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. Summaries are presented orally at the meeting, and presenters are expected to register for the meeting. Non-U.S. attendees requesting a Visa or 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.

FORMAT

Authors are required to use the ANS Template and Guidelines for TRANSACTIONS Summary Preparation provided at ans.org/pubs/transactions. Summaries must be submitted electronically using original Adobe Acrobat PDF documents and the ANS Electronic Paper Submission and Review (EPSR) system. Summaries not based on the ANS template will be rejected.

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.

LENGTH AND PAGE CHARGES

1. The minimum length is one full page.
2. 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.
3. Summaries will incur a $50 per page publication fee.
4. Limit title to ten words; limit listing authors to three or fewer if possible.

EXECUTIVE SESSIONS

Have an idea for 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.
2022 WINTER MEETING: SESSION TITLES BY DIVISION

1. AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANSTD)
   1a. Aerospace Nuclear Science and Technology

2. DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (DESD)
   2a. Uranium Mine Reclamation
   2b. Future of Nuclear Maritime Propulsion
   2c. General Decommissioning
   2d. Climate Effects on the West (P)

3. EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)
   3a. Cutting Edge Techniques in Education, Training and Distance Education
   3b. Student Design Competition
   3c. Innovations in Nuclear Technology R&D Awards
   3d. Focus on Communications (P)
   3e. Research by U.S. DOE NEUP Sponsored Students
   3f. Training, Human Performance, and Workforce Development

4. FUSION ENERGY (FED)
   4a. Fusion: General

5. HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)
   5a. Recent Advances in Human Factors
   5b. Recent Advances in Instrumentation and Controls
   5c. Human Factors Evaluation of HMLs
   5d. Advances in Digital I&C
   5e. Sensors and Signal Processing
   5f. New Designs of HMLs and I&C
   5g. Situational Awareness and Operator Support
   5h. Automation and Autonomy
   5i. Cybersecurity for Nuclear Installations
   5j. Operational Considerations for New Reactor Designs
   5k. Future Concepts in HF and I&C

6. ISOTOPES AND RADIATION (IRD)
   6a. Safeguards Measurement Techniques for High Level Radioactive Waste
   6b. Isotopes and Radiation: General

7. MATERIALS SCIENCE AND TECHNOLOGY (MSTD)
   7a. Fuel and Materials for Molten Salt Reactors
   7b. In-Pile Testing of Nuclear Fuels and Materials
   7c. Advanced Manufacturing/Additive Manufacturing
   7d. Sensors and In-Pile Instrumentation
   7e. Nuclear Science User Facilities
   7f. Accident Tolerant Fuels
   7g. Nuclear Fuels
   7h. Aging of Materials
   7i. Fuels and Materials for Fast Reactors
   7j. Irradiation Experiments for Nuclear Materials and Fuels Research
   7k. Actinide Science
   7l. Machine Learning and Artificial Intelligence Applications in Nuclear Materials

8. MATHEMATICS AND COMPUTATION (MCD)
   8a. Transport Methods
   8b. Computational Methods and Mathematical Modeling
   8c. Uncertainty Quantification, Sensitivity Analysis, and Machine Learning
   8d. Current Issues in Computational Methods: Roundtable (P)

9. NUCLEAR CRITICALITY SAFETY (NCSD)
   9a. Recent Nuclear Criticality Safety Program Technical Accomplishments
   9b. Virtual Training: The Good, the Bad, and the Ugly (P)
   9c. Leadership and Oversight of Nuclear Criticality Safety Programs (P)
   9d. ANS 8 Standards Forum (P)
   9e. Critical and Subcritical Experiments
   9f. Data, Analysis and Operations in Nuclear Criticality Safety

10. NUCLEAR INSTALLATIONS SAFETY (NISD)
    10a. Current Topics in Probabilistic Risk Analysis
    10b. Nuclear Installations Safety: General
    10c. Realizing the Benefits of Risk-Informed and Performance-Based (RIPB) Approaches (P)
    10d. Safety of Hydrogen Production in Nuclear Power Installations: Early Insights from Analytical Studies and Demonstration Projects (P)

11. NUCLEAR NONPROLIFERATION POLICY (NNPD)
    11a. Safeguards and Security by Design for Advanced Reactors (P)
    11b. Prospects for Multinational and Bilateral Arms Talks (P)
    11c. Technology and Policy Advancements in Nuclear Nonproliferation

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. Modeling Nuclear Power Plant Market Deployments
    12f. Nuclear Historic Landmark Award and Walter Zinn Medal Special Session (P)
    12g. Repowering Retiring Coal with New Nuclear (P)
    12h. Progress in Advanced Reactor Demonstrations and Development (P)
    12i. Digital Twin for Advanced Nuclear (P)

13. RADIATION PROTECTION AND SHIELDING (RPSD)
    13a. Radiation Protection and Shielding: General
    13b. Computational Methods for Radiation Protection and Shielding
    13c. Million Person Study Results and Methods

14. REACTOR PHYSICS (RPD)
    14a. Reactor Physics: General
    14b. Reactor Analysis Methods
    14c. Reactor Physics Design, Validation and Operational Experience
    14d. Reactor Physics of Advanced Reactors
    14e. Reactor Physics of Micro Reactors for Terrestrial and Space Applications
    14f. Advances in Reactor Design Methods
    14g. Research Reactors in Support of Advanced Reactors (P)
    14h. Research Reactors in Support of Advanced Reactors R&D
    14i. Advances in Education in Criticality Evaluations and Reactor Physics (P)
    14j. Reactor Physics and Digital Twins
    14k. Large Modular Reactors: Practical Options to Achieve an Economical Grid Supply and a Sustainable Nuclear Power Industry (P)
    14l. Preliminary Design of the MARVEL Microreactor
    14m. Overview of the MARVEL Project (P)
    14n. Wigner Award Lecture (P)
    14o. NRC Virtual Test Bed (VTB)
    14p. Reactor Demonstration Updates in the Advanced Reactor Demonstration Program (ARDP) (P)
    14q. Challenges in Multiphysics Coupling of Radiation Transport Codes (P)
    14r. Methods to Determine Equilibrium Core Models of Pebble-Bed Reactors (P)

15. ROBOTICS AND REMOTE SYSTEMS (RRSD)
    15a. Robotic and Remote Systems: General

16. THERMAL HYDRAULICS (THD)
    16a. Computational Thermal Hydraulics
    16b. Experimental Thermal Hydraulics
    16c. Two-phase Flow and Heat Transfer Fundamentals
    16d. General Thermal Hydraulics
    16e. Computational Fluid Dynamics and Thermal Hydraulics of Microreactors
    16f. Thermal Hydraulics of Advanced Reactors
    16g. Machine Learning Applications for Thermal Hydraulics
    16h. Multiphase Thermal Hydraulics: Challenges in Computation and Experiment (P)
    16i. Experimental Facilities and Capabilities for Thermal Hydraulic Testing (P)
    16j. Thermal Hydraulics Issues in Licensing of Advanced Reactors (P)

2022 WINTER MEETING: TECHNICAL DIVISIONS

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