



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

**Third International Conference on Applications of
Radiation Science and Technology
(ICARST-2025)**

IAEA Headquarters

Vienna, Austria

7–11 April 2025

Organized by the

International Atomic Energy Agency (IAEA)

In cooperation with the

International Society for Tracer and Radiation Applications

Announcement and Call for Papers

A. Background

The International Atomic Energy Agency (IAEA) is organizing the Third International Conference on Applications of Radiation Science and Technology (ICARST-2025), following the success of the first ICARST in 2017 and second ICARST in 2022.

Innovations in the field of radiation sciences have contributed significantly to industrial growth and economic development by providing versatile tools and processes to produce high quality products in a clean and efficient manner. These advances have resulted in economic growth and have significantly improved the quality of life in many Member States. With the focus now shifting to the development of sustainable technologies to help achieve the United Nations Sustainable Development Goals (UN SDGs), it is now time to revisit the current status of radiation technology programmes in academia and industry to prepare for meeting future challenges.

Today radiation scientists primarily focus on the production of advanced high-performance materials through sustainable industrial processes, with the overarching goal of ensuring a cleaner environment. There is also a growing emphasis on gaining a comprehensive understanding of the chemical effects of radiation under unique conditions, along with the exploration of novel approaches to address intricate chemistry at interfaces. Radiation technologists, meanwhile, persistently ensure the safe, secure and dependable operation of radiation facilities. They are charged with implementing international standards for process control, assuring the uninterrupted supply and transportation of cobalt-60 consignments across continents, and advancing the development of new generations of electron beam accelerators and X-ray sources for emerging applications. These innovations necessitate novel approaches in dosimetry and microbiology techniques for process control. Besides radiation processing applications, other radiation technologies are also utilized. These include the use of radionuclides to improve and optimize the performance of industrial processes, investigate environmental pathways, and employ radiation sources for product quality control. The IAEA, working in close partnership with its Member States as well as professional scientific bodies and industries, continues to strive to maximize the contribution of radiation sciences and technologies towards the achievement of Member States' development priorities.

B. Purpose and Objectives

The purpose of ICARST-2025 is to provide a comprehensive review of significant developments in applications of radiation science and technology, as well as the state of the art in the field; assess national, regional, and global initiatives for implementing proven industrial applications of radiation science and technology; provide a composite platform where representatives from industry and academia can develop new initiatives; and chart a clear-cut pathway for the adoption of radiation technologies to achieve specific SDGs.

It will aim to provide a unique opportunity to achieve the following objectives:

- **Review key developments:** ICARST-2025 will serve as a platform for a comprehensive review of significant developments in the applications of radiation science and technology. It will facilitate an examination of the 'state of the science' in this field, taking into account the latest advancements and innovations;
- **Assessing Initiatives:** The conference aims to assess ongoing national, regional, and global initiatives that focus on the implementation of established industrial applications rooted in radiation science and technology. The evaluation will emphasize the socio-economic benefits generated by these initiatives and their role in bolstering capacity building in Member States;

- **Fostering New Initiatives:** ICARST-2025 will provide a composite platform where representatives from industry and academia can collaborate to launch new initiatives. These initiatives will be geared towards ensuring the continued success of radiation technologies, particularly in addressing emerging challenges encountered across various domains; and
- **Identifying implementation strategies:** An important outcome of ICARST-2025 will be charting a clear-cut pathway for the adoption of radiation technologies to achieve specific sustainable development goals.

C. Themes and Topics

The scope of the conference will cover, but is not limited to, the following topical areas:

- Advances in radiation chemistry, radiation science and technology;
- Radiation modified advanced materials: from fundamentals to applications;
- Radiation and nuclear technology for imaging and preservation of cultural heritage;
- Radiation processing applications in medical sterilization, tissue banking, food and agriculture;
- Dosimetry, standards and quality management of irradiation facilities;
- New generation of radiation sources: gamma rays, electron beam and X-ray;
- Production and application of radionuclides and tracers for studying industrial and environmental processes and flow visualisation;
- Nucleonic control and measurement systems and imaging technologies;
- Non-destructive Testing (NDT) applications for civil engineering, including artificial intelligence, neutron and muon radiography;
- Computational fluid dynamic (CFD) and numerical Residence Time Distribution (RTD) modelling;
- Radiation sciences and technology in environmental monitoring, protection, remediation and post natural disaster management;
- Education, training and certification in radiation science and technology; and
- Radiation sciences & technology success stories in line with the UN SDGs (<https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>).

Abstracts concerning medical applications of radioisotopes and radiopharmaceuticals are considered out-of-scope for the ICARST-2025. However, as a complement to the ICARST series, the IAEA will host the International Symposium on Trends in Radiopharmaceuticals (ISTR-2027) Conference specifically covering medical applications of radiation science and technology. Submissions of abstracts focused on these topics related to ISTR-2027 are highly encouraged.

D. Structure

The conference programme will consist of plenary sessions on topics listed in Section C and eminent speakers from academia and industry will be delivering oral presentations and participating in panel discussions. In addition, poster sessions will also be organized to allow ample time for discussion and interaction among participants. A panel discussion session will address the contemporary issues derived in the plenary sessions and will summarize recommendations for the future development of radiation sciences and technologies.

The conference will include a “Young Professional Award”. Details, including information on how to participate, eligibility, and terms and conditions will be posted on the conference webpage in due time.

E. Expected Outcomes

The conference will strengthen contacts and foster cooperation among radiation science researchers, radiation technology providers, radiation facility operators, and the coordinators of academic programmes in the radiation sciences. It will provide a comprehensive review of the status of radiation sciences in industry and academia. The conference is expected to generate ideas that will form the basis of future IAEA programmes in the area of radiation technologies and achieving sustainable development goals.

F. Target Audience

This conference will focus on the applications of radiation science and technology, which is a multidisciplinary area covering many branches including radiation-related physics, chemistry, materials science, biology, engineering, and industrial applications. The target audience for this conference comprises, but is not limited to:

- Radiation technologists in areas of chemistry, physics, microbiology, material science;
- Food technologists;
- Cultural heritage conservators and preservers;
- High dose radiation dosimetry experts;
- Environment engineers and scientists;
- Radiation facility operators;
- Quality assurance specialists for radiation facilities;
- Radiation safety experts;
- Process engineers;
- Entrepreneurs involved in applications of radiation technologies;
- Manufacturers of radiation sources and equipment suppliers;
- Research scientists and students engaged in radiation technologies;

- Policy makers and regulators; and
- Other stakeholders.

G. Call for Papers

Contributions on the topics listed in Section C are welcome as oral or poster presentations. All submissions, apart from invited papers, must present original work, which has not been published elsewhere.

G.1. Submission of Abstracts

Abstracts (approximately 150 to 200 words on one A4 page, may contain any charts, graphs, figures and references) should give enough information on the content of the proposed paper to enable the Programme Committee to evaluate it. Anyone wishing to present at the conference must submit an abstract in electronic format using the conference's file submission system ([IAEA-INDICO](#)), which is accessible from the conference web page (see Section Q). The abstract can be submitted through this system from **19 January** until **28 June 2024**. Specifications for the layout will be available on IAEA-INDICO. The system for electronic submission of abstracts, IAEA-INDICO, is the sole mechanism for submission of contributed abstracts. Authors are encouraged to submit abstracts as early as possible. The IAEA will not accept submissions via email.

In addition, authors must register online using the InTouch+ platform (see Section H). The online registration together with the auto-generated Participation Form (Form A) and Form for Submission of a Paper (Form B) must reach the IAEA no later than **28 June 2024**.

IMPORTANT: The Programme Committee will consider uploaded abstracts only if these two forms have been received by the IAEA through the established official channels (see Section H).

G.2. Acceptance of Abstracts

The Secretariat reserves the right to exclude abstracts that do not comply with its technical or scientific quality standards and that do not apply to one of the topics listed in Section C.

Authors will be informed by **31 October 2024** as to whether their submission has been accepted, either orally or as a poster, for presentation at the conference. Accepted abstracts will also be reproduced in an unedited electronic compilation of Abstracts which will be made available to all registered participants of the conference.

G.3 Proceedings

Following the conference, the IAEA will publish a summary report which will be made available to read online.

H. Participation and Registration

All persons wishing to participate in the event must be designated by an IAEA Member State or should be a member of an organization that has been invited to attend.

Registration through the InTouch+ platform:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):

- Persons with an existing NUCLEUS account can [sign in here](#) 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 ‘Basic Profile’ (if no financial support is requested) or under ‘Complete Profile’ (if financial support is requested) and upload the relevant supporting documents;
- Search for the relevant event (**EVT2306594**) 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 Conference.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 Participation Form (Form A), Form for Submission of a Paper (Form B) and/or 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 form(s) will automatically be sent to the IAEA through the online platform.

NOTE: Should prospective participants wish to submit a paper or request financial support, the application needs to be submitted by the specified deadlines (see section O).

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.

If it is not possible to submit the application through the InTouch+ platform, prospective participants are requested to contact the IAEA’s Conference Services Section via email: Conference.Contact-Point@iaea.org.

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. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

I. 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 conference. The IAEA has, however, limited funds at its disposal to help cover 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 conference.

If participants wish to apply for a grant, they should submit applications to the IAEA using the InTouch+ platform through their competent national authority (see Section H). Participants should ensure that applications for grants are:

1. Submitted by **28 June 2024**;
2. Accompanied by Grant Application Form (Form C); and
3. Accompanied by Participation Form (Form A).

Applications that do not comply with the above conditions cannot be considered.

Approved grants will be issued in the form of a lump sum payment that usually covers **only part of the cost of attendance**.

J. Distribution of Documents

A preliminary and final programme will be made available on the conference web page (see Section Q) prior to the start of the conference. The electronic compilation of abstracts will be accessible free of charge to participants registered for the conference.

K. Exhibitions

A limited amount of space will be available for commercial vendors' displays/exhibits during the conference. Interested parties should contact the Scientific Secretariat by email ICARST-2025@iaea.org by **31 October 2024**.

L. Working Language

The working language of the conference will be English. All communications must be sent to the IAEA in English.

M. Venue and Accommodation

The conference will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. 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.

Participants must make their own travel and accommodation arrangements. Hotels offering a reduced rate for participants are listed on <https://www.iaea.org/events>. Please note that the IAEA is not in a position to assist participants with hotel bookings, nor can the IAEA assume responsibility for paying fees for cancellations, re-bookings and no-shows.

N. Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria as early as three months but not later than 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.

For more information, please see the Austria Visa Information document available on <https://www.iaea.org/events>.

O. Key Deadlines and Dates

Submission of abstracts through IAEA-INDICO	28 June 2024
Submission of Form B (together with Form A) through the InTouch+ platform	28 June 2024
Submission of Form C (together with Form A) through the InTouch+ platform	28 June 2024
Notification of acceptance of abstracts for oral or poster presentation	31 October 2024
Submission of Form A only (no paper submission, no grant request) through the InTouch+ platform	31 March 2025

P. Conference Secretariat

General Postal Address and Contact Details of the IAEA:

International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA
Tel.: +43 1 2600
Fax: +43 1 2600 2007
Email: Official.Mail@iaea.org

Scientific Secretaries of the Conference:

Ms Celina Horak

Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
Tel.: +43 1 2600 21744
Fax: +43 1 26007
Email: ICARST-2025@iaea.org

Ms Hannah Affum

Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
Tel.: +43 1 2600 21745
Fax: +43 1 26007
Email: ICARST-2025@iaea.org

Administration and Organization:

Ms Julie Zellinger

Conference Services Section
Division of Conference and Document Services
Department of Management
IAEA-CN-332; EVT2306594
Tel.: +43 1 2600 21321
Email: Conference.Contact-Point@iaea.org

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on administrative matters to the IAEA's Conference Services Section.

Q. Conference Web Page

Please visit the IAEA conference <https://www.iaea.org/events/icarst-2025> regularly for new information regarding this conference.