2012 ANS Winter Meeting and Nuclear Technology Expo November 11-15, 2012 • San Diego, California • Town & Country Hotel & Resort

"Future Nuclear Technologies: Resilience and Flexibility"

and EMBEDDED TOPICAL MEETINGS:

- Advances in Thermal Hydraulics (ATH'12)
- International Meeting on Severe Accident Assessment and Management: Lessons Learned from Fukushima Dai-ichi

SUMMARY DEADLINE: June 29, 2012

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DEADLINES: NO EXCEPTIONS

SUBMISSION OF SUMMARIES: April 1, 2012–June 29, 2012

AUTHOR NOTIFICATION OF ACCEPTANCE: By July 23, 2012

REVISED SUMMARIES DUE: August 7, 2012

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Authors are now REQUIRED to use the ANS Template and "Guidelines for TRANSACTIONS Summary Preparation" provided on the ANS Web site. Summaries must be submitted electronically using Adobe Acrobat (PDF) files and original Microsoft Word documents and the ANS Electronic Paper Submission and Review System. Summaries not based on the ANS Template will be REJECTED.

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CONTENT

- 1. Introduction: State the purpose of the work.
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	6d.	Advances in Environmental Monitoring Techniques		Current Issues in Computational Methods–Roundtable
6e. Current Issues in Decommissioning and Environmental 13. Nuclear Criticality Safety (NCSD)	~	с ,	1	-
Restoration 13a. Data, Analysis, and Operations for Nuclear Criticality Safety				
6f. Environmental Aspects of New Site Selection 13b. FY2011 Nuclear Criticality Safety Program Technical	6f.	Environmental Aspects of New Site Selection	1	
6g. Modeling of the Transport of Materials in the Environment Accomplishments	6g.	·	150.	

- 6h. Environmental Aspects of Spent Fuel Storage
- Environmental Aspects of the Transportation of Radioactive 6i. Materials
- Use of Nuclear Energy for Desalination, Process Heat, and 6j. Space Heating
- Environmental Benefits and Impacts, Life-Cycle Studies, and 6k. External Costs of Nuclear and Various Energy Technologies
- 6l. **Emergency Planning and Preparedness**

- 13c. ANS 8 Standards Forum-Panel
- 13d. Validation Tutorial
- 14. Nuclear Installations Safety (NISD)
- 14a. Containment Degradation Research and Implications
- 14b. Nuclear Installations Safety: General
- 14c. State-of-the-Art Reactor Consequence Analyses (SOARCA)
- Project: Overview, Insights, and Path Forward

ANS 2012 Winter Meeting: Session Titles by Division / Technical Divisions

15. Nuclear Nonproliferation Technical Group (NNTG)

- 15a. Nuclear Nonproliferation and International Safeguards Challenges in the Middle East–Panel
- 15b. Nuclear Nonproliferation Education Programs-Panel
- 15c. NNSA Global Threat Reduction (NA-21) Activities-Panel
- 15d. Nonproliferation Considerations Associated with Transportation and Handling of $\rm UF_6$ Cylinders
- 15e. Road to Zero
- 15f. Safeguards and Security Considerations Associated with Long-Term Dry Storage of Used Nuclear Fuel
- 15g. Treaty Verification and Arms Control Policy and Technology
- 15h. Safeguards by Design—NNSA's Next Generation Safeguards Initiative Activities
- 15i. Nuclear Nonproliferation: General
- 16. Operations and Power (OPD)
- 16a. Advanced/Gen-IV Reactors
- 16b. Next Generation Nuclear Plant— Advances and Innovations
- 16c. Small Modular Reactors
- 16d. The International Framework for Nuclear Energy Cooperation–Advances and Innovations
- 16e. Operations and Power: General
- 17. Radiation Protection and Shielding (RPSD)
- 17a. Radiation Protection and Shielding: General
- 17b. Computational Tools for Radiation Protection and Shielding
- 17c. Shielding for Radioactive Material Packages

- 17d. RSICC: Celebrating 50 Years of Services to the Nuclear Research Community–Panel
- 17e. Ethics in Professional Engineering-Panel
- 17f. Radiation Shielding for Space Applications
- 18. Reactor Physics (RPD)
- 18a. Hybrid Monte Carlo Deterministic Methods for Reactor Analysis
- 18b. IAEA Reactor Physics and Technology Development Activities
- 18c. Physics Issues for Small, Compact Reactors
- 18d. "I Wonder If ..." Special Session in Honor of John Rowlands
- 18e. Reactor Analysis Methods
- 18f. Reactor Physics Design, Validation, and Operating Experience
- 18g. Reactor Physics: General
- 19. Robotics and Remote Systems (RRSD)
- 19a. Robotics and Remote Systems: General
- 20. Thermal Hydraulics (THD)
- 20a. Young Professional Thermal-Hydraulics Research Competition
- 20b. Thermal Hydraulics: General
- 21. Young Members (YMG)
- 21a. Issue Resolution and Policy Debate: The United States Government Should Increase Investments in Nuclear Power in the 21st Century

ANS 2012 Winter Meeting: Technical Divisions				
Acceleration Applications (AAD) Eric Burgett, burgeric@isu.edu Erich Schneider, eschneider@mail.utexas.edu	Mathematics and Computation (MCD) Brian Franke, bcfrank@sandia.gov			
Aerospace Nuclear Science and Technology (ANST) Martin Sattison, martin.sattison@inl.gov	Nuclear Criticality Safety (NCSD) Allison Miller, admille@sandia.gov Nuclear Installations Safety (NISD) Kevin O'Kula, Kevin.okula@wsms.com Operations and Power (OPD) Sasan Etemadi, sasan.etemadi@sce.com			
Biology and Medicine (BMD) Wayne Newhauser, Newhauser@lsu.edu				
Decommissioning, Decontamination, and Reutilization (DDRD) Douglas Davis, ddavis48@nycap.rr.com				
Education, Training, and Workforce Development (ETWDD) John Bennion, john.bennion@ge.com	Radiation Protection and Shielding (RPSD) Eric Burgett, burgeric@isu.edu			
Environmental Sciences (ESD) Eduardo Farfan, eduardo.farfan@srnl.doe.gov	Reactor Physics (RPD) Alexander Stanculescu, Alexander.Stanculescu@inl.gov Fausto Franceschini, FranceF@westinghouse.com Robotics and Remote Systems (RRSD) Timithy McJunkin, timothy.mcjunkin@inl.gov Richard Minichan, richard.minichan@srnl.doe.gov			
Fuel Cycle and Waste Management (FCWMD) Bill DelCul, delculgd@ornl.gov				
Fusion Energy (FED) Lee Cadwallader, lee.cadwallader@inl.gov				
Human Factors, Instrumentation, and Controls (HFICD) Sacit Cetiner, cetinerms@ornl.gov	Thermal Hydraulics (THD) Xiaodong Sun, pcchair@thd-ans.org			
Isotopes and Radiation (IRD) Kenan Unlu, K-unlu@psu.edu	Young Members Group (YMG) Allison Miller, admille@sandia.gov			
Materials Science and Technology (MSTD) Kenneth Geelhood, Kenneth.Geelhood@pnl.gov	Nuclear Nonproliferation Technical Group (NNTG) Susan B. Turner, turnersb@y12.doe.gov			

Embedded Topical Meeting: Advances in Thermal Hydraulics (ATH '12)

EMBEDDED TOPICAL MEETING CHAIRS

Honorary Chair Bal Raj Sehgal, *Emeritus Professor, Royal Institute of Technology*

General Co-Chairs

Yassin Hassan, Texas A&M University Hisashi Ninokata, Tokyo Institute of Technology Francesco D'Auria, University of Pisa

Technical Program Chairs

Kurshad Muftuoglu, *GE Hitachi Nuclear Energy* S. H. Chang, *Korea Advanced Institute of Science and Technology* Henryk Anglart, *Royal Institute of Technology*

Assistant Technical Program Chairs

Donna Guillen, *Idaho National Laboratory* Brian Woods, *Oregon State University*

PAPER DEADLINES

ABSTRACT SUBMISSION DEADLINE: June 30, 2012 ABSTRACT ACCEPTANCE: July 7, 2012 DRAFT FULL PAPERS: July 31, 2012 REVIEW NOTIFICATION: August 15, 2012 FINAL PAPER/COPYRIGHT: September 14, 2012

SUBMIT ABSTRACTS

By March 30, 2012, authors should submit a one-page 500-word abstract (text only) with contact information and preferred track number using the ANS Electronic Submission System: www.ans.org/meetings.

ABOUT THE MEETING

This embedded topical meeting is the first one in its series being organized by the Thermal Hydraulics Division and is a peerreviewed full-length technical paper conference covering recent advances in thermal hydraulics. Authors and presenters are invited to participate in this event to exchange the recent advances made in the thermal hydraulics area.

PLANNED TECHNICAL TRACKS

- 1. Two-Phase Flow and Heat Transfer Fundamentals
- 2. Code Developments and Applications
- 3. Advanced Code Developments
- 4. Operation and Safety of Existing Reactors
- 5. Experimental Thermal Hydraulics
- 6. Advanced Reactors Thermal Hydraulics
- 7. Waste Management Thermal Hydraulics
- 8. Thermal Hydraulics of Non-Electricity Generating Nuclear Systems

Embedded Topical Meeting: International Meeting on Severe Accident Assessment and Management: Lessons Learned from Fukushima Dai-ichi

EMBEDDED TOPICAL MEETING CHAIRS

General Chairs

Michael Corradini, University of Wisconsin Dale Klein, University of Texas, Austin

Technical Program Chairs

Jacopo Buongiorno, *Massachusetts Institute of Technology* Akira Tokuhiro, *University of Idaho*

PAPER DEADLINES

ABSTRACT SUBMISSION DEADLINE: March 15, 2012 ABSTRACT ACCEPTANCE: April 30, 2012 DRAFT PAPERS: June 15, 2012 REVIEW NOTIFICATION: July 13, 2012 FINAL PAPER/COPYRIGHT: September 3, 2012

SUBMIT ABSTRACTS

By March 15, 2012, authors should submit a one-page 500-word abstract (text only) with contact information and preferred track number using the ANS Electronic Submission System: www.ans.org/meetings.

ABOUT THE MEETING

This embedded topical meeting is the first of its kind hosted by ANS. We witnessed unprecedented events at the Fukushima nuclear plant in March 2011. We now live in a post-Fukushima nuclear energy world, where once again severe accidents and management thereof are under security. This embedded topical aims to provide an open exchange of information and technical views, including panel discussions, but more importantly lessons learned as a global nuclear community. PLANNED TECHNICAL TRACKS

All track papers should be Fukushima specific; otherwise they should be in the Winter Meeting.

- 1. Lessons Learned from Fukushima Dai-ichi
- 2. Re-Examination of External (Seismic, Tsunami, and other Natural Phenomena) Events and Loss of Offsite Power Events
- 3. Severe Accident Phenomena and Analyses
- 4. Emergency and Severe Accident Response, Procedures and Analyses: EOPs, SAMGs, SAMA, SAMDA
- 5. Spent Fuel Pool/Pond Management
- 6. Siting of Existing and Proposed Nuclear Power Plants
- 7. PRA/PSA
- 8. Operational Safety Improvements
- 9. Regulatory and Training Implications
- 10. Environmental Modeling
- 11. Beyond Design Basis Event for Nuclear Facilities
- 12. Risk-Informing New Designs
- 13. Emergency Preparedness, Planning, and Risk Communication
- 14. Comparisons Between Accidents at TMI, Chernobyl, and Fukushima
- 15. Safety Culture Issues
- 16. International Response and Impacts
- 17. Safety System Performance and Improvement (IC, RCIC/HPCI, AC/DC Bus, Diesels)
- 18. Improved Instrumentation and Safety Parameter Display
- 19. Current Status of Dai-ichi Plant and Cleanup Efforts
- 20. Cross-Track Panel Discussions