



# CARD 2023

Conference for Advanced  
Reactor Deployment

February 22-24, 2023

Annenberg Presidential  
Conference Center  
College Station, TX

# CALL FOR PAPERS

**Draft Technical Paper Submission Deadline: October 12, 2022**

The ASME Conference on Advanced Reactor Deployment (CARD) will embrace in-depth discussions on the design, development, and manufacturing of a wide range of advanced reactor technologies. In addition to continued regulatory modernization, the rapid deployment of new reactors will require leveraging advances in manufacturing, codes and standards, and new technologies like digital twins. **ASME CARD** looks to discuss the current status of these topics and needed next steps to enable the deployment of new reactor technologies, by bringing together a diverse set of international participants.

## Topics include:

### Modularization and Advanced Manufacturing

The fundamentally different approach to manufacturing Small Modular Reactors / Advanced Reactors will challenge both nuclear suppliers as well as regulators. In order for new nuclear reactors to scale at the pace necessary, improvements in construction approaches and techniques – many of which are already used in other industries – will be needed.

### Advanced Reactor Research

Timely advancements through research, development, and demonstration (RD&D) activities in collaboration with government, industry and international partners underpin the accelerated path required for advanced reactors. Ongoing activities at national laboratories and facilities for civil and academic nuclear RD&D are focused on improving economic competitiveness and reducing the technical and regulatory uncertainties for deploying new nuclear reactor technologies.

### Code Development and Harmonization

The rapid deployment of advanced reactors will require a change towards the international standardization of reactor designs and the harmonization of approaches to licensing, codes, and standards.

### Digital Twins

Digital twins, beginning in the pre-development stage, will offer new advantages for the nuclear industry, including design, construction, operation, and even safety. It's the beginning of an entirely new, very modern way to think about nuclear operations.

### Reactor Technologies

A wide variety of advanced reactor designs are being developed internationally. Advanced reactors will have simpler designs, be inherently and/or passively safe, and have an expected reduction in costs. Panel, technical paper and round table session discussions will focus on the various technologies and the challenges they are encountering, along with their timings for deployment.

### Regulatory Modernization

New reactor technologies approach safety in different ways, and it is important that the regulatory framework for these new designs can accommodate these different approaches while ensuring safety.

**If you have any questions on the CARD submission process, please email: [toolboxhelp.asme.org](mailto:toolboxhelp.asme.org)**

For technical publication submissions, authors should submit their draft paper by **October 12, 2022**

\*Journal quality papers may be considered for inclusion in the *ASME Journal of Nuclear Engineering and Radiation Science* special edition on Advanced Reactors, "Progress in Advanced Reactors".