Research, Inc*)

Leadership Lessons Learned from Back-to-Back Probations, Stephanie P. Banker (*Ameren*)

Community of Practice, Dea Holman (*INPO*)

Holding the Line on SAT, Robert L. Sandstrom (*Focus Forward Performance Solutions LLC*), invited



TUESDAY, FEBRUARY 5, 2013, 2:45 P.M.–3:00 P.M.

Refreshment Break

Grand Ballroom Foyer 5-8

TUESDAY, FEBRUARY 5, 2013, 3:00 P.M.–4:45 P.M.

Engineering Education—III

Grand Ballroom 8

Chair: Gilbert Brown (Univ of Massachusetts–Lowell)

The Advanced Test Reactor National Scientific User Facility Education Program, Jeff B. Benson, Todd Allen, Frances Marshall (*INL*)

The Engineering Expertise Matrix: Identification and Quantification of Knowledge Gaps, Matthew T. Hiatt, Robert McNeil (*STP Nucl Operating Co*)

Nuclear Energy Globalization: Ways to Meet Non-Proliferation Challenges Through University Education, Irina A. Vorobieva (*IATE Obninsk*), E.F. Kryuchkov (*MEPHI, Moscow*)

Cooperation Between European Union and Russian Universities in Nuclear Education and Training, Petre Ghitescu (*Univ Politehnica Bucharest*)

Web-Based Heat-Transfer Modules for Nuclear Engineering Undergraduate Education, Ratan Kumar (*Univ of Texas at Arlington*)

Simulator Changes in the Industry

Grand Ballroom 6

Chair: William Hendy (PG&E)

Expanding the Use of Glass Panel Simulators, Jeff Wayne Mercer (*Southern Nuclear*), invited

Scenario Based Testing Methodology and Results, Shawn M. Quick (*Exelon Generation*)

Severe Accident Training in Real-Time, Gregory Thomas Hayes (*Corys Thunder Inc*)

Dynamic Presentations of TRACE/PARCS Analysis for Plant Transients, Jung Hua Yang (*Natl Tsing Hua Univ*), invited

Coupling of MELCOR Severe Accident Code To A Full Scope Training Simulator, Bernard J. Panfil (*Corys Thunder Inc.*), Robert Sanders (*AREVA NP*)

Personnel Training/Qualification/Education—V

Grand Ballroom 7

Chair: Robert Fletcher (Entergy)

Entergy Material Handling Training Program, Michael Kenneth Jessen (*Entergy Nuclear*)

Presentation of 480 VAC Breaker Trouble-Shooting, Hugh Nixon (*Entergy Nuclear*)

Ontario Power Generation's Blended Approach to SOER 10-2 Training, Greg Cornett, Louise Hastie, Alan Shiever (*OPG*)

Incorporating Cognitive Training in Simulation Based Learning for Performance Optimization, Melanie Cash Hill (*Interactive Visualization Center Greenville*), Melanie Hill (*IVC Greenville*)

TUESDAY, FEBRUARY 5, 2013, 6:00 P.M.–7:30 P.M.

Cash Bar Reception in the Expo

Grand Ballroom Foyer 5-8

(Sponsored by L-3 MAPPs)

WEDNESDAY, FEBRUARY 6, 2013, 7:00 A.M.–8:00 A.M.

Conference Breakfast

Grand Ballroom Foyer 5-8

(Sponsored by NextEra Energy)

WEDNESDAY, FEBRUARY 6, 2013, 8:00 A.M.–9:45 A.M.

Reactor Operator Licensing Focus Group—Challenges to Licensed Operator Training and Licensing—Panel

Grand Ballroom 6

Chair: Richard Pelton (NRC)

In this session, the panelists will discuss challenges to training and licensing operators including control room interfaces, control room conduct of operations, training program accreditation, simulator availability and certification, licensed operator training and requalification, licensed operator examiner training; licensed operator instructor training and certification; and international training and licensing experiences. Each participant will make a short presentation followed by a question and answer period.

PANELISTS:

- Richard Pelton (*NRC*)
- Michael Junge (*NRC*)
- Jack McHale (*NRC*)
- Andy Barbee (*V. C. Summer*)
- Mike Llewellyn (*INPO*)

Engineering Education—IV

Grand Ballroom 8

Chair: Sherrie Cotton (*Entergy Nuclear*)

Distance-Enabled Graduate Nuclear Engineering at the University of Pittsburgh, Larry R. Foulke, Janet L. Littrell (*University of Pittsburgh*), invited

Engaging First Year Students: North Carolina State's Nuclear Engineering Undergraduate Outreach, Lisa M. Marshall, Mohamed Bourham (*NCSU*)

The Systems Engineering Initiative—An Innovative Approach to Experiential Learning, Richard Cable Kurwitz, John W. Poston, Kenneth L. Peddicord (*Texas A & M*)

A Generational Influence, Shawn Cameron Howry, David Wheeler (*SNL*)

Nuclear Uniform Curriculum Program/Partnerships—IV

Grand Ballroom 7

Chair: Elizabeth McAndrews-Benavides (*NEI*)

U.S. Nuclear Workforce Development: An Update on the Nuclear Uniform Curriculum Program, Elizabeth L. McAndrew-Benavides (*NEI*), invited

Filling the Critical Nuclear Quality Systems Workforce Gap, Susan Winsor (*Aiken Technical College*), Furman Miller (*V. C. Summer Nuclear Station*)

Educating the Nuclear Workforce of the Future in Texas, John W. Poston, R. C. Kurwitz, G. Tsvetkova, K. L. Peddicord (*Texas A&M*)

Prior Learning Assessment — Getting College Credit for Learning Outside the Traditional Academic Environment, Richard P. Coe (*Thomas Edison State Coll*)

WEDNESDAY, FEBRUARY 6, 2013, 9:45 A.M.–10:00 A.M.

Refreshment Break

Grand Ballroom Foyer 5-8

WEDNESDAY, FEBRUARY 6, 2013, 10:00 A.M.–11:45 A.M.

Leadership Development—III

Grand Ballroom 8

Chair: Michael Desilets (*Entergy*)

Entergy Training Manager Development Through Training, Michael Desilets, Sherrie Cotton (*Entergy Nuclear*)

Advanced Operations Overview for Managers Training Program, George Thomas Berezna (*Univ of Ontario Inst of Tech*), Greg Cornett, Hassan Nivi (*OPG*)

Helping Individuals and Professional Societies Develop the Next Generation of Nuclear Leaders, Debra M. Hager (*Duke Energy*)

Personnel Training/Qualification/Education—VI

Grand Ballroom 7

Chair: Jane LeClair (*Excelsior College*)

Innovative Design and Implementation of Process Flow Trainer, Marvin Lee Chase (*Entergy*)

From Fundamentals to New Nuclear Plants—Interactive-3D is the Most Effective Path to Mastery, Michael K. Lerg (*GSE Systems Inc.*)

NANTeL Human Performance Re-Design, Maureen Kunapreddy (*INPO*)

Educational Path from an Operator to a Manager for the Non-Traditional Student, Adrian M. Skinner (*Excelsior Coll*)

Holding the Line on SAT—II

Grand Ballroom 6

Chair: Elizabeth McAndrews-Benavides (*NEI*)

Instructional Technologist Job Familiarization Program, Terry Smith, Jennifer Lawless (*CENG*), invited

Measuring Training Effectiveness: Deep, Not Broad, Jacob H. Kluch (*Exelon Generation*)

Maintaining Accountability in a Non- Traditional Nuclear Engineering Technology Program Through Outcomes Assessment Plan, Adrian M. Skinner (*Excelsior Coll*)

The Affective Learning Domain: The Next Frontier in Nuclear Training, Audrey Cate (*INPO*), Bryce L. Shriver (*Three Seven Research, Inc*)

WEDNESDAY, FEBRUARY 6, 2013, 11:45 A.M.–1:00 P.M.

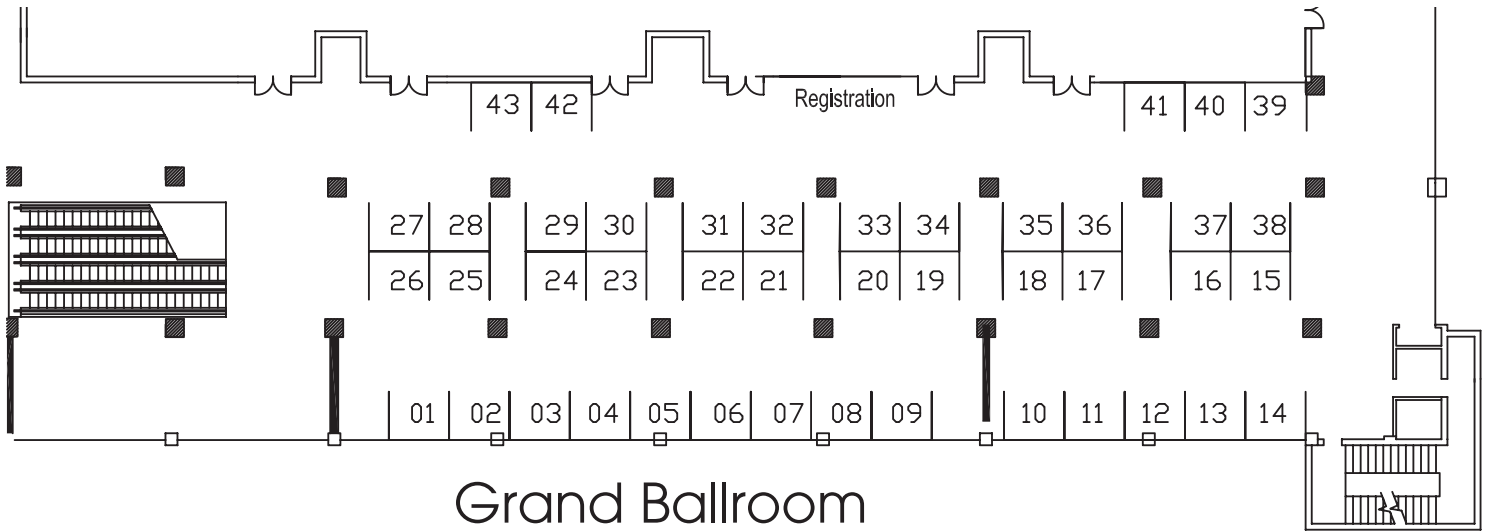
Closing Conference Luncheon

Grand Ballroom 4

(Sponsored by Southern Nuclear Operating Company)

SPEAKERS:

- David Igyarto, Vice President, Industry Training and Accreditation (*INPO*)
- Dr. Jane LeClair, Technical Program Co-Chair
- Patrick Berry, Technical Program Co-Chair (*Director of Training, Entergy Nuclear*)



Grand Ballroom Hyatt Regency Jacksonville-Riverfront Jacksonville, FL

American Society of Mechanical Engineers

New York, NY (Booth 21)

ASME is a not-for-profit membership organization that enables collaboration, knowledge sharing, career enrichment, and skills development across all engineering disciplines, toward a goal of helping the global engineering community develop solutions to benefit lives and livelihoods. Founded in 1880 by a small group of leading industrialists, ASME has grown through the decades to include more than 120,000 members in over 150 countries worldwide.

Bismarck State College National Energy Center of Excellence

Bismarck, ND (Booth 31)

Bismarck State College's National Energy Center of Excellence offers online training for the nuclear energy industry. An associate degree in Nuclear Power Technology with an option to transfer into the Bachelor of Applied Science degree in Energy Management is available entirely online. Visit our website at bismarckstate.edu/energy for more information.

CORYS Thunder, Inc.

St. Marys, GA (Booths 1 & 2)

CORYS Thunder, Inc. offers the most sophisticated products and technology in the simulation industry. CTI engineers pioneered Windows and PC based simulation technology as well as the THOR 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.

Excelsior College

Albany, NY (Booth 30)

Excelsior College's ABET accredited online Bachelor of Science in Nuclear Engineering Technology allows transfer of up to 52 credits from Nuclear Utility Accredited Programs, maximizing students' training. Excelsior also boasts a 2 year online Associate in Science in

Nuclear Technology program which prepares students to move into the utility work force. Accredited by the Middle Association of Colleges and Schools, Excelsior is host to the first virtual student chapter of the American Nuclear Society.

GSE Systems

Sykesville, MD (Booths 28 & 29)

We are a next-generation virtual simulation, simulation training, and engineering consulting services provider applying a world of experience to help you achieve the performance you imagine. GSE is a world leader in real-time, high-fidelity simulation, providing a wide range of simulation, training and engineering solutions to the energy industry. Our comprehensive and modular solutions help customers achieve performance excellence in design, training and operations. GSE's products and services are tailored to meet specific client requirements such as scope, budget and timeline.

Hyperspring Training & Development

Madison, AL (Booth 27)

Hyperspring Training & Development, LLC is a comprehensive training delivery and material development company. Our workforce of experienced nuclear industry professionals strives to both support and advance the ever evolving energy industry through the innovative use of technology. We focus on improving the existing safety, performance, and efficiency of both nuclear and non-nuclear generating facilities worldwide while preparing for the next generation of plant technology.

Hyperspring, can ensure that training organizations have access to modern and cutting-edge training materials, highly qualified and adept personnel, and the most current and capable technologies. Training material development, staff augmentation services, and operations support are the core of Hyperspring's business and success. Hyperspring personnel are industry experts using the SAT-ADDIE processes and site specific knowledge to correctly identify areas for improvement to produce individualized solutions.

Hyperspring, LLC is proud to announce being awarded multiple contracts to conduct Generic Fundamentals Examination training courses as well as Senior Reactor Operator Certification courses to several large fleet training organizations. These industry leading cost effective courses are offered as 16 week ANSI 3.1 Management SRO Certification courses or 36 week SRO Certification courses. Additionally, beginning in 2013 Hyperspring will offer an innovative one week candidate selection course to improve ILT throughput nationwide.

Hyperspring Corporate Office is located in Madison, Alabama with offices in New Jersey, Tennessee and Mississippi.

International Programs, Argonne National Laboratory

Argonne, IL (Booth 22)

The International Programs at Argonne National Laboratory administers a U.S. support program to the International Atomic Energy Agency (IAEA), focusing on its work promoting peaceful uses of nuclear technology. The International Programs is divided into four primary parts: Training Courses, Fellowships, Meeting Nominations, and Careers.

L3-MAPPS

Montreal, Quebec, Canada (Booths 33 & 34)

When you're looking for increased reliability in your power plant's performance, you can count on L-3 MAPPS' simulation experience to get you there. Our dedication to true-to-life power plant simulators ensures that your personnel have the knowledge required to safely and efficiently operate your power plant. Providing more than just training devices, our simulator solutions - powered by L-3 MAPPS' unparalleled Orchid™ suite of simulation products - will elevate your engineering team to new heights in addressing plant design issues, procedural deficiencies and reliability improvements.

Linn State Technical College Nuclear Technology

New Mexico, MO (Booth 24)

The Linn State Technical College Nuclear Technology program offers the student a unique, challenging opportunity to obtain technical training towards an Associate of Applied Science degree in Nuclear Technology with an emphasis in Instrumentation & Controls, Radiation Protection, or Reactor Operations.

NWI Consulting, LLC

Knoxville, TN (Booth 9)

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, Performance Improvement, Engineering, 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 (including Organizational Effectiveness and Safety Culture), Root Cause Analyses, NRC 95-002 & 3 Preparations and specialized Safety Analyses (50.59).

Regional Center for Nuclear Education and Training

Fort Pierce, FL (Booth 35)

NextEra Energy and Florida Power & Light are pleased to sponsor the Regional Center for Nuclear Education and Training booth.

The Regional Center for Nuclear Education and Training (RCNET) is a National Science Foundation (NSF) Advanced Technology Education (ATE) Center focused on making sure the demand for skilled nuclear technicians is met in a standardized and systematic way. RCNET, headquartered at Indian River State College (IRSC), is a consortium of 40 colleges and universities, 27 industry partners, American Nuclear Society (ANS), Center for Energy Workforce Development (CEWD), Nuclear Energy Advisory Committee (NEAC), Nuclear Regulatory Commission (NRC), Nuclear Energy Institute (NEI), Institute of Nuclear Power Operations (INPO), Department of Energy (DOE), Oak Ridge National Laboratory (ORNL), and the U.S. Navy. This booth features products, materials, and information on services offered by RCNET to the nuclear community.

TELETRIX

Pittsburgh, PA (Booth 36)

At Teletrix, we proudly endeavor to create innovative solutions in radiation detection training simulators that educate, prepare and protect the world.

Teletrix simulators deliver superior realism in radiation training. This realism effectively educates and prepares people to perform skillfully, enhancing job safety, plant safety and ultimately protecting the public and environment.

Thomas Edison State College

Trenton, NJ (Booth 32)

Thomas Edison State College is one of New Jersey's 12 senior public institutions of higher education and one of the oldest institutions in the country designed specifically for self-directed adults. The College provides flexible, high quality, collegiate learning opportunities for working adults and offers degree programs and certificates in more than 100 areas of study. The College has pioneered the use of the latest technology in its degree programs and is recognized by Forbes magazine as one of the top 20 schools in the nation in the use of technology to create learning opportunities for adult learners. Thomas Edison State College is accredited by Middle States Association of Colleges and Schools and its entire academic program is geared to the unique needs of self-directed adults who must juggle family and career responsibilities.

TriLink Systems

Virginia Beach, VA (Booth 23)

TriLink Systems offers 3D Interactive Animations utilizing its patented 3D visualization technology, Bridgeworks®, to enhance Nuclear Training Programs. TriLink employs experienced nuclear trainers and engineers in the design process to ensure our most important design objective of integrating our 3D technology into your existing current training curriculum verses attempting to redesign your curriculum to fit into our technology. Bridgeworks® focuses on how a complicated component or systems operates visually to accomplish your existing learning objectives in the most efficient manner. "Visualize Your World"



University of Missouri Research Reactor (MURR)

Columbia, MO (Booth 7)

MU/MURR is closely involved in INPO ACAD 08-006, ACAD 10-002, and other criteria compliant curricula development for energy industry and workforce training. Partnering with the Center for Energy Workforce Development, a web-based, instructor-led ANSI-approved Energy Industry Fundamentals class – which includes an Energy Industry Math Skills refresher -- has been is being deployed for energy industry workforce development needs – including pathways to nuclear technical education (DOL SESP GJ-19902- 010-60-A-29).

Western Services Corporation

Frederick, MD (Booths 42 & 43)

WSC, headquartered in Frederick, Maryland, is a global simulation and services company. WSC's primary focus is the development and deployment of advanced 3KEYSOFTWARE® Simulation Technology, which consists of the 3KEYMASTERTM simulation platform and a suite of unified graphical modeling tools for operator training simulators for all type of power and process plants.

Increasingly WSC 3KEYMASTERTM software is being deployed for Simulation Assisted Engineering (SAE). Leading companies are now embedding WSC's technology in their engineering processes to address the challenges of improving quality up-front, and reducing complex engineering development and commissioning cycles.

To support the increasing deployment of e-learning, WSC has developed 3KEYSTUDENTTM, which makes state-of-the-art simulator training available to a student's PC anywhere in the world via the Internet.

WSC recently added the ability to embed Severe Accident Analysis modeling in 3KEYMASTER by coupling MELCOR, a product of Sandia National Laboratories, or EPRI's MAAP5, with 3KEYRELAP5-RT.

WSC is committed to continually improving the capabilities of its technology and widening the applicability of its simulation technology to complex systems. To further this goal, WSC has a vigorous market-focused R&D program and a strong commitment to customer service.

Western Technical Services, Inc.

Goodyear, AZ (Booth 26)

Western Technical Services, Inc. offers a wide range of consulting services, including Operations and Training Management mentoring, plant operations training, operator professional development, training material development, examination and exam bank development, SRO Certification training, ISFSI training program development, and turn-key GFES program administration. Western Technical also designs and implements site specific Simulator Instructor training. As the industry's leading developer of NRC license and facility audit examinations, we maintain SRO expertise in both PWR and BWR design. Our Nu-SECTM exam generation software provides the ability to efficiently generate initial license, operator requalification, and generic fundamentals examinations using the industry's largest and most comprehensive NRC exam bank.

Westinghouse Electric Company

Pittsburgh, PA (Booth 5)

(company description not yet available)

The Westwind Group, Inc.

Wilmington, NC (Booth 20)

The Westwind Group, Inc. is a multifaceted consulting firm specializing in training and performance support solutions, technical and information technology services, and industrial/organizational psychology and management support.

Our mission is to equip our clients with solutions that measurably contribute to productivity in the work place by: Building Collaborative Value; Evaluating, Supplementing, or Developing Processes & Procedures that Ensure Quality, Incorporate Best Practices, & Emphasize Management Standards & Expectations; Applying a Systematic Approach; Developing Client In-House Skills to Maintain & 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.



Conference on Nuclear Training and Education – CONTE 2013

"An International Forum for the Discussion of Issues Facing Nuclear Energy Training and Education"

February 3–6, 2013 • Jacksonville, FL • Hyatt Regency Jacksonville Riverfront Hotel

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	PREREGISTRATION FEES PAID BY JANUARY 11, 2013		REGISTRATION FEES PAID AFTER JANUARY 11, 2013	
	ANS NATIONAL MEMBER	NON-MEMBER	ANS NATIONAL MEMBER	NON-MEMBER
Conference Registration <i>Includes Opening Reception, Monday Luncheon, Awards Luncheon, Wednesday Luncheon Conference Proceedings, and admittance to technical sessions.</i>	[01] <input type="checkbox"/> \$755.00	[02] <input type="checkbox"/> \$905.00	[05] <input type="checkbox"/> \$855.00	[06] <input type="checkbox"/> \$1050.00
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Proceedings (additional copies) [13] ___ x \$95.00 \$ _____

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TUESDAY, FEBRUARY 5, 2013
Awards Luncheon [16] ___ x \$55.00 \$ _____

WEDNESDAY, FEBRUARY 6, 2013
Wednesday Luncheon [17] ___ x \$55.00 \$ _____

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Registration cancellations must be made in writing prior to January 11th in order to receive a refund minus a \$75 processing fee. Meeting registrations and additional tickets canceled after January 11th will not be refunded; however, you may send a substitute. Please contact the ANS Registrar at telephone number: 708/579-8316 or e-mail: registrar@ans.org with any questions.



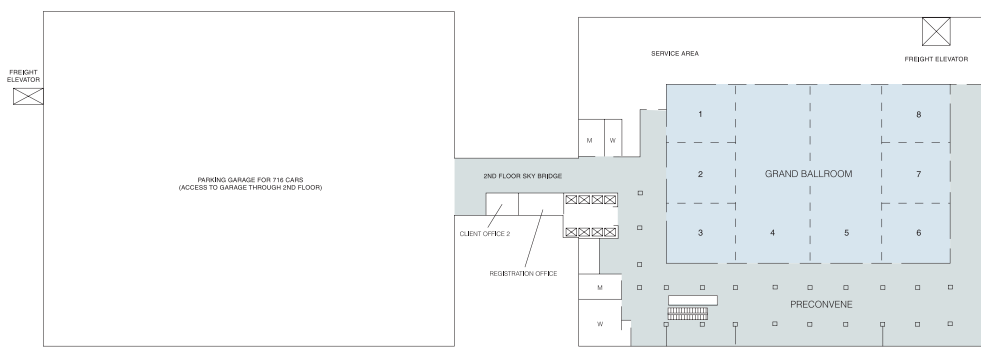
Hyatt Regency Jacksonville Riverfront

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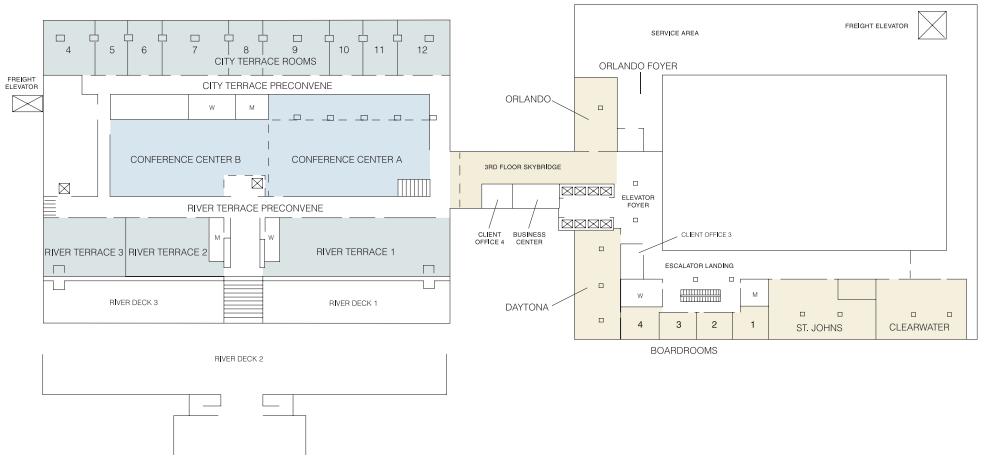
From Jacksonville International Airport, take I-95 south to exit 117, go east (left) on Union Street, then south (right) on Newnan and east (left) on Coastline.

From I-95 northbound, take exit 107 (Main Street/Prudential Drive) and follow signs to Main Street; go over the bridge onto Newnan Street, then left on Coastline.

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