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.

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.
2021 ANNUAL MEETING: SESSION TITLES BY DIVISION

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 (DESĐ)
   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 (ETWD)
   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 (I) (P)
   3e. Young Nuclear Engineering Programs: New, Embedded or Hybrid
   3f. ANS 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 (NCSĐ)
   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 Topics 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 (NISĐ)
   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 SHIELING (RPSĐ)
    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. Computer Methods in Radiation Protection and Shielding
    12f. Artificial Intelligence in Radiation Protection and Shielding

13. REACTOR PHYSICS (RPĐ)
    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. Advancements 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
    13k. 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)

15. THERMAL HYDRAULICS (THĐ)
    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-hydraulics R&D Activities in Steam Generators for Advanced Nuclear Reactors
    15k. Machine Learning for nuclear thermal-hydraulics

2021 ANNUAL MEETING: TECHNICAL DIVISIONS

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