



Advanced Reactor Safety (ARS 2024)

EMBEDDED IN THE ANS ANNUAL CONFERENCE

June 16-19, 2024 | Las Vegas, NV, USA | Mandalay Bay Resort And Casino

CALL FOR PAPERS

EXECUTIVE CHAIRS

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Aslak Stubsgaard (Copenhagen Atomics)

Technical Program Chair

Matthew Denman (Kairos Power)

Publications Chair

Mihai A. Diaconeasa (North Carolina State University)

ABSTRACT DEADLINE: MONDAY, OCTOBER 16, 2023

OCTOBER	→	ABSTRACTS SUBMISSION: October 16, 2023
NOVEMBER	→	ABSTRACT REVIEW NOTIFICATION: November 8, 2023
JANUARY	→	FULL PAPERS SUBMISSION: January 19, 2024
FEBRUARY	→	FULL PAPER REVIEW ACCEPTANCE NOTIFICATION: February 16, 2024
MARCH	→	FINAL CAMERA-READY PAPERS SUBMISSION: March 11, 2024.

MEETING DESCRIPTION

The recent acceleration in advanced reactor licensing efforts, both for non-light water designs (e.g., Aurora, Hermes, Natrium, Xe-100, eVinci) and for light water designs (e.g., NuScale, BWRX-300, SMR-160), will naturally result in new and interesting safety-related research. This conference provides the advanced nuclear industry a venue to share their safety approaches and research.

The Advanced Reactor Safety (ARS) conference, formerly entitled the *International Topical Meeting on Advanced Reactor Safety* and first held in 1994, is one of two conferences the Nuclear Installations Safety Division (NISD) has historically sponsored to support information sharing and networking across the safety community. ARS 2024 will be of interest to those working in both deterministic and probabilistic safety approaches for various applications. The meeting welcomes the submission of full-length technical papers, which will be peer reviewed and published as conference proceedings.

Detailed information and announcements regarding the conference will be posted on [the ARS 2024 meeting page](#).

ABSTRACT GUIDELINES

Maximum of one page identifying title, authors, affiliations, and two to three paragraphs (total fewer than 400 words) describing the key concepts of the paper. A wide range of topic areas are highlighted in the next page of this call. The abstract template is on the [ARS 2024 meeting page](#).

FULL PAPER SUBMISSION

Full papers must describe work that is new, significant, and relevant to safety-related research for advanced reactors. The full-paper submissions should be 7-10 pages. Papers exceeding 10 pages will be rejected unless an exception is granted. For papers exceeding 10 pages, page charges are \$100/page for p. 11 and above.

Authors of accepted papers must agree to register and attend the conference and present their papers. Papers that are not presented in person at the conference will not appear in the final conference publication. The full paper template is on the [ARS 2024 meeting page](#).

Selected papers will be invited to submit extended manuscripts for publication as a special issue in *Nuclear Technology*.

SUBMIT AN ABSTRACT

<https://epsr.ans.org/meeting/?m=383>

PROGRAM SPECIALIST

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TECHNICAL PROGRAM COMMITTEE

Alan Macdonald	David Luxat	Matthew Bucknor	Robert Youngblood
Aslak Stubsgaard	David Wootan	Matthew Denman	Travis Chapman
Bruce McDowell	Jong Chang	Mihai Diaconeasa	
Dave Grabaskas	Koroush Shirvan	Nicole LaHaye	

SUGGESTED TOPICS AND CATEGORIES

T1: TREATMENT OF PASSIVE AND INHERENT SAFETY FEATURES

- 1a. Levels of Defense-in-Depth
- 1b. Modeling of Passive Systems and Inherent Safety
- 1c. Space, Remote, or Small Reactors

T2: DETERMINISTIC SAFETY ANALYSIS

- 2a. Design Basis T/H Analysis
- 2b. Design Basis Source Terms
- 2c. Normal Effluents
- 2d. Tools, Methods, and Validations

T3: PROBABILISTIC RISK ASSESSMENT

- 3a. Tools, Methods, and Validations
- 3b. Reliability Databases
- 3c. Unique Internal and External Hazards
- 3d. PRA Source Terms

T4: THE LICENSING NEXUS: PROVING “SAFE ENOUGH” AND “SECURE ENOUGH”

- 4a. Risk-Informed and Performance-Based Approaches
- 4b. Meshing of the Deterministic and Probabilistic Safety Case
- 4c. Developing an Affirmative Safety Case
- 4d. Safety Informed Cyber and Physical Security
- 4e. Principal Design Criteria (e.g., SARRDLs/SAFDLs)

T5: ADVANCED FUEL CYCLE SAFETY

- 5a. Reprocessing
- 5b. Fuel Fabrication and Synthesis
- 5c. Management of both HLW and LLW

T6: DESIGN ASSURANCE

- 6a. Scaled Safety Testing
- 6b. Equipment Qualification Efforts
- 6c. Quality Assurance Considerations

Note: The topics listed above are not session titles; they are provided just as a guide. The ARS 2024 Technical Program Committee will be happy to expand the areas and include new sessions into the program. Please contact the Publications Chair, Mihai A. Diaconeasa, at madiacon@ncsu.edu to discuss new and alternative concepts.

