

“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



CALL FOR PAPERS

CONFERENCE CHAIRS

General Chair

Per Peterson, *University of California, Berkeley*

Technical Program Chair

Xiaodong Sun, *The Ohio State University*

Assistant Technical Program Chairs

Sacit Cetiner, *Oak Ridge National Laboratory*

Sedat Goluoglu, *Professor, University of Florida*

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

FORMAT

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.

GUIDELINES FOR SUMMARIES

Please submit summaries describing work that is NEW, SIGNIFICANT, and RELEVANT to the nuclear industry. ANS will publish all accepted summaries in the TRANSACTIONS. Papers are presented orally at the meeting, and presenters are expected to register for the meeting. Completed papers may be published elsewhere, but the summaries become the property of ANS. Under no circumstances should a summary or full paper be published in any other publication prior to presentation at the ANS meeting. It is the author’s responsibility to protect classified or proprietary information.

CONTENT

1. Introduction: State the purpose of the work.
2. Description of the actual work: Must be NEW and SIGNIFICANT.
3. Results: Discuss their significance.
4. References: If any, must be closely related published works. Minimize the number of references.
5. Do not present a bibliographical listing.

LENGTH

1. The minimum length is one full page.
2. The maximum length is four pages, including references, tables, and figures.
3. Limit title to ten words; limit listing authors to three or fewer if possible.

PAGE CHARGE

ANS charges \$100 per final printed page (prorated) in the TRANSACTIONS. Authors should be prepared to provide their purchase order numbers when submitting their summaries electronically.

REQUIRED TEMPLATE AND “GUIDELINES FOR TRANSACTIONS SUMMARY PREPARATION”:

www.ans.org/pubs/transactions

SUBMIT A SUMMARY:

www.ans.org/meetings

TRANSACTIONS COORDINATOR

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ANS 2012 Winter Meeting: Session Titles by Division

1. Accelerator Applications (AAD)

- 1a. Best of AccApp'11
- 1b. Advances in Non-HEU ^{99}Mo / $^{99\text{m}}\text{Tc}$ Production Technologies—IV
- 1c. Acceleration Applications: General

2. Aerospace Nuclear Science and Technology (ANSTD)

- 2a. Materials and Fuels for Space Nuclear Applications
- 2b. Aerospace Nuclear Science and Technology: General

3. Biology and Medicine (BMD)

- 3a. Advances in Non-HEU ^{99}Mo / $^{99\text{m}}\text{Tc}$ Production Technologies—I, II, III
- 3b. Biology and Medicine: General

4. Decommissioning, Decontamination, and Reutilization (DDR)

- 4a. Current Topics in West Coast DD&R—Panel
- 4b. Environmental Remediation—Panel
- 4c. Hot Topics and Emerging Issues—Panel
- 4d. Post Fukushima-Daiichi Update—Panel
- 4e. Small Modular Reactor Planning—Designing in Optimal Decommissioning Performance—Panel
- 4f. Decommissioning, Decontamination, and Reutilization: General

5. Education, Training, and Workforce Development (ETWDD)

- 5a. Becoming a Nuclear Spokesperson
- 5b. Communicating Nuclear in a Changing Landscape
- 5c. Innovations in Fuel Cycle Research—A Student Competition
- 5d. Cutting Edge Techniques in Education, Training and Distance
- 5e. The Consortium for Advanced Simulation of Light Water Reactors (CASL) Student Scholars
- 5f. Student Design Competition
- 5g. Education, Training, and Workforce Development: General
- 5h. Workforce Development for the U.S. Nuclear Forensics Programs

6. Environmental Sciences (ESD)

- 6a. Comparison of the Environmental Effects Between Chernobyl and Fukushima
- 6b. Trends in Low-Level Waste Management and Environmental Impacts
- 6c. Environmental Monitoring at Nuclear Facilities
- 6d. Advances in Environmental Monitoring Techniques
- 6e. Current Issues in Decommissioning and Environmental Restoration
- 6f. Environmental Aspects of New Site Selection
- 6g. Modeling of the Transport of Materials in the Environment
- 6h. Environmental Aspects of Spent Fuel Storage
- 6i. Environmental Aspects of the Transportation of Radioactive Materials
- 6j. Use of Nuclear Energy for Desalination, Process Heat, and Space Heating
- 6k. Environmental Benefits and Impacts, Life-Cycle Studies, and External Costs of Nuclear and Various Energy Technologies
- 6l. Emergency Planning and Preparedness

- 6m. Contributions of Nuclear Science and Technology to Sustainable Development

- 6n. Environmental Sciences: General

7. Fuel Cycle and Waste Management (FCWMD)

- 7a. Creating the New Entity to Manage Used Nuclear Fuel with Access to the Nuclear Waste Fund Fees—Panel
- 7b. Early Transfer of Spent Nuclear Fuel to Dry Storage: Options, Technologies, and Challenges—Panel
- 7c. Progress in DOE's Fuel Cycle Research and Development Program—Panel
- 7d. Advances in Separation Methods for the Recycle of Used Fuels
- 7e. Development of Advanced Safeguards Monitoring for Industrial Scale Fuel Cycle Facilities
- 7f. Early Transfer of Spent Nuclear Fuel to Dry Storage: Options, Technologies, and Challenges
- 7g. Nuclear Fuel Cycle Resources, Sustainability, Reuse, and Recycle
- 7h. Waste Forms Development
- 7i. Fuel Cycle and Waste Management: General

8. Fusion Energy (FED)

- 8a. Fusion Energy: General

9. Human Factors, Instrumentation, and Controls (HFICD)

- 9a. Human Factors, Instrumentation, and Controls: General

10. Isotopes and Radiation (IRD)

- 10a. Environmental and Health Aspects of the Radiological Release at Fukushima Dai-ichi
- 10b. Neutron Detection for Nonproliferation Applications
- 10c. Tritium in Fission and Fusion
- 10d. Isotopes and Radiation: General

11. Materials Science and Technology (MSTD)

- 11a. Discussion of Low-Energy Nuclear Reactions—Panel
- 11b. Multiscale Modeling of Nuclear Fuels and Materials
- 11c. Nuclear Fuels and Materials
- 11d. Separate Effects Testing of Nuclear Fuels and Materials
- 11e. Materials Science and Technology: General

12. Mathematics and Computation (MCD)

- 12a. Computational Methods: General
- 12b. Mathematical Modeling: General
- 12c. Transport Methods: General
- 12d. Uncertainty Quantification and Sensitivity Analysis Methods
- 12e. Current Issues in Computational Methods—Roundtable

13. Nuclear Criticality Safety (NCSD)

- 13a. Data, Analysis, and Operations for Nuclear Criticality Safety
- 13b. FY2011 Nuclear Criticality Safety Program Technical Accomplishments
- 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 UF₆ 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

Aerospace Nuclear Science and Technology (ANST)

Martin Sattison, martin.sattison@inl.gov

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

Environmental Sciences (ESD)

Eduardo Farfan, eduardo.farfan@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

Isotopes and Radiation (IRD)

Kenan Unlu, K-unlu@psu.edu

Materials Science and Technology (MSTD)

Kenneth Geelhood, Kenneth.Geelhood@pnl.gov

Mathematics and Computation (MCD)

Brian Franke, [bcfrank@sandia.gov](mailto:bcf Frank@sandia.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)

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Radiation Protection and Shielding (RPSD)

Eric Burgett, burgeric@isu.edu

Reactor Physics (RPD)

Alexander Stanculescu, Alexander.Stanculescu@inl.gov
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Robotics and Remote Systems (RRSD)

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Thermal Hydraulics (THD)

Xiaodong Sun, pcchair@thd-ans.org

Young Members Group (YMG)

Allison Miller, admille@sandia.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 peer-reviewed 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 Tokuhito, *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