Second Technical Meeting on the Development and Application of Open-source Software for Nuclear Engineering

Hosted by the Government of Switzerland

through the

EPFL

Lausanne, Switzerland

20–24 July 2026

Ref. No.: EVT2503610

Information Sheet

Introduction

The International Atomic Energy Agency aims to support and strengthen its Member States' capabilities in the field of advanced reactor modelling and simulations. Over the past several years, numerous institutions have contributed to the development of modern open-source[1] software (OSS) for reactor analysis, reflecting a clear trend within the scientific community toward open-source codes and open-access data. Based on this, the IAEA initiated activities to streamline the endeavours and act as a pivot

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[1] Software in which the source code is released under a license that grants users the rights to use, change, and distribute the software to anyone and for any purpose.

for supporting, coordinating, and creating synergies in the development of open-source nuclear codes for reactor analysis. As a result of this initiative, the IAEA has already established the [ONCORE](#) platform available to all IAEA member states. This platform is attractive for developers across the world, who are seeking new forms of collaboration and impact in the area, as well as for member states exploring new nuclear codes for research and development as well as education and training activities. The platform is also beneficial for emerging nuclear countries and nuclear newcomer states, which usually have limited resources for the deployment of often expensive commercial codes. Leveraging publicly available numerical libraries and code platforms offers clear advantages in terms of development efficiency, flexibility, potential performance, and the capitalization of in-kind contributions from a large network of institutional partners and individual contributors through the open-access philosophy. These aspects provide ideal tools for universities and research institutions. The associated education and training activities will lead to appropriate human capacity building in the field.

Within the broader scope of this initiative, the IAEA is now conducting the second technical meeting on the "Development and Application of Open-Source Software for Nuclear Engineering (ONCORE-26) from 20 to 24 July 2026, hosted by EPFL in Lausanne, Switzerland.

Objectives

The main objectives of the meeting are to:

- Present, discuss and facilitate the exchange of information on the status and development of open-source software (OSS) in nuclear engineering and related topics;
- Review available open-source tools and assess their state of development;
- Provide a forum for discussing technical challenges related to OSS development, maintenance and distribution;
- Identify R&D needs and gaps to assess future requirements in the field, leading to efforts and activities in key areas;
- Formulate recommendations to the IAEA for future coordinated research activities in the field; and
- Prepare an IAEA publication summarizing the works presented by participants.

The event will include discussion sessions to enable participants to contribute to the summary and highlights of the event.

Target Audience

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

Working Language

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 of the meeting 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;

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- A working material to develop a draft for the IAEA publication describing the state-of-the-art and recent developments in open-source tool for nuclear reactor analysis.

Topics

The event will consist of some keynote speeches, general sessions and technical sessions. All contributions, presentations and discussions will be categorized based on the following topics (examples are given for some topics to facilitate participants with session selection):

- **Topic 1**: Open-Source Software: Experiences, Challenges and Opportunities for Nuclear Engineering
  e.g. programmatic descriptions of why the open-source path was taken, user and developer experiences, new collaboration possibilities, E&T activities, programmatic efficiency gains, export control, etc.

- **Topic 2**: Application of open-source tools to nuclear engineering problems
  e.g. sharing experience in the application of existing OSS to simulation and analysis of the nuclear reactors, both operating and new innovative designs; neutronics, thermal hydraulics, and multiscale and multiphysics

- **Topic 3**: Recent developments of OSS and collaborative initiatives
  e.g. developing new codes and updating existing OS: new physical and mathematical models, new numerical technics; parallel simulations, GPU, etc.

- **Topic 4**: Impact of AI on OSS
  e.g. new methods and techniques of programming; using AI in generating code and documentation, version control, AI forking, etc.

- **Panel 1**: AI Application within OSS Workflow: Source Code Generation, Input Preparation, Documentation, User Guides

- **Panel 2**: Deployment of OSS on High Performance and Cloud Computing Platforms

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 **15 March 2026**, 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 a paper is being submitted and complete the relevant information;
- 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 **15 March 2026**.

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 (2-4 pages), and should extend to no more than six 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/event/458/). 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/event/458/), not later than **15 March 2026**. Authors will be notified of the acceptance of their proposed presentations by **30 April 2026** and provided with peer-review feedback. The authors will then be requested to submit a revised extended abstract by **15 June 2026**.

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 **15 March 2026**.

Venue

The event will be held at EPFL, Lausanne, Switzerland: https://www.epfl.ch/en/

Visas

Participants who require a visa to enter Switzerland should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of Switzerland.

Key Deadlines and Dates

Action	Date
Extended abstract submission deadline	15 March 2026
Notification of acceptance of abstract by the IAEA	30 April 2026
Submission of application via the InTouch+ platform (https://intouchplus.iaea.org, search event number EVT2503610)	15 May 2026
Review comments submitted to authors	31 May 2026
Revised extended abstract submission deadline	15 June 2026
Technical Meeting in Lausanne (Switzerland)	20-24 July 2026

Event Web Page

Please visit the following IAEA web page regularly for new information regarding this event: https://conferences.iaea.org/event/458/

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