

American Nuclear Society: 2012 Annual Meeting

June 24–28, 2012 • Chicago, Illinois • Hyatt Regency Chicago

“Nuclear Science and Technology: Managing the Global Impact of Economic and Natural Events”

and EMBEDDED TOPICAL MEETINGS:

- ANS Embedded Topical on Decommissioning, Decontamination and Reutilization and Technology Expo (DD&R 2012)
- Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors (NFSM 2012)
- International Congress on Advances in Nuclear Power Plants (ICAPP 2012)
(see pages 3 to 4 for details)

SUMMARY DEADLINE: JANUARY 13, 2012



Call for Papers

CONFERENCE CHAIRS

General Chair

Amir Shahkarami, *CEO, Exelon Nuclear Partners/Senior VP, Exelon Generation*

Technical Program Chair

Ray Klann, *Argonne National Laboratory*

Assistant Technical Program Chairs

Eric Burgett, *Georgia Institute of Technology*

Patrick Pinhero, *University of Missouri, Columbia*

DEADLINES: NO EXCEPTIONS

SUBMISSION OF SUMMARIES: *October 1, 2011–January 13, 2012*

AUTHOR NOTIFICATION OF ACCEPTANCE: *By February 28, 2012*

REVISED SUMMARIES DUE: *March 13, 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.
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 INFORMATION SERVICES

Ellen Leitschuh

Tel: 708/579-8253

Fax: 708/352-6464

eleitschuh@ans.org

Joe Koblich, Director

Tel: 708/579-8237

Fax: 708/352-6464

jkoblich@ans.org

ANS 2012 Annual Meeting: Session Titles by Division

1. Accelerator Applications (AAD)

- 1a. Accelerators and Detectors Used in Medical Therapy
- 1b. Acceleration Applications: General

2. Aerospace Nuclear Science and Technology (ANSTD)

- 2a. Aerospace Nuclear Science and Technology: General

3. Biology and Medicine (BMD)

- 3a. Isotopes for Medicine
- 3b. Modeling and Simulation of Brachytherapy Sources
- 3c. Proton Imaging Technology for Proton Therapy
- 3d. Biology and Medicine: General

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

- 4a. Bridging the Gap Between Policy and Technology in Education and Training
- 4b. Research by U.S. DOE NEUP-Sponsored Students
- 4c. Workforce Development for U.S. Nuclear Forensics Programs—Panel
- 4d. Innovations in Education, Training, and Distance Learning
- 4e. Nuclear Technician Education and Training
- 4f. Education, Training, and Workforce Development: General

5. Environmental Sciences (ESD)

- 5a. Environmental Monitoring at Nuclear Facilities
- 5b. Advances in Environmental Monitoring Techniques
- 5c. Current Issues in Decommissioning and Environmental Restoration
- 5d. Environmental Aspects of New Site Selection
- 5e. Modeling of the Transport of Materials in the Environment
- 5f. Environmental Aspects of Spent Fuel Storage
- 5g. Environmental Aspects of the Transportation of Radioactive Materials
- 5h. Use of Nuclear Energy for Desalination, Process Heat, and Space Heating
- 5i. Environmental Benefits and Impacts, Life-Cycle Studies and External Costs of Nuclear and Various Energy Technologies
- 5j. Emergency Planning and Preparedness
- 5k. Contributions of Nuclear Science and Technology to Sustainable Development
- 5l. Environmental Sciences: General

6. Fuel Cycle and Waste Management (FCWMD)

- 6a. Development of Advanced Fuel Recycle Methods
- 6b. Nuclear Nonproliferation and International Safeguards
- 6c. Off-Gas Separation and Immobilization
- 6d. Quantitative Methods for Nuclear Nonproliferation
- 6e. Used Fuel Component Recycle to Minimize Wastes and Recover Valuable Materials
- 6f. Fuel Cycle and Waste Management: General

7. Fusion Energy (FED)

- 7a. Fusion Energy: General

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

- 8a. Human Factors, Instrumentation, and Controls: General

9. Isotopes and Radiation (IRD)

- 9a. University Research Reactors and Nuclear Science Programs
- 9b. Radiation Measurement and Analysis in Nuclear Materials Protection, Accountancy, and Control
- 9c. Innovations in Radiation Detectors: New Designs, Improvements, and Applications
- 9d. Isotopes and Radiation: General

10. Mathematics and Computation (MCD)

- 10a. Computational Methods: General
- 10b. Current Issues in Computational Methods—Roundtable

- 10c. Mathematical Modeling: General

- 10d. Transport Methods: General

- 10e. Uncertainty Quantification and Sensitivity Analysis Methods

- 10f. Advances in Reduced Order Modeling for Nuclear Applications

11. Nuclear Criticality Safety (NCS)

- 11a. Advancing Criticality Safety Capabilities in a Growing Nuclear World

- 11b. ANS-8 Nuclear Criticality Safety Standards Forum

- 11c. Benchmarking Experiments for Criticality Safety and Reactor Physics Applications

- 11d. Data Analysis in Nuclear Criticality Safety

12. Nuclear Installations Safety (NIS)

- 12a. Current Fire Research Activities: Strengthening Safety Through Research

- 12b. Development of a Fault Injection-Based Test Methodology for Digital Systems

- 12c. Emerging Issues in Nuclear Facility Safety

- 12d. Generic Issue 199, “Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants”

- 12e. High-Density Polyethylene Piping for Safety-Related Nuclear Power Plant Applications

- 12f. Human Factors Review Guidance Updates

- 12g. Irradiation Assisted Degradation of Reactor Vessel Internals / NRC-Sponsored Environmentally Assisted Fatigue Research Activities

- 12h. Learning from Digital System Experience (Oconee and others)

- 12i. NRC Emergency Preparedness and Planning (based on Task Force on Fukushima)—Panel

- 12j. NRC’s International Regulatory Development Partnership

- 12k. Reclassification of Depleted Uranium and Natural Uranium

- 12l. Nuclear Installations Safety: General

13. Operations and Power (OPD)

- 13a. Advanced /Gen-IV Reactors

- 13b. Next Generation Nuclear Plant—Advances and Innovations

- 13c. The International Framework for Nuclear Energy Cooperation—Advances and Innovations

- 13d. Operations and Power: General

- 13e. SMR: Progression and Status

- 13f. New Nuclear Construction Around the World—Status Report

- 13g. Young Blood: Integration and Retention of the Next Generation Nuclear Workforce—Panel

14. Radiation Protection and Shielding (RPSD)

- 14a. Radiation Protection and Shielding: General

15. Reactor Physics (RPD)

- 15a. Reactor Analysis Methods

- 15b. Reactor Physics Design, Validation, and Operating Experience

- 15c. Initial Experience with ENDF/B-VII.1

- 15d. ENDF/B-VII.1: Data Measurements, Evaluation, and Processing

- 15e. Experiences and Challenges in RERTR Core Redesign

- 15f. Research Applications of Neutron Spectrometry and Dosimetry

- 15g. Current Issues in LWR Core Design and Reactor Engineering Support

- 15h. Hybrid Monte Carlo Deterministic Methods for Reactor Analysis

- 15i. Reactor Physics: General

16. Robotics and Remote Systems (RRSD)

- 16a. Robotics and Remote Systems: General

17. Thermal Hydraulics (THD)

- 17a. Computational Thermal Hydraulics

- 17b. General Two-Phase Flow

- 17c. Thermal Hydraulics in Severe Accidents

- 17d. Thermal Hydraulics in Rod Bundles

- 17e. Thermal Hydraulics of Used Fuel and Fuel Storage

- 17f. Next Generation Safety Analysis Code (Invited)

- 17g. Thermal Hydraulics: General

ANS 2012 Annual Meeting: Technical Divisions

Accelerator Applications (AAD)

Nolan Hertel, nolan.hertel@me.gatech.edu

Aerospace Nuclear Science and Technology (ANSTD)

Martin Sattison, martin.sattison@inl.gov

Biology and Medicine (BMD)

Wayne Newhauser, Newhauser@lsu.edu

Decommissioning, Decontamination, and Reutilization (DDR)

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)

Lance Snead, sneadll@ornl.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)

Patrick Brantley, brantley1@llnl.gov

Nuclear Criticality Safety (NCS)

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

Radiation Protection and Shielding (RPSD)

Eric Burgett, burgeric@isu.edu

Reactor Physics (RPD)

Fausto Franceschini, FranceF@westinghouse.com

Robotics and Remote Systems (RRSD)

Sean Peterson, speterson@destaco.com

Thermal Hydraulics (THD)

Xiaodong Sun, pcchair@thd-ans.org

Young Members Group (YMG)

Allison Miller, admille@sandia.gov

Nuclear Non-Proliferation Technical Group

Susan B. Turner, turnersb@y12.doe.gov

Embedded Topical Meeting: DD&R 2012

EMBEDDED TOPICAL MEETING:

DD&R 2012

June 24–28, 2012 • Chicago, IL • Hyatt Regency Chicago

EMBEDDED TOPICAL MEETING CHAIRS

General Chair

Patrick Daly, *General Manager, ZionSolutions*

Technical Program Chair

Sue Aggarwal, *President, New Millennium Nuclear Technologies International*

Assistant Technical Program Chair

James Byrne, *Principal, Byrne & Assoc., LLC*

PAPER DEADLINES

SUBMISSION OF SUMMARIES: *October 1, 2011–January 13, 2012*

AUTHOR NOTIFICATION OF ACCEPTANCE: *By March 2, 2012*

REVISED SUMMARIES DUE: *March 16, 2012*

SUBMIT SUMMARIES

Use the ANS Template and “Guidelines for TRANSACTIONS Summary Preparation” provided at www.ans.org/pubs/transactions. ANS will publish all accepted summaries in the Topical Meeting Proceedings for the meeting. Submit summaries via the ANS website (www.ans.org/meetings).

ABOUT THE MEETING

The ANS Topical DD&R Meeting is a forum for the discussion of the social, regulatory, scientific, and technical aspects of decontamination, decommissioning, and reutilization, and waste management. The 2012 conference program will include commercial, government, and international project updates as well as present project management, technology, and regulatory developments in the areas of decommissioning, waste management, site closure, and legacy management.

TOPICS

Project Track:

DOE Projects; Commercial Nuclear Plants Decommissioning Projects; International Decommissioning; EPA/DoD Projects; Fast Reactor Decommissioning Projects; Site and Building Remediation/Rehabilitation; NORM/UMT/Smaller Nonreactor Issues/Projects; Stakeholder Involvement; Accident Cleanup.

Technology Track:

Low Level Radioactive Waste Management; Groundwater Issues Monitoring and Remediation; Waste Management Technology Developments; Decommissioning and Decontamination Technology Developments; Final Status Survey and Radiation Measurement Technology Developments; Other Innovative Technologies and Feedback Experience; MARSSIM/Site Release/LTP/FSS/Geostatistical Approach; Dose Modeling/RESRAD/D&D; Regulatory Infrastructure for Technology Development.

Regulatory, Lessons Learned Track:

Capturing Best Practices and Other Lessons Learned; Project Infrastructure and Regulatory Criteria; Environmental Issues in Decommissioning; State Regulatory Issues that can Affect Decommissioning; Long-Term Surveillance and Maintenance of DOE and Commercial Facilities; Regulatory Infrastructure Long Term Surveillance and Maintenance of Sites; SAFSTOR, Entombment, and Spent Fuel Storage; Reutilization of Closed Sites/Facilities; Stakeholder Involvement/Public Relations; Records Management; Contracts Management.

EMBEDDED TOPICAL MEETING:

Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors (NFSM 2012)

June 24–28, 2012 • Chicago, IL • Hyatt Regency, Chicago

EMBEDDED TOPICAL MEETING CHAIRS

GENERAL CHAIRS

Todd Allen, *University of Wisconsin*

Lance Snead, *Oak Ridge National Laboratory*

TECHNICAL PROGRAM CHAIRS

Jacob Eapen, *North Carolina State University*

K. L. Murty, *North Carolina State University*

Heather J. MacLean Chichester, *Idaho National Laboratory*

PAPER DEADLINES

SUBMISSION OF SUMMARIES:

By January 11, 2012

AUTHOR NOTIFICATION:

By February 29, 2012

SUBMIT SUMMARIES

Summaries must be submitted using the ANS Electronic Submission System. Authors are required to use the ANS Template and “Guidelines for Transactions Summary Preparation” provided on the ANS Web site.

ABOUT THE MEETING

NFSM 2012 will bring together a group of materials experts from the industry, academia, and national laboratories to discuss the current research and development in the nuclear materials field.

The meeting will cover a wide spectrum of topics ranging from investigation of fuels and materials deformation at picoseconds to very slow aging of concrete and structural materials.

Summaries submitted to NFSM 2012 will be reviewed and published on a CD-ROM available at the meeting. Publication of full papers in a special issue of *Journal of Nuclear Materials* is anticipated. A limited number of submissions are scheduled for oral presentations, while the majority of technical presentations of NFSM 2012 are planned to be held in a poster session. At least one author is required to register for the topical meeting.

TOPICS

1. Fast Reactor Cladding and Duct Materials
2. Advanced Cladding (Including Alternatives to Zr Alloys)
3. Advanced Fuel
4. Spent Fuel and Interim Storage
5. Concrete
6. Materials Under Extreme Environment
7. High Temperature Materials for Nuclear Applications
8. Atomistic and Microstructure Modeling
9. Reprocessing
10. Fukushima Accident:
 - a. Materials perspective
 - b. Policy

EMBEDDED TOPICAL MEETING:

International Congress on Advances in Nuclear Power Plants (ICAPP 2012)

June 24–28, 2012 • Chicago, IL • Hyatt Regency Chicago

EMBEDDED TOPICAL MEETING CHAIRS

HONORARY CHAIR

Susan Landahl, *Exelon Nuclear*

TECHNICAL PROGRAM CHAIR

Luca Oriani, *Westinghouse Electric Company*

PAPER DEADLINES

ABSTRACT SUBMISSION DEADLINE:

October 15, 2011

ABSTRACT ACCEPTANCE:

November 30, 2011

DRAFT PAPERS:

January 15, 2012

REVIEW NOTIFICATION:

February 28, 2012

FINAL PAPERS/COPYRIGHT:

March 30, 2012

ABOUT THE MEETING

ICAPP provides a forum for leaders of the nuclear industry to exchange information, present results from their work, review the state of the industry, and discuss future directions and needs for the deployment of new nuclear power plant systems around the world. ICAPP will gather industry leaders in several invited lectures in plenary sessions.

SUBMIT ABSTRACTS

By October 15, 2011 authors should submit a one-page 500-word abstract (text only) with contact information and preferred track number at www.icapp.ans.org or to icapp@icapp.ans.org

TOPICS

1. Water-Cooled Reactor Programs and Issues
2. High Temperature Reactors
3. Advanced Reactors
4. Operation, Performance, and Reliability Management
5. Plant Safety Assessment and Regulatory Issues
6. Reactor Physics and Analysis
7. Thermal Hydraulics Analysis and Testing
8. Fuel Cycle and Waste Management
9. Materials and Structural Issues
10. Nuclear Energy and Global Environment