

ANS CALL FOR PAPERS

ANS Student Conference 2025

Old and Nu

April 3–5, 2025 | Albuquerque, NM | The University of New Mexico

OFFICIALS

General Chair
Ethan Krammer

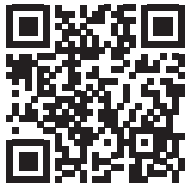
Technical Chair
Ashley Machado

General Conference Email: ans25stuco@unm.edu



SUBMIT A SUMMARY

epsr.ans.org/meeting/?m=443



PROGRAM SPECIALIST

Janet Davis
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IMPORTANT DEADLINES

**SUBMISSION OF
SUMMARIES**
JANUARY 17, 2025

**REVIEWS COMPLETED AND AUTHORS
NOTIFIED WITH REVISION REQUESTS**
FEBRUARY 14, 2025

**FINAL SUMMARIES WITH
REVISIONS DUE**
FEBRUARY 21, 2025

FORMAT

Submissions, including research, internship projects, senior design projects, and nuclear-policy analysis, are invited. Authors are required to use the ANS template provided at <https://www.ans.org/pubs/transactions/>.

SUBMISSION

To be considered for a presentation or poster session, students must submit a 1–4-page summary following the ANS template listed above.

Poster and presentation slots are limited. Accepted summaries will be scheduled for a podium or poster presentation at the discretion of the technical program committee. If your submission is based on work completed during an individual or group senior design project, please select a session with the “Senior Design Project” identifier. Each track (see p. 2) includes a Senior Design Project session.

Summary acceptance will be based on the quality of work, clarity and conciseness, and impact. Submissions that do not follow the template will be rejected.

TRACKS

COMPUTATIONAL METHODS, ARTIFICIAL INTELLIGENCE, AND MACHINE LEARNING

The Computational Methods, Artificial Intelligence, and Machine Learning track invites work involving computational methods in the nuclear field. Work may include the use of artificial intelligence and machine learning as they pertain to nuclear uses.

FUEL CYCLES, WASTE MANAGEMENT, AND DECOMMISSIONING

The Fuel Cycles, Waste Management, and Decommissioning track invites work on the lifetime of nuclear fuel, from fabrication and in-core management to recycling and disposal, including high-level, low-level, and mixed wastes. Work may also relate to decontamination, decommissioning, and environmental restoration of former nuclear sites.

FUSION AND PLASMA PHYSICS

The Fusion and Plasma Physics track invites work in fusion energy and plasma physics. Topics also include plasma-material interactions, plasma diagnostics, semiconductor fabrication, and plasma chemistry.

INSTRUMENTATION, CONTROL SYSTEMS, AND CYBER SECURITY

The Instrumentation, Control Systems, and Cybersecurity track invites work that contributes to human interfaces with nuclear systems, instrumentation and control of nuclear systems, and security of plant information.

ISOTOPE PRODUCTION

The Isotope Production track invites work in nuclear science and engineering technologies involving isotopes, radiation applications, and associated equipment in scientific research, development, and industrial processes.

NONPROLIFERATION, SECURITY, AND SAFEGUARDS

The Nonproliferation, Security, and Safeguards track invites work in security and safeguards for the peaceful use of nuclear technology and

materials. Topics include physical protection, vulnerability assessment, human reliability, insider threats, radiological security, nuclear and radiological terrorism, nuclear forensics, international trade and export controls, and nuclear material accounting and control. Work may also include policy and legal considerations for nuclear security and safeguards.

NUCLEAR CRITICALITY SAFETY

The Nuclear Criticality Safety track invites work on the practice of ensuring that fissile material operations outside of reactors are performed safely, including operational criticality safety, human factors, nuclear data, cross section measurement, critical and subcritical experimentation, and radiation transport codes.

NUCLEAR EDUCATION AND ADVOCACY

The Nuclear Education and Advocacy track invites work on education of nuclear topics to all audiences. Work may focus on strategies to strengthen the nuclear workforce through training and professional development or communication with the public and decision-makers about nuclear issues.

NUCLEAR FUELS AND MATERIALS

The Nuclear Fuels and Materials track invites work that intersects material science and nuclear technology development. This includes reactor materials such as fuel, cladding, and coolant in conventional reactors as well as development of fuels in advanced reactors and materials appropriate for enabling advancement in fission and fusion technology.

NUCLEAR TECHNOLOGY IN SOCIETY AND POLICY

The Nuclear Technology in Society and Policy track invites work focused on the presence and advancement of nuclear technology within society and policy.

POWER REACTOR OPERATIONS, SAFETY, AND RELIABILITY

The Power Reactor Operations, Safety, and Reliability track invites work on improving the longevity and safety of construction and operational nuclear sites with efficient

technology, processes, and procedures. Work may also include technologies and techniques applicable to the construction of nuclear reactors such as additive manufacturing.

RADIATION DETECTION AND IMAGING

The Radiation Detection and Imaging track invites work in advancements of detector technology and radiation imaging techniques.

RADIATION PROTECTION AND MEDICAL PHYSICS

The Radiation Protection and Medical Physics track invites work related to the radiological sciences for the safe use and implementation of nuclear sources in and beyond medical physics.

REACTOR PHYSICS

The Reactor Physics track invites work in nuclear data, particle interactions and transport, reactor and nuclear systems analysis, methods, design, validation, and operating experience and standards.

SPACE NUCLEAR POWER AND PROPULSION

The Space Nuclear Power and Propulsion track invites work in advancements of nuclear applications for space use.

THERMAL HYDRAULICS

The Thermal Hydraulics track invites work that advances the fields of thermal and hydraulic phenomena as they relate to nuclear energy.

OFFICE OF NUCLEAR ENERGY FUNDED RESEARCH (NEUP AND UNLP PROGRAMS)

The Office of Nuclear Energy Funded Research track invites work from students performing research supported by the Office of Nuclear Energy University Program and/or a University Nuclear Leadership Program award. Any research topic supported under the NEUP and UNLP programs can be submitted, and track sessions will be organized to bring together students working in similar research areas. Students should identify their advising professor and the DOE award number or NEUP tracking ID number of the project being supported as part of their submission.

Many tracks are closely aligned with ANS division goals and therefore descriptions can be accredited to the corresponding division.