ANS® Annual Meeting 2023

June 11–14, 2023 | Indianapolis, IN | Marriott Indianapolis Downtown

CALL FOR PAPERS

EXECUTIVE CHAIRS

Co-Program Chairs
Nicholas R. Brown (Univ. Tennessee)
Martin B. Sattison (INL, retired)

Assistant Program Chairs:
Benjamin R. Betzler (ORNL)
Cenk Guler (Westinghouse Electric)

SUMMARY DEADLINE: MONDAY, FEBRUARY 6, 2023

FEBRUARY → SUBMISSION OF SUMMARIES: **Monday, February 6, 2023**

FEBRUARY → AUTHOR NOTIFICATION OF ACCEPTANCE: **Monday, February 27, 2023**

MARCH → REVISED SUMMARIES DUE: **Monday, March 13, 2023**

GUIDELINES FOR SUMMARIES

Please submit summaries describing work that is new, significant, and relevant to the nuclear industry. ANS will publish all accepted and presented summaries in the TRANSACTIONS. Summaries are presented orally at the meeting, and presenters are expected to register for the meeting. Non–U.S. attendees requesting a Visa invitation letter: registrar@ans.org. Full papers based on summaries 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 before presentation at the ANS meeting. It is the author's responsibility to protect classified, export-controlled, or proprietary information. Submit your summary via the ANS Electronic Paper Submission and Review (EPSR) portal; see link below.

FORMAT AND LENGTH

1. Use the ANS Template and Guidelines for TRANSACTIONS Summary Preparation provided at ans.org/pubs/transactions. Summaries that are not based on the ANS template will be rejected.
2. Summaries must be submitted as Adobe Acrobat PDF documents.
3. The minimum length is one full page.
4. The maximum length is four pages, including references, tables, and figures. After you save your document as a PDF, verify that it is still four or fewer pages.
5. Limit title to ten words; limit listing authors to three or fewer if possible.
6. Do not use all capital letters for the title or any part of the authors' names. For the title of the summary, Capitalize the First Letter of Major Words. Author names should be First Name or Initial(s) followed by Last Name.
7. Do not use page numbers, headers, or footers.
8. Keep the bottom margin clear so there is space for the ANS-applied footer and page number.

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.
6. If acknowledgements are required (e.g., to the author's employer), it is the author's responsibility to include the acknowledgement in the summary as either an end-of-summary note or footnote. Please ensure such footnotes do not interfere with the bottom margin, and do not format acknowledgements as headers.

EXECUTIVE SESSIONS

Would you like to propose an Executive Session? If so, email the Program Specialist (contact information below). Executive Sessions take a broader look at developments in nuclear science and technology and their impact on policy and markets.

SUBMIT A SUMMARY
epsr.ans.org/meeting/?m=314

PROGRAM SPECIALIST
Janet Davis
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2023 ANNUAL MEETING: SESSION TITLES BY DIVISION (P) = Panel

1. **AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANSTD)**
   - 1a. Aerospace Nuclear Science and Technology: General
   - 1b. Space Nuclear Reactor Power Systems
   - 1c. Space Nuclear Propulsion Technologies

2. **DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (DESD)**
   - 2a. Commercial Decommissioning: Midwest/Eastern U.S. (P)
   - 2b. DOE Decommissioning: Midwest/Eastern U.S. (P)
   - 2c. Dealing with PFAS During Decommissioning (P)
   - 2d. Environmental Social Governance of Nuclear (P)
   - 2e. NEPA Environmental Reviews in the Nuclear Facility Life Cycle

3. **EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)**
   - 3a. Cutting-Edge Techniques in Education, Training, and Distance Education
   - 3b. Focus on Communications (P)
   - 3c. Training, Human Performance, and Workforce Development

4. **FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)**
   - 4a. Nuclear Fuel Cycle Topics of the US-UK Collaboration Agreement (P)
   - 4b. Status of the Rokkasho Reprocessing Plant in Japan (P)
   - 4c. Nuclear Waste or Valuable Product? (P)
   - 4d. Characterizing the Waste From Advanced Reactors (P)
   - 4e. Fuel Cycles and Technologies to Support Isotope Production for Space Power Applications
   - 4f. Nuclear Waste Management Strategies: State, Regional, and Private Approaches
   - 4g. Microreactor Fuel Cycles and Waste Management
   - 4h. Spent Fuel Transportation
   - 4i. Direct Disposal of Advanced Reactor Spent Nuclear Fuels
   - 4j. Fuel Cycle and Waste Management: General
   - 4k. Aging of Waste, Storage, and Transportation Systems
   - 4l. University Research in Fuel Cycle and Waste Management

5. **FUSION ENERGY (FED)**
   - 5a. Fusion: General

6. **HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)**
   - 6a. Recent Advances in Instrumentation and Controls
   - 6b. Recent Advances in Human Factors
   - 6c. 2023 NPIC&HMIT Preview (P)

7. **ISOTOPES AND RADIATION (IRD)**
   - 7a. Recent Advances in Wide Bandgap Semiconductor Irradiation: Characterization and Detector Development
   - 7b. Anatomy of a Novel Irradiation Test: Structure and Process of the DRIFT experiment in TREAT
   - 7c. Isotopes and Radiation: General

8. **MATERIALS SCIENCE AND TECHNOLOGY (MSTD)**
   - 8a. Fuel and Materials for Molten Salt Reactors
   - 8b. In-Pile Testing of Nuclear Fuels and Materials
   - 8c. Advanced Manufacturing/Additive Manufacturing
   - 8d. Sensors and In-Pile Instrumentation
   - 8e. Nuclear Science User Facilities
   - 8f. Accident Tolerant Fuels
   - 8g. Nuclear Fuels
   - 8h. Aging of Materials
   - 8i. Fuels and Materials for Fast Reactors
   - 8j. Irradiation Experiments for Nuclear Materials and Fuels Research
   - 8k. Actinide Science
   - 8l. Machine Learning and Artificial Intelligence Applications in Nuclear Materials

9. **MATHEMATICS AND COMPUTATION (MCD)**
   - 9a. Current Issues in Computational Methods – Roundtable (P)
   - 9b. Transport Methods
   - 9c. Computational Methods and Mathematical Modeling
   - 9d. Uncertainty Quantification, Sensitivity Analysis, and Machine Learning

10. **NUCLEAR CRITICALITY SAFETY (NCSD)**
    - 10a. Data, Analysis and Operations in Nuclear Criticality Safety
    - 10b. ANS 8 Standards Forum (P)
    - 10c. Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety (P)
    - 10d. ANS-8 Standards
    - 10e. Incorporating NCS into Design (P)
    - 10f. NCS Issues Related to HALEU

11. **NUCLEAR INSTALLATIONS SAFETY (NISD)**
    - 11a. Nuclear Installations Safety: General
    - 11b. Current Topics in Probabilistic Risk Analysis
    - 11c. Integrated Energy Systems Safety (P)
    - 11d. Emergent Topics for PRA Standards (P)

12. **OPERATIONS AND POWER (OPD)**
    - 12a. Operations and Power: General
    - 12b. Advanced Nuclear Reactors and Power Systems
    - 12c. Energy Storage Integration with Nuclear Power Plants
    - 12d. Hybrid and Integrated Energy Systems
    - 12e. Nuclear Energy Markets, Financing, and Economics
    - 12f. Excellence and Innovation in the Existing Fleet

13. **RADIATION PROTECTION AND SHIELDING (RPSD)**
    - 13a. Radiation Protection and Shielding: General
    - 13b. Computational Methods for Radiation Protection and Shielding
    - 13c. Highlights of ICRS 14/RPSD 2022
    - 13d. Retrospective Dosimetry
    - 13e. Machine Learning and Optimization in Radiation Protection

14. **REACTOR PHYSICS (RPD)**
    - 14a. Reactor Physics: General
    - 14b. Reactor Physics Design, Validation and Operational Experience
    - 14c. Reactor Physics of Advanced Reactors
    - 14d. Reactor Physics of Micro Reactors for Terrestrial and Space Applications
    - 14e. Advances in Reactor Design Methods
    - 14f. Research Reactors in Support of Advanced Reactors R&D
    - 14g. Early Career Reactor Physicist Award (P)
    - 14h. SCALE 6.3 Non-Light Water Reactor Analyses
    - 14i. SCALE 6.3 Extended Light Water Reactor Analyses
    - 14j. SCALE 6.3 General Reactor Analyses
    - 14k. Machine Learning and Artificial Intelligence in Reactor Physics and Design
    - 14l. Advances in Open-Source Software for Nuclear Reactor Analysis
    - 14m. Software Quality Assurance (NQA-1) Reactor Physics Safety Analysis and Design Codes (P)
    - 14n. Reactor Analysis Methods

15. **ROBOTICS AND REMOTE SYSTEMS (RRSD)**
    - 15a. Robotics and Remote Systems
    - 15b. Robotic Digital Twin for Nuclear and Energy Applications (P)

16. **THERMAL HYDRAULICS (THD)**
    - 16a. General Thermal Hydraulics
    - 16b. Experimental Thermal Hydraulics
    - 16c. Computational Thermal Hydraulics
    - 16d. Fundamentals of Two-Phase Flow
    - 16e. Advanced Reactor Thermal Hydraulics
    - 16f. High-Resolution Thermal Hydraulics
    - 16g. Recent Advances in Thermal Hydraulic Facilities, Capabilities and Activities
    - 16h. Thermal Hydraulics Needs, Challenges and Opportunities in the Advanced Reactor Demonstration Program (P)

2023 ANNUAL MEETING: TECHNICAL DIVISIONS

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