



**International Conference on Accelerators for
Research and Sustainable Development:
from Good Practices towards Socioeconomic
Impact**

**IAEA Headquarters
Vienna, Austria**

23–27 May 2022

**Organized by the
International Atomic Energy Agency (IAEA)**

Announcement and Call for Papers

A. Background

The International Atomic Energy Agency (IAEA) is organizing the First International Conference on Accelerators for Research and Development: from good practices towards socioeconomics impact. Such a Conference was long awaited by the Member States to address important needs in our high-tech oriented society, where particle accelerators have become indispensable.

Nowadays, more than 20,000 particle accelerators operating world-wide are used for commercial applications, either in the medical (radiotherapy treatments) or industrial sectors (materials modification). Although only a few hundred accelerators are used for scientific research, the knowledge and technological spin-offs gained from these facilities drive the development of commercial applications and support the research and development needs of a diverse range of fields, including fundamental and applied science. The current trend is to utilize accelerators in a dedicated way to support specific high technology application areas. The main demand from researchers is for high quality X ray, neutron, and ion beams to engage in cutting-edge research in energy, food and agriculture, environment, biology, medicine, forensics, cultural heritage, materials science, and many other areas. Accelerators also play a key role in capacity building, provide education and training both in academia and industry, contributing to the solution of problems of modern society and to increased competitiveness of local economies.

Numerous innovations and accomplishments in the field of accelerator-based research and development as well as diverse applications have been already acknowledged, however it is now time to take a comprehensive look at their socioeconomic impact, assess their sustainability and ability to meet future challenges. The IAEA has been implementing programmatic activities that provide interested Member States with platforms to exchange information on new trends and applications in accelerator-based nuclear science and technology. Indeed, the IAEA successfully implements a few programmes with direct relevance to use of particle accelerators such as Nuclear Science, Radioisotope Production and Radiation Technology, Human Health and Environment. In addition, direct support and assistance to the Member States in the area of accelerator-based research and applications is also provided through the IAEA Technical Cooperation Programme.

B. Purpose and Objectives

The Conference aims primarily to present an international stage for discussing accelerator applications in research and industry, foster exchange of information on best practices in accelerator facility utilization and management, and to provide a showcase how achievements and experience attained with accelerator technologies contribute to a sustainable development. All types of accelerators will be considered: from low-energy ion-beam electrostatic accelerators to cyclotrons, from compact accelerator-based neutron sources to large-scale spallation facilities, from electron-based irradiation facilities to synchrotron light sources, and many others.

Special emphasis will also be given in accelerator applications of large societal impact such as human health, environmental monitoring, cultural heritage, food quality, energy sector, forensics, nuclear security, and others promoting economic development. The Conference will provide a unique opportunity to achieve the following specific objectives:

- To disseminate:

- New knowledge and technologies developed through accelerator-based research and applications in a wide spectrum of scientific areas.
- Best practices in establishing new accelerator facilities, and ensuring their effective management and sustainability
- To review:
 - Key developments in particle accelerator technologies, established and emerging ones, and their role in enhancing innovations
 - National, regional and global initiatives for implementing proven accelerator applications that lead to socio-economic benefits and strengthen capacity building in Member States; and
- To serve:
 - As a composite platform through which academia and industry can foster new initiatives for ensuring the success of accelerator applications in addressing the emerging challenges in multiple disciplines.
 - As a bridge to enhance existing and establish new collaborations among scientists and institutions from Member States aiming at benefiting from accelerator technologies to face challenges in a series of problems of modern society.

C. Themes and Topics

The IAEA welcomes high-quality, well structured, abstracts and papers in all fields of accelerator-based research and applications which will be grouped under three main themes/tracks:

- A. Cutting-edge scientific results and innovation in applications
- B. Success stories and case studies demonstrating socioeconomic impact
- C. Best practices in effective management, safe operation, and sustainability of accelerator facilities, including establishment of new facilities

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

- Biology and biophysics
- Cultural heritage
- Engineering applications (including energy sector)
- Environmental applications (including geosciences and climate change)
- Food and agriculture
- Forensics and security applications
- Information and quantum technologies
- Materials research (including materials damage studies)
- Medical applications (including radioisotope production and Boron Neutron Capture Therapy)

- Nuclear data and modelling benchmarks
- Radioactive beam applications
- R&D on new accelerator and alternative technologies (including Compact Accelerator based Neutron Sources)
- Best practices in and lessons learned from
 - Education and training with accelerators
 - Establishment of new facilities
 - Facility management and user programmes
 - Facility operations and maintenance
 - Outreach, knowledge preservation and management
 - User access programmes and regional/interregional networking
 - Strategic considerations for sustainability and self-reliance

D. Structure

The aforementioned topical areas will be discussed under the three main themes outlined in section C. A series of plenary sessions will address the most interesting and crucial topics and the meeting programme will include invited keynote speakers from academia and industry, giving oral presentations and participating in panel discussions and round table sessions. Several poster sessions will be organized to allow ample time for discussion and interaction. In addition, the participants will have an opportunity to interact with conference exhibitors and participate in technical tour(s). Finally, a closing panel session will review the main conclusions drawn in the plenary sessions and will summarize recommendations for the future development of radiation sciences and technologies using particle accelerators.

E. Expected Outcomes

The conference will strengthen contacts and foster cooperation among accelerator-based science and application researchers, accelerator manufacturers, facility operators and the coordinators of academic programmes in the accelerator sciences, leading to a comprehensive review of the status of accelerator-based research and applications. The conference is expected to generate ideas that will form the basis of future IAEA programmes in the area of research and applications using accelerator technologies.

F. Target Audience

This conference will focus on applications of accelerator science and technology, which is a multidisciplinary area covering many different branches from accelerator and nuclear physics, materials science, biology, environment, medicine, cultural heritage to engineering and industrial applications. Accordingly, the target audience for this conference comprises, but is not limited to:

- research scientists engaged in accelerator-based research and applications;
- accelerator operators and users;

- entrepreneurs or stakeholders involved in applications of accelerator technologies;
- policy makers and regulators.

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 Synopses

Synopses (approximately 500 to 600 words on one or a maximum of two printed A4 pages, 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 a synopsis in electronic format using the conference's file submission system ([IAEA-INDICO](#)), which is accessible from the conference web page (see Section Q). The synopsis can be submitted through this system until **1 October 2021**. Specifications for the layout will be available on IAEA-INDICO. The system for electronic submission of synopsis, IAEA-INDICO, is the sole mechanism for submission of contributed synopsis. Authors are encouraged to submit synopsis 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 **1 October 2021**.

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

G.2. Acceptance of Synopses

The Secretariat reserves the right to exclude synopses 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 **1 December 2021** as to whether their submission has been accepted, either orally or as a poster, for presentation at the conference. Accepted synopses will also be reproduced in an unedited electronic compilation of Synopses which will be made available to all registered participants of the conference.

G.3 Submission of Full Papers

Authors of accepted synopses will be requested to submit a full paper in Word format, of about **5 to 10** pages in length, also through the [IAEA-INDICO](#) file submission system. Submitting the paper in the indicated electronic format is mandatory. Specifications for the layout and electronic format of the contributed papers and for the preparation of posters will be made available on IAEA-INDICO.

The IAEA reserves the right to exclude papers that do not comply with its quality standards and those that do not apply to one of the topics outlined in Section C above and those that do not meet the expectations based on the information in the abstract.

The deadline for electronic submission of the full papers as Word files is **1 June 2022**. The IAEA will not accept papers submitted after the deadline.

The IAEA will notify authors of its completed review process of the full papers by **1 July 2022**. The deadline for revised papers, if required, to be submitted through IAEA-INDICO is **1 August 2022**.

IMPORTANT: The system for electronic submission of papers, IAEA-INDICO, is the sole mechanism for submission of contributed papers. Authors are encouraged to submit papers as early as possible. The IAEA will not accept submissions via email.

G.4 Proceedings

The proceedings containing summaries of the plenary and technical sessions as well as full papers presented at the conference will be published by the IAEA as soon as possible after the conference.

H. Participation and Registration

All persons wishing to participate in the event must be designated by an IAEA Member State or should be member of an organization that has been invited to attend. The list of IAEA Member States and invited organizations is available on the event web page (see Section Q).

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 (**EVT2005408**) 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);
- 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 **1 October 2021**.
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 synopses 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 AccConf2022@iaea.org by **1 December 2021**.

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 synopses through IAEA-INDICO	1 October 2021
Submission of Form B (together with Form A) through the InTouch+ platform	1 October 2021
Submission of Form C (together with Form A) through the InTouch+ platform	1 October 2021
Notification of acceptance of synopses for oral or poster presentation	1 December 2021
Electronic submission of full papers through IAEA-INDICO	1 June 2022
Notification of review of full papers	1 July 2022
Deadline for submission of revised full papers submitted through IAEA-INDICO	1 August 2022
Submission of Form A only (no paper submission, no grant request) through the InTouch+ platform	No deadline

P. Conference Secretariat

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

Q. Conference Web Page

Please visit the IAEA [conference web page](#) regularly for new information regarding this conference.