⊕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.

PAGE CHARGES

Summaries will incur a $50 per page publication fee.

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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