



ANS Call For Papers

2014 ANS Annual Meeting

June 15–19, 2014 • Reno, Nevada • Grand Sierra Resort
The U.S. Role in a Global Nuclear Energy Enterprise

EMBEDDED TOPICAL MEETINGS

- Decommissioning and Remote Systems (D&RS 2014)
- Nuclear Fuels & Structural Materials for Next Generation Nuclear Reactors
- Advances in Thermal Hydraulics - 2014

Summary Deadline: January 10, 2014
CALL FOR PAPERS

CONFERENCE CHAIRS:

General Chair

John J. Grossenbacher, *Idaho National Laboratory*

Technical Program Chair

Eric Burgett, *Idaho State University*

Assistant Technical Program Chair

Jeff Brault, *Shaw Group/CB&I Power*

DEADLINES: NO EXCEPTIONS

SUBMISSION OF SUMMARIES:

October 1, 2013–January 10, 2014

AUTHOR NOTIFICATION OF ACCEPTANCE:

By February 25, 2014

REVISED SUMMARIES DUE:

March 12, 2014

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

Ellen Leitschuh
Tel: 708/579-8253
Fax: 708/352-6464
eleitschuh@ans.org

INFORMATION SERVICES

Joe Koblich, Director
Tel: 708/579-8237
Fax: 708/352-6464
Fax: 708/352-6464

2014 ANS Annual Meeting

2014 Annual Meeting: Session Titles by Division

1. Accelerator Applications (AAD)

- 1a. Accelerator Applications: General

2. Biology and Medicine (BMD)

- 2a. Biology and Medicine: General

3. Decommissioning, Decontamination, and Reutilization (DDRD)

- 3a. Decommissioning, Decontamination, and Reutilization: General

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

- 4a. Education, Training, and Workforce Development: General
- 4b. Training, Human Performance, and Workforce Development (Standing Annual Meeting session)
- 4c. Focus on Communications: Communicating with Communities (P)
- 4d. Focus on Communications: Promoting Voluntary Siting Efforts (P)
- 4e. University Infrastructure Needs (P)
- 4f. Engineering Advisory Council Metrics and Best Practices (P)

5. Environmental Sciences (ESD)

- 5a. Environmental Sciences: General

6. Fuel Cycle and Waste Management (FCWMD)

- 6a. Headend Processing
- 6b. A Consent-Based Process to Used Fuel Disposition Siting: Outlook and Challenges
- 6c. Advanced Fuel Cycle Technology
- 6d. Experiments in Used Fuel Disposition, Storage, Transport, and Disposal
- 6e. Recycle and Reuse of Components from Used Nuclear Fuel
- 6f. Fuel Cycle and Waste Management: General
- 6g. Fuel Cycle Simulators and Systems Analysis
- 6h. Hybrid Energy: Combining Nuclear and Other Energy Sources
- 6i. SRS Plutonium Disposition Projects Update

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

- 7a. Human Factors, Instrumentation, and Controls: General—I
- 7b. Human Factors, Instrumentation, and Controls: General—II

8. Isotopes and Radiation (IRD)

- 8a. Isotopes and Radiation: General

9. Materials Science and Technology (MSTD)

- 9a. Materials Science and Technology: General

10. Mathematics and Computation (MCD)

- 10a. Computational Methods: General
- 10b. Mathematical Modeling: General
- 10c. Transport Methods: General
- 10d. Uncertainty Quantification and Sensitivity Analysis Methods
- 10e. Current Issues in Computational Methods Roundtable
- 10f. Mathematical Challenges in Multi-physics Reactor Simulation and Analysis

11. Nuclear Criticality Safety (NCSD)

- 11a. Data, Analysis, and Operations for Nuclear Criticality Safety
- 11b. Nuclear Criticality Safety Standards—Forum
- 11c. Criticality Accident Assessments by Students and Young Professionals
- 11d. Fundamentals of Uranium and Plutonium Chemistry Tutorial
- 11e. ANS 8 Standards Forum
- 11f. Criticality Safety Program Metrics

12. Nuclear Installations Safety (NISD)

- 12a. Nuclear Installations Safety: General (C)
- 12b. Emerging Issues in Nuclear Facility Safety (C)
- 12c. Current Topics in Probabilistic Risk Analysis (C)
- 12d. Safety Margins in Operating Light Water Reactor Plants - Combined Technical Papers and Panel
- 12e. Human Factors in Nuclear Safety (C)
- 12f. Joint NRC/Electric Power Research Institute (EPRI) Low Probability of Rupture (xLPR) Probabilistic Fracture Mechanics Code: Pilot Study Results (I/C)
- 12g. Methods for Evaluating the Technical Basis for Requests for Exemptions from Staffing, Security and EPZ Licensing Requirements for SMRs. (I/C)
- 12h. Fire Safety Issues - Focus on High Energy Arc Faults (I/C)
- 12i. Fuel Cladding Behavior Under Accident Conditions (I/C)
- 12j. Nuclear Safety and Quality Culture (C)
- 12k. Specific Safety Aspects of SMR Reactors - Panel
- 12l. Safety Aspects of Utilization of LWR Type SMR Reactor for Industrial Process Heat and District Heating - Panel
- 12m. Comprehensive Site Level 3 Probabilistic Risk Assessment (PRA) (C)
- 12n. Results from Experiments on Dispersal During Quenching (I/C)
- 12o. Status of Proposed Revision of Regulatory Guide 1.59, "Design Basis Floods for Nuclear Power Plants" (C)
- 12p. NRC Review of Combined License Applications (C)
- 12q. Highlights from the NRC Regulatory Information Conference (RIC) 2013 (I)
- 12r. Digital Instrumentation and Control Research: Strengthening Regulatory Decisions (C)
- 12s. Round Table on Organizing Special Sessions for ANS meetings (co-sponsor with YMG) - Workshop
- 12t. Development of a Fault Injection-Based Test Methodology of Digital Systems (C)

13. Nuclear Nonproliferation Technical Group (NNTG)

- 13a. Nuclear Nonproliferation Technical Group: General

14. Operations and Power (OPD)

- 14a. Operations and Power: General
- 14b. Advanced/Gen-IV Reactors

15. Reactor Physics (RPD)

- 15a. Data and Analysis in Nuclear Criticality Safety
- 15b. Update on DOE IRP Project: Integral Inherently Safe Light Water Reactor (I2S-LWR)
- 15c. Reactor Physics: General
- 15d. Nuclear Energy and Radiation in Space Technology Applications
- 15e. Current Issues in LWR Core Design and Reactor Engineering Support – Panel Session

16. Radiation Protection Safety Division (RPSD)

- 16a. Topics in Accelerator Radiation Protection and Shielding
- 16b. Computational Tools for Radiation Protection and Shielding
- 16c. Radiation Protection and Shielding-Roundtable
- 16d. Radiation Protection and Shielding: General
- 16e. History and Current State of Radiation Detection—A Review Session in Honor of Professor Nick Tsoulfanidis

17. Thermal Hydraulics (THD) (Full papers will be submitted to the ATH/14 Embedded Topical Meeting)

- 17a. Thermal Hydraulics: General

2014 ANS Annual Meeting

ANS 2014 Annual Meeting: Technical Divisions

Acceleration Applications (AAD)

Erich Schneider, eschneider@mail.utexas.edu

Aerospace Nuclear Science and Technology (ANST)

Martin Sattison, martin.sattison@inl.gov

Biology and Medicine (BMD)

Rolf Zeisler, rolf.zeisler@nist.gov

Education, Training, and Workforce Development (ETWDD)

John Bennion, john.bennion@ge.com

Decommissioning and Environmental Sciences (ESD)

Eduardo Farfan, eduardo.farfan@srnl.doe.gov

Fuel Cycle and Waste Management (FCWMD)

Jack Law, jack-law@inl.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

Nuclear Criticality Safety (NCSD)

Allison Miller, admille@sandia.gov

Nuclear Installations Safety (NISD)

Matthew Denman, mdenma@sandia.gov

Nuclear Nonproliferation Technical Group (NNTG)

Chris Robinson, robinsonrc@12doe.gov

Operations and Power (OPD)

Gale Hauck, hauckge@westinghouse.com

Radiation Protection and Shielding (RPSD)

Peter Caracappa, caracp3@rpi.edu

Reactor Physics (RPD)

Alexander Stanculescu, Alexander.Stanculescu@inl.gov

Robotics and Remote Systems (RRSD)

Carl Crane, carl.crane@gmail.com

Thermal Hydraulics (THD)

Xiaodong Sun, pcchair@thd-ans.org

Young Members Group (YMG)

Brett Rampal, bret.rampal@gmail.com

Embedded Topical Meeting: Decommissioning and Remote Systems (D&RS 2014)

June 15–19, 2014 • Reno, NV • Grand Sierra Resort

EMBEDDED TOPICAL MEETING CHAIRS

General Chair

Dr. Thomas Sanders, *Associate Laboratory Director for Clean Energy Initiatives, Savannah River National Laboratory*

Technical Program Chair, Decommissioning

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

Technical Program Chair, Remote Systems

Steve Tibrea, *Manager R&D Engineering, Savannah River National Laboratory*

PAPER DEADLINES

SUBMISSION OF SUMMARIES: *October 1, 2013–January 10, 2014*

AUTHOR NOTIFICATION OF ACCEPTANCE: *By February 25, 2014*

REVISED SUMMARIES DUE: *March 11, 2014*

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).

There is a page charge of \$25.00 per page.

ANS DIVISION WEBSITES

<http://ddrd.ans.org>

<http://rrsd.ans.org>

ABOUT THE MEETING

The ANS Topical D&RS Meeting is a forum for the discussion of the social, regulatory, scientific, and technical aspects of decommissioning, and remote systems. The 2014 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. The conference will be embedded in the ANS National Meeting for 2014, which will provide Technical sessions and opportunities beyond those in the decommissioning and remote systems area.

TOPICS

Decommissioning

Capturing Best Practices and Other Lessons Learned, Commercial Nuclear Plants Decommissioning Projects, Contracts Management, Decommissioning and Decontamination Technology, DOE Projects, Dose Modeling/RESRAD/D&D, Environmental Issues in Decommissioning, EPA/DoD Projects, Final Status Survey & Radiation Measurement Technology, Fukushima—Response, Cleanup, and Recovery, Groundwater Issues Monitoring and Remediation, International Decommissioning, Long-Term Surveillance and Maintenance of Facilities, Low Level Radioactive Waste Management, MARSSIM/Site Release/LTP/FSS, NORM/UMT/Smaller Non-Reactor Issues/Projects, Other Innovative Technologies and Feedback Experience, Project Infrastructure & Regulatory Criteria, Reactor Accident Clean-up and Recovery, Records Management, Regulatory Infrastructure for Technology Development, Regulatory Infrastructure for Surveillance and Maintenance, Reutilization of Closed Sites/Facilities, SAFSTOR, Entombment and Spent Fuel Storage, Site and Building Remediation/Rehabilitation, Stakeholder Involvement/Public Relations, State Regulatory Issues That Can Affect Decommissioning, Waste Management Technology Developments

2014 ANS Annual Meeting

Embedded Topical Meeting: Decommissioning and Remote Systems (D&RS 2014) (Continued)

Remote Systems

Chernobyl- Remote Systems, Construction Systems, Education and Robotics, Emergency and Explosive Disposal Robotics, Fukushima—Remote Applications, Human Factors Applied to Telerobotics and Teleoperators, Humanoid Robotics for Hazardous Environments, Intelligent and Autonomous Robotics, International Standards for Telerobotics, Mathematics Related to Robotics and Teleoperators, Medical, Rehabilitative, and Assistive Robotics,

Micro/Nano Robotics, Radiation Detection Platforms, Remote Handling, Remote Sampling, Remote Sensing and Robotic Platforms, Remote Tools and Processes, Robot and Teleoperator Dynamics and Control, Robotic and Automation Research Topics, Robotic D & D, Robotics and Remote Operations in Hazardous Facilities, Safeguards and Security Topics, Surveillance Systems, Telerobotics, Underwater Remote Systems, Unmanned Aerial Vehicles, Vision Systems

SPONSORED BY



ANS DESD



ANS RRSD

Embedded Topical Meeting: Nuclear Fuels and Structural Materials for the Next Generation Nuclear Reactors (NFSM 2014)

June 15–19, 2014 • Reno, NV • Grand Sierra Resort

EMBEDDED TOPICAL MEETING CHAIRS

General Chair

Todd R. Allen, *Deputy Laboratory Director, Idaho National Laboratory*

Lance L. Snead, *Distinguished Research staff, Oak Ridge National Laboratory*

Technical Program Chairs

Heather J. MacLean Chichester, *Senior Staff Scientist, Idaho National Laboratory*

Kurt A. Terrani, *Staff Scientist-Weinberg Fellow, Oak Ridge National Laboratory*

PAPER DEADLINES

Submission of summaries: *October 1, 2013–January 10, 2014*

Author notification: *By February 25, 2014*

SUBMIT SUMMARIES

Summaries must be submitted electronically using Adobe Acrobat (PDF) files and original Microsoft Word documents and 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 2014 will bring together a group of nuclear materials experts from industry, academia, and national laboratories to discuss current research and development in the nuclear fuel and core structural materials field. The meeting will cover a wide spectrum of experimental and modeling research related to fuels and core structural materials across various reactor platforms and throughout the fuel cycle. Experimental and modeling research activities within the following areas are particularly encouraged for submission to NFSM 2014:

- Fabrication and characterization of advanced fuel forms
- Cladding development for fast and thermal reactors
- Metallic and ceramic core structural component development
- Environmental effects on core constituents in fast and thermal reactors
- Irradiation and PIE of fuel and core structural materials
- In-pile behavior of core constituents
- Fuel performance modeling and analysis
- Lifetime management and sustainability for LWRs
- Used fuel management, storage, and reprocessing
- Fuel and core materials impact on reactor safety
- Accident tolerant core concepts

Summaries submitted to NFSM 2014 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 2014 are planned to be held in a poster session to facilitate detailed discussions. At least one author is required to register for the topical meeting.

SPONSORED BY



ANS FED



ANS MSTD

2014 ANS Annual Meeting

International Embedded Topical Meeting on Advances in Thermal Hydraulics - 2014 (ATH '14) June 15–19, 2014 • Reno, NV • Grand Sierra Resort

ABOUT THE MEETING

This embedded topical meeting is the second one in its series being organized by the Thermal Hydraulics Division and is a peer-reviewed full-length technical papers covering recent advances in thermal hydraulics. Authors and presenters are invited to participate in this event to exchange the recent advances and new developments. There will be a plenary session and a technical session dedicated to Dr. Novak Zuber to commemorate his legacy.

Conference Topics (Sessions for Paper Submittals)

- Research and Developments inspired by Dr. Novak Zuber
- Gas-Cooled Reactors in Memory of Dr. Chang Oh
- Two-Phase Flow and Heat Transfer Fundamentals
- Boiling and Condensation Phenomena
- Rod Bundle Thermal Hydraulics
- Subchannel Analysis
- Nuclear Reactor Core Thermal Hydraulics
- Nuclear Reactor Plant Thermal Hydraulics and Safety
- Code Development and Applications
- Computational Methods, Modeling, Verification/Validation
- Applications of Computational Methods to Nuclear Systems
- Advanced Code Development and Validation/Verification/Applications
- Experimental Methods and Instrumentation
- Severe Accidents, Phenomena, Modeling and Experiments
- Combustion and Fires, Modeling and Experiments
- Thermal Hydraulics in Accident Management
- Operating LWRs Thermal Hydraulics and Safety
- Thermal Hydraulics in Power Upgrading/Life Extension
- Neutronics/Thermal-Hydraulics Coupling
- Fluid-Structures and Materials Interactions
- Sodium-Cooled Fast Reactor Thermal Hydraulics
- Next Generation LWR Thermal Hydraulics
- Next Generation Gas-Cooled Reactor Thermal Hydraulics
- Generation IV and Future Innovative Nuclear Reactors Thermal Hydraulics
- Nano-Fluid Science and Technology Applications to Nuclear Systems
- Micro-Channel Flow and Heat Transfer Phenomena
- Thermal Hydraulics of Non-Electricity Generating Nuclear Equipment
- Thermal Hydraulics of Waste Management
- Best Estimate LOCA

IMPORTANT DATES:

Draft Full-Length Paper Submission:
January 10, 2014

Review Notification:
By February 25, 2014

Final Paper:
March 11, 2014
Selected papers will be published in a special edition of Nuclear Technology

There is a page charge of \$25 per page.

EMBEDDED TOPICAL OFFICIALS

General Chairs

Dr. Kurshad Muftuoglu (*Principal Engineer, GE Hitachi Nuclear Energy*)

Prof. Jong Hyun Kim (*Professor, KAIST & Consulting Executive EPRI*)

Technical Program Chair

Dr. Donna Post Guillen (*Distinguished Staff Engineer, INL*)
Horst-Michael Prasser, (*Paul Scherrer Institute*)

Assistant Chairs

Prof. Seungjin Kim (*Associate Professor, PSU*)
Dr. Elia Merzari (*Nuclear Engineer, ANL*)

SPONSORED BY



ANS THD



ANS Call For Papers