



Technical Meeting on Advances and Innovations in Fast Reactor Design and Technology

IAEA Headquarters, Vienna, Austria
M-Building, M02

29 September – 2 October 2025

Ref. No.: EVT2103425

Information Sheet

Introduction

The International Atomic Energy Agency is organizing a Technical Meeting on Advances and Innovations in Fast Reactor Design and Technology to bring together developers, designers, vendors, and the broader world fast reactor community. Recent years have seen significant advancements in fast reactor technology, leading to the development of various new reactor designs. Taking these developments into consideration, and to identify gaps and needs, the Technical Working Group on Fast Reactors (TWG-FR) recommended a Technical Meeting on this topic. This event will review the current status, international progress, and recent innovations in the field of fast reactor design and technology. It will also address Member States' expressed need for information exchange on projects and programmes in the field, as well as for the identification of priorities based on the analysis of technology gaps to be covered through research and development (R&D) activities at the international level under the IAEA's aegis.

Participants of the Technical Meeting on Advances and Innovations in Fast Reactor Design and Technology will be invited to submit an extended abstract of their achievements and innovations in the field and also provide contributions to the IAEA Advanced Reactor Information System (ARIS), providing information on new reactor designs or updates to existing reactor design projects.

Objectives

The purpose of the event is to review the status of fast reactor technology, to present advancements in reactor designs and related scientific and technological aspects, and to provide a forum for active discussions and the sharing of new ideas among participants from different countries and organizations.

The main objectives of the meeting are to:

- Discuss experiences and the latest innovations and technological challenges related to fast reactors designs;
- Promote and facilitate the exchange of information on fast reactors design advances at the national and international levels;
- Present and discuss the current status of R&D in this field;
- Discuss and identify R&D needs and gaps to assess the future requirements in the field, which should eventually lead to efforts being concentrated in the key lacking areas;
- Enable the integration of research on fast reactors designs in Member States to support the development of new technologies that have a higher level of technological readiness;
- Provide recommendations to the IAEA for future joint efforts and coordinated research activities (if required) in the field; and
- Prepare a reference document summarizing the work presented by the participants, including the findings of the study in the standard IAEA publications format.

Target Audience

The meeting is open to all Member States involved or interested in the research, development and innovations in the field of fast reactors designs, including government organizations (policymakers, analysts, regulators and R&D agencies) and industry stakeholders (vendors, engineering companies, plant operators and technology developers).

Working Language(s)

The working language of this meeting will be English with no interpretation provided. All communications, abstracts and papers must be submitted in English.

Expected Outputs

The expected outputs are:

- Identification of key research priorities and areas for future collaboration between interested Member States on the topics of the event;

- Development of recommendations to the IAEA on future joint efforts and coordinated research activities in this area;
- An update of the IAEA Advanced Reactors Information System (ARIS);
- Publication of an IAEA technical document (TECDOC series) with the proceedings of the meeting;
- Selection of high-quality contributions from the meeting for presentation at the plenary sessions and/or panel discussions of the upcoming IAEA International Conference on Fast Reactors and Related Fuel Cycles (FR26)

Topics

The event will consist of several sessions, and all contributions, presentations and discussions will be categorized based on the following topics (examples of topics are given for each topic to facilitate participants with session selection):

- 1. Fast Reactors in National and International Nuclear Energy Programmes**
- 2. Review and comparison of fast reactor designs and technology**
 - Size, power and modularity
 - Breeding and burning
 - Long life reactor cores
 - Thorium cycle as an alternative
- 3. Advanced fast reactor and core designs, including SMRs**
- 4. Innovative systems and components**
 - Plant components (pumps, heat exchangers, fuel handling, etc.)
 - Advanced safety systems (DHR systems, core catchers, passive shutdown systems, etc.)
 - Coolant purification and chemistry control systems
 - Reactivity control
 - Establishing infrastructure and supply chain
- 5. Advanced Fuels and Materials**
 - Development and performance of metallic, oxide, nitride, and other fuels
 - Fuel Fabrication and qualification
 - Cladding, structural, and high-temperature resistant materials
- 6. Experimental facilities and databases**
 - Quality assurance programmes
 - Instrumentation and advanced measurement techniques
 - Knowledge gaps in innovative reactor concepts

Participants and contributors are also encouraged to submit their reactor design to the IAEA Advanced Reactor Information System (ARIS). The submission can be of a new design or an update to an existing entry in ARIS.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **8 August 2025**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
 - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
 - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
 - Search for the relevant event under the ‘My Eligible Events’ tab;
 - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
 - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
 - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
 - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **8 August 2025**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency’s Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA’s scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA’s mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above.

Participants who wish to give presentations are requested to submit an extended abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The extended abstract should be in A4 page format, should extend to no more than four pages (including figures and tables). It should contain title, contributing author(s) names and affiliation, must be written in English, and provide sufficient information on the contents of the proposed paper for evaluation. The MS Word template is available at (<https://conferences.iaea.org/e/FR-2025>). The extended abstract will be reviewed as part of the selection process for presentations. The extended abstract should be in Microsoft Word format and should not exceed four pages. It should be uploaded to INDICO website (<https://conferences.iaea.org/e/FR-2025>), not later than **30 April 2025**. Authors will be notified of the acceptance of their proposed presentations by **31 July 2025** and provided with peer-review feedback. The authors will then be requested to submit a revised extended abstract by **5 September 2025**.

In addition to the registration already submitted through the InTouch+ platform, participants have to submit the extended abstract, together with the Form for Submission of a Paper (Form B, available at <https://conferences.iaea.org/e/FR-2025>), to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA not later than **8 August 2025**.

Participants and contributors are also encouraged to submit their reactor design to the IAEA Advanced Reactor Information System (ARIS) via <https://aris.iaea.org/>. The submission can be of a new design or an update to an existing entry in ARIS.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **8 August 2025**.

Venue

The event will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

www.iaea.org/events.

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

Additional Information: Key Deadlines

Action	Date
Extended abstract submission deadline	30 April 2025
Notification of acceptance of abstract by the IAEA	31 July 2025
Submission of application via the InTouch+ platform (https://intouchplus.iaea.org)	8 August 2025
Submission of the revised extended abstract	15 September 2025
Technical Meeting	29-02 October 2025

Event Web Page

Please visit the following IAEA web page regularly for new information regarding this event:

<https://conferences.iaea.org/e/FR-2025>

<https://conferences.iaea.org/event/408/>

IAEA Contacts

Scientific Secretaries:

Mr Vladimir Kriventsev

Nuclear Power Technology Development Section
Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100, 1400 VIENNA, AUSTRIA

Tel.: +43 1 2600 22808

Email: V.Kriventsev@iaea.org

Ms Nicole Virgili

Nuclear Power Technology Development Section
Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100, 1400 VIENNA, AUSTRIA

Tel.: +43 1 2600 24234

Email: n.virgili@iaea.org

Administrative Secretary:

Mr Nikolaos Kinovas

Nuclear Power Technology Development Section
Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100, 1400 VIENNA, AUSTRIA

Tel.: +43 1 2600 25795

Email: N.Kinovas@iaea.org

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.

Enclosure: Form for Submission of a Paper (Form B)



Form for Submission of a Paper

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To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary (V.Kriventsev@iaea.org) and to the Administrative Secretary (N.Kinovas@iaea.org).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels as per Conference Announcement.

Title of the paper:		
If applicable: Abstract ID in IAEA-INDICO:		
Family name(s) and first name(s) of all author(s): e.g. Smith, John	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name and first name(s) of author presenting the paper: e.g. Smith, John	Mr/Ms:	
Mailing address:		
Tel. (Fax):		
Email:		

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that the material submitted to the IAEA does not contain any libellous or other unlawful statements and does not contain any materials that violate any personal or proprietary rights of any person or entity.

Date:

Signature of main author: