

American Nuclear Society 2002 Winter Meeting



"Building the World Nuclear Community - Strategies for the Deployment of New Nuclear Technologies"

Embedded Topical Meetings:

Eighth Emergency Preparedness & Response

Fifteenth Technology of Fusion Energy

Submission deadlines are different for the Embedded Topical Meetings. See page 4.

November 17-21, 2002 • Washington, D.C. • Omni Shoreham Hotel

CALL FOR PAPERS **Summary Deadline: June 21, 2002**

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Track Themes

1. Meeting Theme: "Building the World Nuclear Community - Strategies for the Deployment of New Nuclear Technologies"
Special Theme: "60th Anniversary of First Chain Reaction"
2. Nuclear Plant Systems, Operations, and New Construction
3. Environment, Safety, and Health
4. Nuclear Engineering Science
5. Life Extension and Decommissioning
6. Fuel Cycle, Materials, and Nonproliferation
7. Reactor Physics and Shielding
8. Nonpower, Medical, and Radiation Applications
9. Emerging Nuclear Technologies

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 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. Author is responsible 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. Use at least 450 words, excluding tables and figures.
2. Use no more than 900 words, including tables and figures.
3. Count tables and figures as 150 words each. Use no more than three tables or figures.
4. Limit title to ten words; limit listing authors to three or fewer if possible.
5. Exclude references from word count.

Format

1. Summaries must be submitted electronically in ASCII text, HTML, Word, WordPerfect, and/or PDF (Adobe Acrobat) format.
2. Use SI Units (with English units following in parentheses, if desired). Exceptions are made for eV and barns.
3. List references numerically at the end of the summary, and use numbers in the text, enclosed within brackets.
4. If using the ASCII text or HTML format, please include tables or figures in GIF or JPEG format. Also, please upload your original source document for use in the printed program, if available.

Page Charge

ANS charges \$135 per final printed page (prorated) in the TRANSACTIONS. Authors should be prepared to provide their purchase order numbers when submitting their summaries electronically.

Deadlines – NO EXCEPTIONS

Submission of Summaries: *May 1, 2002 – June 21, 2002*

Author Notification of Acceptance: *by July 31, 2002*

Revised Summaries Due: *No later than August 16, 2002*

Submit a Summary: www.ans.org/meetings/winter

Transactions Coordinator:

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ANS 2002 Winter Meeting - Session Titles for Contributed and Invited Sessions

(I) = Invited; (I/C) = Invited / Contributed Sessions
[] = Sponsoring / Cosponsoring Technical Divisions

Track 1: Meeting Theme: "Building the World Nuclear Community – Strategies for the Deployment of New Nuclear Technologies"

Track Leader: A. Scott Dam, scott_dam@jupitercorp.com

- 1a Meeting Theme Plenary (I)
- 1b Cosponsored Plenary – Emergency Preparedness (I)
- 1c President's Special Session – 60th Anniversary (I)
- 1d TPC Special Session – Nonproliferation (I)

Track 2: Nuclear Plant Systems, Operations, and New Construction

Track Leader: Robert Margolis, Robert_Margolis@dom.com

- 2a Human Factors: General [HFD]
- 2b New Interfaces for Human Computer Interaction [HFD]
- 2c Public Perceptions of Risk in Light of Current Events [HFD]
- 2d Intelligent Information Processing [HFD]
- 2e Knowledge Management [OPD] (I/C)
- 2f Managing the Engineering Workload [OPD] (I/C)
- 2g Global Climate Change: Potential Effects on Future Nuclear Power Plant Operations – Panel [OPD] (I/C)
- 2h Performance Monitoring: A Consistent and Meaningful Approach – Panel [OPD]
- 2i Control Room Habitability: Implementation of Industry and Regulatory Guidance [OPD, NISD] (I/C)
- 2j 9-11 Response: 1 Year Later – Panel [OPD] (I)
- 2k PWR Recirculation Issues [OPD]
- 2l Early Site Permits [OPD]

Track 3: Environment, Safety, and Health

Track Leader: Charles (Chip) Martin, charlesm@dnfsb.gov

- 3a Environmental Sciences: General [ESD]
- 3b Advances in Environmental Monitoring Techniques [ESD] (I/C)
- 3c Environmental Monitoring at Nuclear Facilities [ESD] (I/C)
- 3d Modeling the Transport of Radionuclides in the Environment [ESD] (I/C)
- 3e Environmental and Safety Aspects of Transportation of Radioactive Materials [ESD] (I/C)
- 3f Environmental and Safety Aspects of Spent Fuel Storage [ESD, FCWMD] (I/C)
- 3g Life Cycle Studies and Energy Payback Times of Energy Technologies [ESD] (I/C)
- 3h Environmental Impacts and External Costs of Various Energy Technologies [ESD] (I/C)
- 3i Environmental Aspects of the Production and Use of Nuclear-Derived Hydrogen [ESD] (I/C)
- 3j Data, Analysis, Operations for Nuclear Criticality Safety [NCSD]
- 3k Nuclear Criticality Safety Standards Forum – Panel [NCSD] (I)
- 3l Criticality Alarm System and Evacuation Zones [NCSD] (I/C)

- 3m Transitioning Criticality Controls to Prepare for Extended Shutdown or Decommissioning [NCSD] (I/C)
- 3n Burnup Credit for Storage and Transportation Systems [NCSD]
- 3o Reactor Safety: General [NISD]
- 3p Probabilistic Safety Assessment: General [NISD]
- 3q Nuclear Installations Safety: General [NISD]
- 3r Innovative Containment Concepts for Nuclear Power Plants [NISD] (I)
- 3s Risk Informing Part 70 [NISD] (I/C)
- 3t International Experience with Safety and Reliability of Sodium-Cooled Reactors [NISD] (I/C)
- 3u Options for Generating PuO₂ for the MOX Fuel Fabrication Facility [NISD] (I/C)
- 3v Media Communications on Nuclear Installation Safety Issues [NISD] (I/C)
- 3w "Risk Informing" 10 CFR Part 50: Options and Progress – Panel [NISD, OPD]
- 3x Emerging Topics in Nuclear Installation Safety Technology [NISD]

Track 4: Nuclear Engineering Science

Track Leader: Thomas K. Larson, tk1@inel.gov

- 4a Education and Training: General [ETD]
- 4b Training, Human Performance, and Workforce Development [ETD] (I/C)
- 4c Training Excellence Awards [ETD] (I)
- 4d Student Design Competition [ETD] (I)
- 4e Innovations in Nuclear Engineering Education, Training, and Distance Learning [ETD] (I/C)
- 4f ABET Accreditation: Constituency Perspectives on Process and Program Improvement – Panel [ETD, MCD] (I)
- 4g Mathematical Modeling: General [MCD]
- 4h Computational Methods: General [MCD]
- 4i Transport Methods: General [MCD, RPSD, RPD]
- 4j Roundtable on Current Issues in Computational Methods [MCD, RPD] (I)
- 4k Use of Particle Transport Methods in Medical Applications [MCD, RPSD] (I/C)
- 4l "New and Improved" Computational Tools for Nuclear Criticality Safety Analysis [NCSD, RPD]
- 4m Computational Fluid Dynamics and Heat Transfer [THD] (I/C)
- 4n General Two-Phase Flow [THD]
- 4o Thermal Hydraulics of Next Generation of Nuclear Reactors [THD]
- 4p Thermal Hydraulics Code Development/Applications [THD]
- 4q Neutronics Codes and Data for Accelerator Applications [AAD, MCD, RPD]

Track 5: Life Extension and Decommissioning

Track Leader: James Rang, jsrang@chartermi.net

- 5a Plant Life Extension and License Renewal: Global View [DDRD, OPD] (I/C)
- 5b License Renewal in the United States [OPD, DDRD] (I/C)
- 5c Reactor Aging Issues [OPD]
- 5d Materials Aging Research Sponsored by NEPO Program [MSTD]

ANS 2002 Winter Meeting - Session Titles for Contributed and Invited Sessions

- 5e DD&R: General [DDRD]
- 5f Saving a Few Hundred Million Dollars: What Nuclear Power Plant Operators Should Be Learning from Plants in Decommissioning – Panel [DDRD] (I)
- 5g Hot Topics and Emerging Issues – Panel [DDRD] (I)
- 5h License Termination Plan (LTP) Planning – Panel [DDRD] (I)
- 5i Decommissioning of Russian Nuclear Submarines [DDRD, FCWMD, NISD] (I)

Track 6: Fuel Cycle, Materials, and Nonproliferation

Track Leader: Mel Buckner, mel.buckner@srs.gov

- 6a Fuel Cycle and Waste Management: General [FCWMD]
- 6b Congressional Status of Yucca Mountain – Panel [FCWMD] (I)
- 6c Protecting Commercial Spent Nuclear Fuel: In Storage and Transportation [FCWMD] (I/C)
- 6d Materials Science and Technology: General [MSTD]
- 6e Materials for Fusion Energy Devices [MSTD]
- 6f Materials for Hydrogen Storage [MSTD] (I)
- 6g Materials Issues in Nuclear Fuel Recycling [MSTD, AAD]
- 6h Fuels for Transmutation [AAD, MSTD]
- 6i Irradiation Experiments for AAA Target/Blanket Development [AAD]
- 6j Student Research in Nuclear Materials Science and Technology – Poster [MSTD]
- 6k Nonproliferation Challenges for Nuclear Technologies in the 21st Century – Panel [SCNN, FCWMD] (I)
- 6l Nonproliferation Policy in the United States: Is It Current with Changing Times? – Panel [SCNN, FCWMD] (I)
- 6m Nonproliferation – Proliferation Resistance Assessment Methodology [SCNN, FCWMD] (I/C)
- 6n Perspectives on the Danger of Radiological Weapons [SCNN, FCWMD] (I/C)
- 6o Methods and Tools for Evaluating and Supervising Intrinsic Observability Attributes of Nuclear Energy Systems and Associated Operations [SCNN, FCWMD] (I/C)

Track 7: Reactor Physics and Shielding

Track Leader: David R. Anderson, danders3@ebmail.gdeb.com

- 7a Radiation Protection and Shielding: General [RPSD, MCD, NISD]
- 7b Radiation-Based Nondestructive Testing Techniques and Applications [RPSD, MCD] (I/C)
- 7c Radiation Sterilization [RPSD] (I/C)
- 7d Detection and Dose Assessment for Alpha Emitters [RPSD] (I/C)
- 7e Overview of Radiation Protection and Methodology on Research Reactors in Mexico [RPSD] (I)
- 7f Highlights of RPSD 2002 [RPSD] (I)
- 7g History and Current Development in Dose Conversion [RPSD] (I/C)
- 7h Pressure Vessel Embrittlement [RPSD, MCD]
- 7i Reactor Analysis Methods [RPD, AAD, MCD]
- 7j Reactor Physics Design, Validation, and Operating Experience: General [RPD]

- 7k Advances in Nuclear Fuel Management [RPD, FCWMD] (I/C)
- 7l ANS JBS Benchmarks and Related Efforts [RPD, MCD, RPSD] (I/C)
- 7m Reactor Physics: General [RPD]

Track 8: Nonpower, Medical, and Radiation Applications

Track Leader: William D. James, wd-james@tamu.edu

- 8a Nonpower Reactors: General [OPD]
- 8b External Regulation of Operating Department of Energy Nuclear Facilities – Panel [OPD] (I)
- 8c Biology and Medicine: General [BMD]
- 8d Nuclear Analytical Techniques [BMD, IRD] (I/C)
- 8e Nuclear Measurements in Air Quality Research [BMD, IRD] (I/C)
- 8f Quality Assurance in Nuclear Methods of Analysis [BMD, IRD] (I/C)
- 8g Low Level Uranium in the Biosphere [BMD, IRD] (I/C)
- 8h Health Effects of Low Level Radiation [BMD] (I/C)
- 8i Technologies for Safeguard Applications [BMD, IRD] (I/C)
- 8j Beneficial Uses of U-233 with Focus on Medical Uses [NISD] (I/C)
- 8k Medical Radiation Safety [RPSD] (I/C)
- 8l Radiation Treatment Planning [RPSD, MCD] (I/C)
- 8m Radon and Lung Cancer [RPSD] (I/C)
- 8n Isotopes and Radiation: General [IRD]
- 8o Research Reactors: Accomplishments and Challenges [IRD, BMD] (I/C)
- 8p Characterization of High-Tech Materials by Nuclear Techniques [IRD] (I/C)
- 8q Nuclear Data [IRD, BMD] (I/C)
- 8r Field Measurements of Radionuclides [IRD, BMD] (I/C)
- 8s The Spallation Neutron Source: R&D, Analysis, and Design [AAD]

Track 9: Emerging Nuclear Technologies

Track Leader: Buzz Savage, buzz_savage@jupitercorp.com

- 9a Generation IV Advanced Nuclear Energy Systems: U.S. Department of Energy Roadmap Update – Panel [OPD] (I)
- 9b Licensing Gas Cooled Reactors [OPD] (I)
- 9c Nuclear Energy Research Initiative: FY 2003 Program Direction – Panel [OPD] (I/C)
- 9d Safety Considerations in Design and Operation of New Accelerator Driven Facilities [NISD]
- 9e Reactor versus Accelerator Based Transmutation [RPD, AAD] (I/C)
- 9f Targetry for Secondary Beams [AAD]
- 9g Lead-Bismuth Target Technology [AAD]
- 9h Robotics and Remote Systems: General [RRSD]
- 9i General Space Technology Interests [ANST]
- 9j Current Proposed Program in Space [ANST]
- 9k Thermal-Fluid Physics of Space Nuclear Power Systems [ANST]
- 9l Space Nuclear Power and Propulsion: A Look to the Past, A Look to the Future [ANST]

Technical Divisions:

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Embedded Topical Meeting: Eighth Emergency Preparedness & Response

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Paper Deadlines

Submission of Summaries: *June 26, 2002*

Author Notification of Acceptance: *July 31, 2002*

Paper Deadlines (cont'd)

Submission of Papers for Review: *September 10, 2002*

Submission of Final Papers: *October 3, 2002*

About the Meeting

This meeting will focus on technical and programmatic challenges facing DOE, NRC, EPA, FEMA, DTRA, IAEA and the commercial nuclear power industry in the first decade of the 21st Century. The meeting will provide a forum for key issues in emergency planning, preparedness, response, and safeguards/security and the opportunity to share operational insights, lessons learned, and solutions to complex issues in the public and private sectors.

Online Submission of Abstracts

Please refer to www.ans.org/meetings for Call for Papers, topical areas, and submittal instructions. Authors should submit summaries with name, affiliation, address, phone, fax, and E-mail information online at www.ans.org/8epr.

Embedded Topical Meeting: Fifteenth Technology of Fusion Energy

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Paper Summary Deadline

Submission of 450-Word Summaries: *June 21, 2002*

Author Notification of Acceptance: *July 31, 2002*

About the Meeting

The 15th Technology of Fusion Energy topical meeting is accepting summaries covering a broad range of topics including fusion experiments, plasma heating and controls, fusion reactor designs, material performance, and safety and economics. See Call for Papers online at www.ans.org/meetings/winter/15fusion for complete list of sessions and paper submission information. Full papers will be published in Fusion Science and Technology.