

International Workshop on **Dynamic Probabilistic Safety Assessment (DPSA) and its Role In Risk-Informed Decision-Making**

Rockville, MD, USA, 16 - 17 November 2023



Hosted by the United States Nuclear Regulatory Commission (NRC)

Key Dates

30 June 2023

17 July 2023

27 October 2023

27 October 2023

16 - 17 November 2023

Deadline for Abstract Submission

Notification to Authors

Deadline for Attendance Registration

Deadline for Presentation Submission

Workshop

General Information

This is the announcement and call for presentations for the *International Workshop on Dynamic PSA and Its Role in Risk-informed Decision-making* being organized under the auspices of the OECD Nuclear Energy Agency (NEA) Committee on the Safety of Nuclear Installation (CSNI) Working Group on Risk Assessment (WGRISK). The Workshop will be

hosted by the United States Nuclear Regulatory Commission (U.S. NRC) in Rockville, MD, USA), November 16 - 17, 2023.

Working under the mandate of the CSNI, the main objectives of WGRISK are to maintain, assess, and advance the technical and scientific knowledge base of PSA methods, tools, data, and analysis practices; to strengthen the interfaces between PSA and the disciplines from which PSA draws; and to facilitate the use of risk assessment results in decision-making and in safety management programs.

Background

Dynamic methodologies for probabilistic safety and risk assessment, continue to advance steadily. Several (primarily research-oriented) case studies have been published, demonstrating the additional capabilities and insights that dynamic PSA approaches can deliver, while advances in computational power and methods allow problems of increasing scale to be tackled.

Recognizing that both technical and organizational obstacles to the practical deployment of dynamic PSA remain, the WGRISK initiated a task entitled *Dynamic PSA Methods – Preparing for the Future* to assess the potential role of currently available and emerging DPSA tools and methodologies in risk-informed decision-making, to identify the practical challenges for their application to support such decisions, and to evaluate the outlook for overcoming these challenges. This workshop for the presentation and discussion of *dynamic PSA methods and their role in risk-informed decision-making* is at the center of the second phase of this task, following a survey questionnaire on the topic. This electronic leaflet is the Workshop Announcement.

Workshop Objectives

The objectives of the workshop are to provide a forum to exchange information on the current and potential application of DPSA methods in risk-informed decision-making and on the state of the available and emerging tools and methodologies. The participants will also discuss the principal technical and organizational obstacles to the practical deployment of dynamic PSA and the outlook for overcoming these. The perspectives of practitioners, decision-makers, and other nuclear safety professionals with expertise in established (classical) PSA methods as well as those of dynamic PSA specialists will enrich the workshop.

Suggested topics

Participants are invited to present contributions on topics such as:

- Identification of risk-informed decision-making cases (scenarios, nuclear safety issues, etc.) where the application of dynamic PSA may provide improved or additional insights to support a decision;
- Experiences with the application of dynamic PSA approaches and the use of their results by decision-makers;
- Integration/implementation of results from dynamic PSA in risk-informed decision-making;

- Current safety issues and risk management decisions where traditional (non-dynamic) PSA approaches have potential shortcomings;
- Technical challenges to the practical deployment of dynamic PSA and the outlook for addressing these, e.g., coverage of rare events, human factor-related models, computational issues, methods to identify important insights from the vast amounts of data produced by dynamic PSA simulations;
- Organizational challenges related to the application of dynamic PSA methods and the use of their results in risk-informed decision-making

The Workshop will consider all scopes of PSA for nuclear power plants and other nuclear installations, the associated safety issues and the diverse decisions made by stakeholders including licensees and regulatory bodies. The dynamic PSA decision-making cases to be identified may be defined for any of these scopes or parts thereof, including Level 1/2/3 PSA, any plant operational modes, internal events, internal and external hazards, as well as diverse specific concerns such as spent fuel pools, equipment recovery, portable equipment deployment, accident management, and site-level risk.

Format

The Workshop will include plenary and technical sessions in addition to a facilitated wrap-up session. Active participation of the workshop attendees in the discussions as well as in the formulation of conclusions and recommendations will be highly appreciated. Information obtained as a result of the Workshop will provide a better understanding and improved interpretation of subjects, topics, and issues related to the use of dynamic PSA in risk-informed decision-making for nuclear installations.

A WGRISK report (Workshop Proceedings with summarized results and conclusions, as well as recommendations for follow-on activities) will be prepared on the basis of the information presented and discussed during the Workshop.

The Workshop will be an in-person event only; no virtual participation is foreseen.

Participation in the Workshop and Logistics

Participants

The organizers kindly invite experts from industry, regulatory authorities, technical support organizations (TSOs) and research institutes, safety analysis practitioners and consultants involved in the probabilistic safety assessment of nuclear installations or the associated decision-making from the OECD member countries, the NEA member countries, and NEA strategic partners, invitees, and partner international organizations to contribute and participate.

Registration

Registration is required for all participants. To support effective planning, please register early, but at latest by the deadline **27th October 2023**. Please register using the **Registration Form** on the [WS event page](#).

Presentations

Participants intending to present a contribution related to the workshop topics are requested to submit an abstract (between 300 and 500 words) that provides a brief overview of the content of their proposed presentation. All abstracts should be submitted by 30st June 2023; see the submission form on the [DPSA WS event page](#). The Organizing Committee will review abstracts and notify the authors by 17th July 2023 on the acceptance of the presentations.

Presenters will be asked to upload their presentations prior to the workshop – instructions will be available at the event website.

Registration Fee

The Workshop is free of charge for all participants. Accommodation and travel will not be provided and must be organised by the participants.

Language

All presentations and discussions will be in English; translation will not be provided.

Workshop Location

The Workshop will be hosted by the U.S. NRC at its Headquarters in Rockville, MD, USA. Rockville is in the Washington DC metropolitan area and the venue is easily accessible by public transport.

Venue Address:

U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852
USA

For **practical travel information** (how to get there, accommodation options); see the [DPSA WS event page](#).

Workshop Contacts

NEA Secretariat:

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Workshop Organizing Committee

Michelle GONZALEZ (Chair)	U.S. NRC	USA
Tanja ERAERDS (Co-Chair)	GRS	Germany
Vinh DANG	PSI	Switzerland
Mehdi Reisi Fard	U.S. NRC	USA
Yuji KUMAGAI (NEA)	OECD NEA	France

Key Dates and Deadlines

Deadline for Abstract Submission	<i>June 30, 2023</i>
Notification of Accepted Presentations	<i>July 17, 2023</i>
Deadline for Attendance Registration	<i>October 27, 2023</i>
Deadline for Presentation Submission	<i>October 27, 2023</i>
The workshop	<i>November 16-17, 2023</i>

Please refer to the Dynamic PSA [WS event page](#) for

- Guidelines for the abstracts and instructions for their submission
- How to register and practical information for participants

and the latest information and updates on the workshop.

Workshop Proceedings

The Task Report from the Workshop will be published by the OECD NEA and will include objectives and important comments provided during the Workshop, all Workshop presentations, summaries, conclusions and recommendations made during the discussions, concluding remarks as well as new or emerging areas of interest identified in the final closing session. A specific part of the report will be dedicated to the discussion of experiences.