2021 ANS Annual Meeting

June 14-16, 2021 | Virtual Meeting

CALL FOR PAPERS

EXECUTIVE CHAIRS

Technical Program Chair

Nicholas Brown (University of Tennessee, Knoxville)

SUMMARY DEADLINE: FRIDAY, FEBRUARY 5, 2021

FEBRUARY → SUBMISSION OF SUMMARIES: **Friday, February 5, 2021**

FEBRUARY → AUTHOR NOTIFICATION OF ACCEPTANCE: **Thursday, February 25, 2021**

MARCH → REVISED SUMMARIES DUE: **Monday, March 15, 2021**

APRIL → OFFICIAL PROGRAM POSTED: **Friday, April 2, 2021**

INTRODUCING OUR NEW EXECUTIVE TRACK

New this year, a high-level Executive Track has been added to provide busy nuclear professionals a broader look at developments in nuclear science and technology and their impact on policy and markets. Proposals that address the latest advances in fusion, modeling and simulation, and waste are encouraged. Also of interest are presentations on policy, communications, K-12 outreach, diversity and inclusion, leadership and career development, strategic planning, and workforce issues. Inclusion of a summary is optional for Executive Track submittals. In lieu of a summary, you may upload a written proposal that provides a clear statement of the subject matter and an outline of your proposed presentation. Also provide relevant information about your own background. Proposals should be submitted in the Executive Track in the EPSR.

FORMAT

Authors are now REQUIRED to use the ANS Template and Guidelines for TRANSACTIONS Summary Preparation provided on the ANS Web site, ans.org/pubs/transactions. 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 during 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.

SUBMIT A SUMMARY

https://epsr.ans.org/meeting/?m=310

PROGRAM SPECIALIST

Janet Davis
708-579-8253
jdavis@ans.org

2021 ANS Annual Meeting

June 14-16, 2021 | Virtual Meeting

2021 ANNUAL MEETING: SESSION TITLES BY DIVISION (P) = Panel

1. AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANSTD)
   - 1a. Aerospace Nuclear Science and Technology: General
   - 1b. Advances in Nuclear Propulsion Technologies
   - 1c. Advances in Space Nuclear Reactor Power
2. DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (DESD)
   - 2a. Decommissioning Projects in the Northeast (P)
   - 2b. Environmental Remediation in the Northeast (P)
   - 2c. General Topics in Decommissioning and Environmental Science (P)
3. EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)
   - 3a. Cutting Edge Techniques in Education, Training and Distance Education
   - 3b. Training, Human Performance and Workforce Development
   - 3c. Focus on Communications I (P)
   - 3d. Focus on Communications II (P)
   - 3e. Young Nuclear Engineering Programs: New, Embedded or Hybrid
   - 3f. ANS Nuclear Grand Challenges I
   - 3g. ANS Grand Challenges II
4. FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)
   - 4a. Fuel Cycle and Waste Management: General
   - 4b. Advances in Actinide Separations
   - 4c. Research and Management of High-Level Radioactive Waste
   - 4d. Used Fuel Storage and Transportation
   - 4e. Fundamental Chemistry and Engineering Supporting Nuclear Waste Management
   - 4f. University Research in Fuel Cycle and Waste Management
   - 4g. Uranium Extraction, Purification, and Remediation
   - 4h. Experimental and Computational Molten Salt Chemistry
   - 4i. The Need for HALEU: Real or Pending (P)
   - 4j. Innovations for Ensuring Safe Extended Dry Storage (P)
   - 4k. Updates from the High Burnup Cask Demonstration Project (P)
   - 4l. Fuel Cycle Needs to Support Advanced and Small Reactors (P)
   - 4m. Closing the Fuel Cycle with Small Modular Reprocessing Facilities (P)
   - 4n. Creating Value from Waste: Recycling Valuable Isotopes for Non-Energy Applications (P)
5. ISOTOPES AND RADIATION (IRD)
   - 5a. Isotope and Radiation: General
   - 5b. The US Research and Test Reactor Fleet 2021-2040 - supporting advanced nuclear technology
6. MATERIALS SCIENCE AND TECHNOLOGY (MSTD)
   - 6a. Fuels and Materials for Molten Salt Reactors
   - 6b. In-Pile Testing of Nuclear Fuels and Materials
   - 6c. Accelerated Materials Discovery
   - 6d. Fuel Materials for Space Propulsion Reactors
   - 6e. Advanced Manufacturing/Additive Manufacturing
   - 6f. Post-Irradiation Examination
   - 6g. Sensors and In-Pile Instrumentation
   - 6h. Nuclear Science User Facilities
   - 6i. Accident Tolerant Fuels
   - 6j. Nuclear Fuels
   - 6k. Plutonium Handbook
   - 6l. Aging of Materials
   - 6m. Materials for Small Modular Reactors and Transformational Challenge Reactor
   - 6n. Fuels and Materials for Micro-reactor applications
7. MATHEMATICS AND COMPUTATION (MCD)
   - 7a. Current Issues in Computational Methods–Roundtable (P)
   - 7b. Transport Methods
   - 7c. Computational Methods and Mathematical Modeling
   - 7d. Uncertainty Quantification and Sensitivity Analysis
   - 7e. Advances in Machine Learning and Artificial Intelligence
8. NUCLEAR CRITICALITY SAFETY (NCSD)
   - 8a. Data, Analysis and Operations in Nuclear Criticality Safety
   - 8b. Sharing of Good Industry Practices and/or Lessons Learned in Nuclear Criticality Safety
   - 8c. An International Perspective on Nuclear Criticality Safety Standards (P)
   - 8d. OECD NEA Programs Related to Criticality Safety (P)
   - 8e. Advanced Session on Impact of Chemistry on Nuclear Criticality Safety Evaluations
   - 8f. NCS of Advanced Fuel Cycles, LEU+ (~8-10%) or HALEU (<20% Triso)
   - 8g. Fundamental physics of NCS
   - 8h. NCS Qualification at different sites
   - 8i. ANS-8 Standards Forum
9. NUCLEAR INSTALLATIONS SAFETY (NISD)
   - 9a. Technical Issues Faced in the Non-LWR PRA Standard Development (P)
   - 9b. Nuclear Installations Safety: General
   - 9c. Current Topics in Probabilistic Risk Analysis
   - 9d. Safety and Security Challenges for Micro-reactors
   - 9e. RIPB Approaches for Non-LWR External Hazards (P)
10. NUCLEAR NONPROLIFERATION POLICY (NNPD)
    - 10a. Technology and Policy Advancements in Nuclear Nonproliferation
    - 10b. International Safeguards and Treaty Verification
11. OPERATIONS AND POWER (OPD)
    - 11a. Operations and Power: General
    - 11b. Advanced Nuclear Reactors and Power Systems
    - 11c. Energy Storage Integration with Nuclear Power Plants
    - 11d. Hybrid and Integrated Energy Systems
12. RADIATION PROTECTION AND SHIELDING (RPSD)
    - 12a. Dosimetry and Shielding for Accelerator Facilities
    - 12b. Radiation Protection and Shielding General
    - 12c. Radiation Detection for Homeland Security
    - 12d. CAD-to-Transport for Radiation Protection and Shielding
    - 12e. Computational Methods in Radiation Protection and Shielding
    - 12f. Artificial Intelligence in Radiation Protection and Shielding
13. REACTOR PHYSICS (RPD)
    - 13a. Reactor Physics: General
    - 13b. Reactor Analysis Methods
    - 13c. Reactor Physics Design, Validation and Operational Experience
    - 13d. Reactor Physics of Micro Reactors for Terrestrial and Space Applications
    - 13e. Reactor Physics of Advanced Reactors
    - 13f. Advances in Reactor Design Methods
    - 13g. Versatile Test Reactor - Current Developments
    - 13h. Versatile Test Reactor - Current Developments (P)
    - 13i. Current Issues in LWR Core Design and Reactor Engineering Support
    - 13j. Transformational Challenge Reactor - Current Developments
    - 13. Transformational Challenge Reactor - Current Developments (P)
    - 13l. Calculations of Energy Deposition in Nuclear Reactors
    - 13m. Machine learning and Artificial Intelligence in reactor physics and design
    - 13n. Machine learning and Artificial Intelligence in reactor physics and design (P)
    - 13o. NuSTEM: Nuclear Science, Technology and Education for Molten Salt Reactors
    - 13p. NuSTEM: Nuclear Science, Technology and Education for Molten Salt Reactors (P)
    - 13q. Education in Criticality Evaluations and Reactor Physics (P)
14. ROBOTICS AND REMOTE SYSTEMS (RRSD)
    - 14a. Robotics and Remote Systems Development for the Nuclear Industry
15. THERMAL HYDRAULICS (THD)
    - 15a. Two-phase flow and heat transfer fundamentals
    - 15b. Computational Thermal Hydraulics
    - 15c. General Thermal hydraulics
    - 15d. Experimental Thermal Hydraulics
    - 15e. Thermal Hydraulics Research and Development in the Versatile Test Reactor
    - 15f. Challenges and Opportunities in Thermal Hydraulics of Load-Following Nuclear Systems (P)
    - 15g. Thermal-hydraulics research in ARPA-E programs (P)
    - 15h. Thermal-hydraulics for advanced reactors
    - 15i. Thermal-hydraulics research in TCR
    - 15j. Thermal Hydraulic R&D Activities in Printed-Circuit Steam Generators for Advanced Nuclear Reactors
    - 15k. Machine Learning for nuclear thermal-hydraulics

2021 ANNUAL MEETING: TECHNICAL DIVISIONS

AEROSPACE NUCLEAR SCIENCE AND TECHNOLOGY (ANST)
Jeffrey King, kingjc@mines.edu

DECOMMISSIONING AND ENVIRONMENTAL SCIENCES (DESD)
James Byrne, jbyrne4424@comcast.net

EDUCATION, TRAINING, AND WORKFORCE DEVELOPMENT (ETWDD)
Lisa Marshall, lisamarshall@yahoo.com

FUEL CYCLE AND WASTE MANAGEMENT (FCWMD)
Christina Leggett, Christina.Leggett@nrc.gov

HUMAN FACTORS, INSTRUMENTATION, AND CONTROLS (HFICD)
Jamie Coble, jcoble1@utk.edu

ISOTOPES AND RADIATION (IRD)
Kenan Unlu, K-unlu@psu.edu
Igor Jovanovic, ijov@umich.edu

MATERIALS SCIENCE AND TECHNOLOGY (MSTD)
Kenneth Geelhood, Kenneth.Geelhood@pnl.gov

MATHEMATICS AND COMPUTATION (MCD)
Brian Kiedrowski, bckiedro@umich.edu

NUCLEAR CRITICALITY SAFETY (NCSD)
Vladimir Sobes, sobesv@utk.edu

NUCLEAR INSTALLATIONS SAFETY (NISD)
Andrew Clark, ajclark@sandia.gov
Askin Guler Yigitoglu, yigitoglua@ornl.gov

NUCLEAR NONPROLIFERATION POLICY (NNPD)
Stefani Buster, srbuster@ncsu.edu
Jim Behrens, jwbehrens@comcast.net

OPERATIONS AND POWER (OPD)
W. Neal Mann, nealmann@utexas.edu

RADIATION PROTECTION AND SHIELDING (RPSD)
Michael Fensin, mfensin@lanl.gov

REACTOR PHYSICS (RPD)
Pavel Tsvetkov, Tsvetkov@tamu.edu

ROBOTICS AND REMOTE SYSTEMS (RRSD)
Irina Popova, popvai@ornl.gov

THERMAL HYDRAULICS (THD)
Igor Bolotnov, igor_bolotnov@ncsu.edu

YOUNG MEMBERS GROUP (YMG)
Timothy Crook, timothy.m.crook@gmail.com
Matt Wargon, mdwargon@gmail.com