



ANS Annual Meeting

2020

Call For Papers

June 7-11, 2020
Arizona Grand Resort & Spa
Phoenix, AZ





ANS

2020 ANS Annual Meeting

June 7-11, 2020 | Phoenix, AZ, USA | Arizona Grand Resort & Spa

CALL FOR PAPERS

EXECUTIVE CHAIRS

Technical Program Chair

Kevin O'Kula, AECOM Technical Services

SUMMARY DEADLINE: FRIDAY, JANUARY 31, 2020

JANUARY	→	SUBMISSION OF SUMMARIES: Friday, January 31, 2020
FEBRUARY	→	SUBMISSION OF DESCRIPTION AND PANELISTS/SPEAKERS FOR PREVIEW PROGRAM: Monday, February 17, 2020
FEBRUARY	→	AUTHOR NOTIFICATION OF ACCEPTANCE: Monday, February 24, 2020
MARCH	→	REVISED SUMMARIES DUE: Wednesday, March 11, 2020
APRIL	→	ANY ADDITIONAL DESCRIPTIONS AND PANELISTS/SPEAKERS FOR OFFICIAL PROGRAM: Friday, April 17, 2020

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 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. Non U.S. attendees requesting a Visa or invitation letter: registar@ans.org. 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 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

ans.org/pubs/transactions

SUBMIT A SUMMARY

epsr.ans.org/meeting/?m=307

PROJECT COORDINATOR

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2020 ANNUAL MEETING: SESSION TITLES BY DIVISION (P) = Panel

1. ACCELERATOR APPLICATIONS (AAD)

- 1a. Accelerator Applications: General

2. AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANSTD)

- 2a. Aerospace Nuclear Science and Technology: General

3. BIOLOGY AND MEDICINE (BMD)

- 3a. Biology and Medicine: General

4. DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (DESD)

- 4a. General Topics in Decommissioning
- 4b. Uranium Mine Reclamation (P)
- 4c. Department of Energy Decommissioning and Environmental Remediation Activities (P)
- 4d. Community Advisory (P)
- 4e. Nuclear Energy's Role in Climate Change Policy (P)
- 4f. Work Force Development (P)

5. EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)

- 5a. Training, Human Performance and Workforce Development
- 5b. Cutting Edge Techniques in Education, Training and Distance Education
- 5c. Innovations in New Reactor Designs (e.g. SMRs, Advanced Reactors)
- 5d. Focus on Communications—I (P)
- 5e. Focus on Communications—II (P)
- 5f. Education and Training on Test, Research, and Training Reactor (TRTR) (P)
- 5g. Experiencing New Ways of Learning Nuclear Energy and Technology to Develop Adequate Capacity (P)

6. FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)

- 6a. Fuel Storage and Transportation for the Next Generation of Reactors (P)
- 6b. Storage and Transportation of Used Nuclear Fuel
- 6c. Impacts of the Change in the Definition of High-Level Waste (P)
- 6d. Fuel Cycle and Waste Management: General
- 6e. Material Detection and Analysis for Nuclear Fuel Cycle Applications
- 6f. Molten Salt Reactor Fuel Cycle Systems
- 6g. Ongoing Developments in the Treatment and Conditioning of Nuclear Waste Forms
- 6h. Chemical Technologies Supporting Advanced Molten Salt Reactor Systems
- 6i. Advancements in High-Level Radioactive Waste Management

7. FUSION ENERGY (FED)

- 7a. Fusion Energy: General

8. HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)

- 8a. Advanced Reactor Instrumentation
- 8b. Data Analytics for Nuclear Power
- 8c. Prognostics and Health Management
- 8d. Digital Instrumentation and Control
- 8e. Online Monitoring at Nuclear Power Facilities
- 8f. General Topics in Instrumentation and Control
- 8g. General Topics in Human Factors
- 8h. Cyber Security for Nuclear Power Installations
- 8i. Additive Manufacturing of Sensors and Instrumentation
- 8j. In-Pile Instrumentation

9. ISOTOPES AND RADIATION (IRD)

- 9a. Isotopes and Radiation: General

10. MATERIALS SCIENCE AND TECHNOLOGY (MSTD)

- 10a. In-Pile Testing of Nuclear Fuels and Materials
- 10b. Accelerated Materials Discovery
- 10c. Fuel Materials for Space Propulsion Reactors
- 10d. Advanced Manufacturing/Additive Manufacturing
- 10e. Post-Irradiation Examination
- 10f. Sensors and In-Pile Instrumentation
- 10g. Nuclear Science User Facilities
- 10h. Fuels and Materials for Molten Salt Reactors
- 10i. Accident Tolerant Fuels
- 10j. Nuclear Fuels
- 10k. Fuels and Materials for Molten Salt Reactors
- 10l. Plutonium Handbook
- 10m. Aging of Materials
- 10n. Versatile Test Reactor

11. MATHEMATICS AND COMPUTATION (MCD)

- 11a. Current Issues in Computational Methods—Roundtable (P)
- 11b. Transport Methods
- 11c. Computational Methods and Mathematical Modeling
- 11d. Uncertainty Quantification and Sensitivity Analysis

12. NUCLEAR CRITICALITY SAFETY (NCSD)

- 12a. Data, Analysis and Operations in Nuclear Criticality Safety
- 12b. Review of Recent CSSG Activities (P)
- 12c. Balancing Competition and National Needs in the Medical Isotopes Market (P)
- 12d. New Developments in Shipping Packages Related to Criticality Safety (P)
- 12e. Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety (P)
- 12f. ANS-8 Standards Forum

13. NUCLEAR INSTALLATIONS SAFETY (NISD)

- 13a. Safety, Security, and Licensing Challenges for Micro-Reactors
- 13b. Nuclear Installations Safety: General
- 13c. Current Topics in Probabilistic Risk Analysis
- 13d. Emergent Topics in Consensus Standards
- 13e. [Grand Challenge] Insights from Early Applications of the Licensing Modernization Process (P)

14. NUCLEAR NONPROLIFERATION POLICY (NNPD)

- 14a. International Safeguards and Verification
- 14b. Nuclear Nonproliferation Policy: General

15. OPERATIONS AND POWER (OPD)

- 15a. Operations and Power: General
- 15b. Advanced/Gen-IV Reactors
- 15c. Energy Storage Systems and Integration with NPPs
- 15d. Integrated Energy Systems
- 15e. Critical Heat Flux Experiments—Accident Tolerant Fuels (P)



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16. RADIATION PROTECTION AND SHIELDING (RPSD)

- 16a. Radiation Protection and Shielding: General
- 16b. Computational Methods for Radiation Protection and Shielding
- 16c. From CAD to Transport for Radiation Protection and Shielding Calculations
- 16d. Space Radiation Protection and Shielding

17. REACTOR PHYSICS (RPD)

- 17a. Current Issues in LWR Core Design and Reactor Engineering Support
- 17b. Versatile Test Reactor—Current Developments
- 17c. Advances in Reactor Design Methods
- 17d. Reactor Physics of Generation IV Advanced Reactors
- 17e. Reactor Physics of Micro Reactors for Terrestrial and Space Applications
- 17f. Reactor Physics Design, Validation and Operational Experience
- 17g. Reactor Analysis Methods
- 17h. Reactor Physics: General

18. ROBOTICS AND REMOTE SYSTEMS (RRSD)

- 18a. Robotics and Remote Systems: General

19. THERMAL HYDRAULICS (THD)

- 19a. Thermal Hydraulics Activities for the Versatile Test Reactor
- 19b. Thermal Hydraulics Challenges and Research Opportunities in Licensing Advanced Reactor Designs (P)
- 19c. Thermal Performance for Integrated Energy Systems: Design, Development and Deployment (P)
- 19d. Challenges and Opportunities in Thermal Hydraulics of High Temperature Gas Cooled Reactors (P)
- 19e. Experimental Thermal Hydraulics
- 19f. General Thermal Hydraulics
- 19g. Computational Thermal Hydraulics
- 19h. Two-Phase Flow and Heat Transfer Fundamentals
- 19i. Progress and Challenges in Thermal Hydraulics of MSRs
- 19j. Thermal Hydraulics of Nuclear Micro-Reactors

2020 ANNUAL MEETING: TECHNICAL DIVISIONS

ACCELERATOR APPLICATIONS (AAD)

Peter Hosemann, peterh@berkeley.edu

AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANST)

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BIOLOGY AND MEDICINE (BMD)

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EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)

Lisa Marshall, lisa.marshall@ncsu.edu

DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (ESD)

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FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)

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FUSION ENERGY (FED)

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HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)

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ISOTOPES AND RADIATION (IRD)

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