2019
Call For Papers
THE VALUE OF NUCLEAR

June 9-13, 2019
Minneapolis, MN, USA
Hyatt Regency Minneapolis
2019 ANS Annual Meeting
The Value of Nuclear
June 9-13, 2019  |  Minneapolis, MN, USA  |  Hyatt Regency Minneapolis

CALL FOR PAPERS

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SUMMARY DEADLINE: WEDNESDAY, JANUARY 30, 2019

JANUARY
SUBMISSION OF SUMMARIES: Wednesday, January 30, 2019

FEBRUARY
SUBMISSION OF DESCRIPTION AND PANELISTS/SPEAKERS
FOR PREVIEW PROGRAM: Monday, February 11, 2019

AUTHOR NOTIFICATION OF ACCEPTANCE: Monday, February 18, 2019

MARCH
REVISED SUMMARIES DUE: Monday, March 11, 2019

APRIL
ANY ADDITIONAL DESCRIPTIONS AND PANELISTS/SPEAKERS
FOR OFFICIAL PROGRAM: Wednesday, April 17, 2019

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 Adobe Acrobat (PDF) files or 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. 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
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SUBMIT A SUMMARY
ans.org/meetings

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2019 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. Closing the Nuclear Fuel Cycle (P)
   4c. License Transfers for Decommissioning (P)
   4d. First Steps of D&D. Lessons Learned from the Recent Wave of Plant Closures (P)
   4e. Water Technologies and Nuclear Power Update (P)
   4f. Overview of the Various Environmental Standards Projects (P)
   4g. Decommissioning Experience in the Midwest (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. ANS Nuclear Grand Challenges
   5d. Best of ANS Student Conference
   5e. Focus on Communications—I (P)
   5f. Focus on Communications—II (P)
   5g. Young Faculty Development (P)

6. FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)
   6a. Prospects for a Commercial High-Assay Low Enriched Uranium Supply to Support Advanced Reactors and Advanced LWR Fuel Applications (P)
   6b. Molten Salt Chemistry and Corrosion
   6c. Advances in Off-Gas Management of Fuel Cycle Operations
   6d. Back End of the Fuel Cycle for Enhanced Accident Tolerant Fuels (extended storage, transportation, disposal)
   6e. Advancement of On-Line Monitoring Systems for Operations in Nuclear Fuel Recycling Applications
   6f. Fuel Cycle and Waste Management: General
   6g. Recycle and Reuse of Used Nuclear Fuel Resources
   6h. University Research in Fuel Cycle and Waste Management
   6i. The WIPP—20th Anniversary (P)
   6j. Progress in Consolidated Interim Storage and Next Steps (P)
   6k. The Importance of Future Fuel Cycle Options in Addressing Growing Worldwide Energy Demand (P)
   6l. Challenges Associated with Material Transport into and Waste Removal from Hot Cell R&D Facilities Worldwide (P)

7. FUSION ENERGY (FED)
   7a. Best of 2018 TOFE
   7b. Fusion Energy Applications

8. HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)
   8a. Best of 11th NPIC-HMIT Conference
   8b. General Topics in Human Factors Engineering
   8c. General Topics in Instrumentation and Control

9. ISOTOPES AND RADIATION (IRD)
   9a. Isotopes and Radiation: General
   9b. Irradiation Experiment

10. MATERIALS SCIENCE AND TECHNOLOGY (MSTD)
    10a. Transient Fuel Performance
    10b. Advanced Manufacturing
    10c. Post-Irradiation Examination
    10d. Advanced Measurement Techniques
    10e. Nuclear Science User Facilities
    10f. Nuclear Fuels and Materials in Fast Reactors
    10g. Accident Tolerant Fuels
    10h. Nuclear Fuels
    10i. Fuels and Materials for Small Modular Reactors
    10j. Fuels and Materials for Molten Salt Reactors
    10k. Challenges and Opportunities with Accelerated Qualification of LWR ATF Cladding and Fuel Materials

11. MATHEMATICS AND COMPUTATION (MCD)
    11a. Current Issues in Computational Methods – Roundtable (P)
    11b. Transport Methods
    11c. Computational Methods
    11d. Mathematical Modeling
    11e. Uncertainty Quantification and Sensitivity Analysis

12. NUCLEAR CRITICALITY SAFETY (NCSD)
    12a. Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety (P)
    12b. ANS-8 Standards Forum (P)
    12c. Credible Accident Sequences in NCS (P)
    12d. Operational Reviews: How Facilities Meet ANSI/ANS-8.1 Section 4.1.6 (P)
    12e. Historical Experiments that Supported Nuclear Criticality Safety (P)
    12f. Rejuvenate Nuclear Technology Infrastructure and Facilities (P)
    12g. Real World Applications of Sensitivity/Uncertainty
    12h. Data, Analysis and Operations in Nuclear Criticality Safety

13. NUCLEAR INSTALLATIONS SAFETY (NISD)
    13b. Safety Aspects of Accident Tolerant Fuel Critical Heat Flux
    13c. Emerging Topics in Consensus Standards
    13d. Current Topics in Risk Analysis
    13e. Nuclear Installations Safety: General

14. NUCLEAR NONPROLIFERATION POLICY (NNPD)
    14a. The Domestic Conversion and Enrichment Enterprise–Past, Present, Future
    14b. Nuclear Nonproliferation Policy Division: General
### 2019 ANNUAL MEETING: SESSION TITLES BY DIVISION CONTINUED

(P) = Panel

#### 15. OPERATIONS AND POWER (OPD)
- 15a. Thermal Energy Storage Systems
- 15b. Advanced/Gen-IV Reactors
- 15c. Cyber Security (P)
- 15e. Advanced and Small Modular Reactors (ASMR): 3 Pathways for Deployment (P)

#### 16. RADIATION PROTECTION AND SHIELDING (RPSD)
- 16a. Highlights of RPSD-2018
- 16b. Computational Tools for Radiation Protection and Shielding
- 16c. Radiation Protection and Shielding: General
- 16d. Unstructured Mesh for Transport Analysis (P)

#### 17. REACTOR PHYSICS (RPD)
- 17a. Reactor Physics: General
- 17b. Reactor Analysis Methods
- 17c. Reactor Physics Design, Validation and Operational Experience
- 17d. Molten Salt Reactors
- 17e. The Nuclear Energy Advance Modeling and Simulation (NEAMS) Workbench
- 17f. Overview of the Versatile Test Reactor
- 17g. The Consortium for the Advanced Simulation of Light Water Reactors

#### 18. ROBOTICS AND REMOTE SYSTEMS (RRSD)

#### 19. THERMAL HYDRAULICS (THD)
- 19a. Severe Accident Thermal Hydraulics
- 19b. Large Eddy Simulation (LES) and Direct Numerical Simulation (DNS)
- 19c. Scaling Methodologies for SET and IET (P)
- 19d. Thermal Hydraulics of Accident-Tolerant Fuels
- 19e. Experiments on Two-Phase Flow and Heat Transfer Fundamentals
- 19f. Multiphase Computational Fluid Dynamics
- 19g. Data-Driven Modeling
- 19h. Thermal Hydraulics and Mass Transport in FHRs and MSRs
- 19i. Advances in Instrumentation for TH Experiments
- 19j. Computational Thermal Hydraulics
- 19k. Experimental Thermal Hydraulics
- 19l. General Thermal Hydraulics

### 2019 ANNUAL MEETING: TECHNICAL DIVISIONS

<table>
<thead>
<tr>
<th>Technical Division</th>
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