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*Átomos para la paz y el desarrollo*

الوكالة الدولية للطاقة الذرية

国际原子能机构

International Atomic Energy Agency

Agence internationale de l'énergie atomique

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

Vienna International Centre, PO Box 100, 1400 Vienna, Austria

Phone: (+43 1) 2600 • Fax: (+43 1) 26007

Email: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) • Internet: <https://www.iaea.org>

In reply please refer to: **EVT2104430**

Dial directly to extension: (+43 1) 2600-21637/28224

La Secretaría del Organismo Internacional de Energía Atómica (OIEA) saluda a los Estados Miembros del OIEA y tiene el honor de señalar a su atención la celebración del **Taller de Capacitación sobre los Adelantos en las Técnicas de Haces de Iones y sus Aplicaciones** (denominado en adelante el “evento”), que tendrá lugar de forma virtual a través de Cisco Webex **del 14 al 18 de noviembre de 2022**.

La finalidad del evento es impartir a jóvenes investigadores de los Estados Miembros capacitación práctica sobre técnicas analíticas utilizando aceleradores de haces de iones.

El evento se celebrará en inglés.

Se invita a los Estados Miembros a designar a una o más personas para que participen en este evento en representación de su Gobierno y se los alienta encarecidamente a que seleccionen con ese fin a mujeres calificadas.

Las designaciones deben presentarse al OIEA por conducto de la autoridad nacional competente (el Ministerio de Relaciones Exteriores, la Misión Permanente ante el OIEA o la Autoridad Nacional de Energía Atómica), a más tardar el **21 de octubre de 2022**, por medio del formulario de participación adjunto (Formulario A). Los formularios de participación debidamente cumplimentados y autorizados deben enviarse por correo electrónico a la dirección [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) o por fax al número: +43 1 26007 (no se precisan copias impresas). Asimismo, han de enviarse copias por correo electrónico al Secretario Científico del evento, Sr. Sotirios Charisopoulos, División de Ciencias Físicas y Químicas, Departamento de Ciencias y Aplicaciones Nucleares (correo electrónico: [S.Charisopoulos@iaea.org](mailto:S.Charisopoulos@iaea.org)), y a la Secretaria Administrativa, Sra. Rozanna Bojdo (correo electrónico: [r.bojdo@iaea.org](mailto:r.bojdo@iaea.org)). Una vez recibidas las designaciones oficiales, el Secretario Científico del evento contactará directamente a los participantes en relación con otras cuestiones de organización, según proceda.

El OIEA no se hace responsable de virus informáticos, gusanos, troyanos, puertas traseras, temporizadores, relojes, contadores o cualquier otra rutina, instrucción o diseño que limiten el funcionamiento, u otro código no solicitado malicioso, ilícito o similar, incluidos programas de vigilancia o rutinas que puedan permitir a cualquier persona el acceso, que estén diseñados con ese fin, o que accedan por iniciativa propia, con el objetivo de borrar, o dañar o modificar de cualquier otro modo datos o sistemas, servidores, instalaciones u otra infraestructura del usuario final (colectivamente, “código inhabilitante”). Asimismo, el proveedor de los servicios para la reunión virtual ha asegurado y garantizado que los Servicios no contendrán, ni ningún usuario final recibirá del programa informático empleado para celebrar la reunión virtual, ninguno de estos códigos inhabilitantes.

La Secretaría del Organismo Internacional de Energía Atómica aprovecha esta oportunidad para reiterar a los Estados Miembros del OIEA el testimonio de su distinguida consideración.



23 de septiembre de 2022

Documentación adjunta (en inglés únicamente):

Reseña informativa

Formulario de participación (Formulario A)

Formulario de presentación de memorias (Formulario B)



**IAEA**

International Atomic Energy Agency

*Atoms for Peace and Development*

# **Training Workshop on Advances in Ion Beam Techniques and their Applications**

**Virtual Event**

**14 to 18 November 2022**

**Ref. No.: 2104430**

## **Information Sheet**

### **Introduction**

Accelerator based technologies are associated with a broad range of applications having societal and technological impact and can contribute to the economic development of Member States. The utilization of accelerators enhances innovation in a variety of fields such as health, materials research, cultural heritage, environment, energy and natural resources being typical examples. In this context, accelerator applications are one of the thematic areas, where the IAEA supports its Member States in strengthening their capabilities to adopt and benefit from the usage of accelerators.

In response to the training needs of young scientists from developing Member States in utilization of accelerators, the Physics Section, Division of Physical and Chemical Sciences (IAEA), organizes a series of training workshops at the accelerator facilities of the Ruđer Bošković Institute (RBI), Zagreb, Croatia, which also includes training in Ion Beam Analysis (IBA) techniques biannually. IBA techniques is a group of non-destructive nuclear analytical methods applied with low energy electrostatic accelerators. They provide important, often unique information on the elemental and isotopic composition, layer structure, electronic and many other properties of materials in solid or liquid form, with high precision. As such, they are extensively used in materials analysis, environmental monitoring, cultural heritage studies and other investigations of problems of key societal impact and industrial interest.

## Objectives

The objective of the forthcoming training workshop is to deepen knowledge and skills in the following scheduled basic IBA techniques:

- Proton-Induced X-ray Emission (PIXE)
- Proton-Induced Gamma-ray Emission (PIGE)
- Rutherford Backscattering Spectroscopy (RBS)
- Elastic Recoil Detection Analysis (ERDA)
- Inelastic Nuclear Reaction Analysis (NRA)
- Single ion techniques: Ion Beam Induced Charge (IBIC) and Scanning Transmission Ion Microscopy (STIM)

## Target Audience

This Training workshop is intended for young scientists working or, planning to work for their thesis at accelerator facilities; the goal is to widen their specific knowledges and skills in the standard IBA techniques through lectures, hands-on work on the specific problems and demonstration experiments.

## Working Language(s)

English.

## 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, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g., Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **21 October 2022**. Participants who are members of an organization invited to attend are requested to send the Participation Form (Form A) through their organization to the IAEA by above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and technical 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. [Optional – only keep if using the InTouch+ platform for registration] 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 abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than 2 pages (including figures and tables) and should not exceed 800 words. It should be sent electronically to Mr Sotirios Charisopoulos, the Scientific Secretary of the event (see contact details below), not later than **21 October 2022**. Authors will be notified of the acceptance of their proposed presentations by **30 October 2022**.

In addition, participants have to submit the abstract together with the **Participation Form (Form A)** and the attached **Form for Submission of a Paper (Form B)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or their organization for onward transmission to the IAEA not later than **21 October 2022**.

## **IAEA Contacts**

### **Scientific Secretary**

#### **Mr Sotirios CHARISOPOULOS**

Physics Section  
Division of Physical and Chemical Sciences  
Department of Nuclear Sciences and Applications  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA  
Tel.: +43 1 2600 21637  
Fax: +43 1 26007  
Email: [S.Charisopoulos@iaea.org](mailto:S.Charisopoulos@iaea.org)

### **Co-Scientific Secretary**

#### **Mr Natko SKUKAN**

Nuclear Science and Instrumentation Laboratory  
Physics Section  
Division of Physical and Chemical Sciences  
Department of Nuclear Sciences and Applications  
International Atomic Energy Agency  
IAEA Laboratories Seibersdorf  
Friedenstrasse 1,  
2444 SEIBERSDORF  
AUSTRIA  
Tel.: +43 1 2600 28624  
Fax: +43 1 26007  
Email: [N.Skukan@iaea.org](mailto:N.Skukan@iaea.org)

### **Administrative Secretary**

#### **Ms Rozanne BOJDO**

Division of Physical and Chemical Sciences  
Department of Nuclear Sciences and Applications  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA  
Tel.: +43-1-2600 21754  
Fax: +43 1 26007  
Email: [R.Bojdo@iaea.org](mailto:R.Bojdo@iaea.org)

# Participation Form

## (Virtual Meeting) Training Workshop on Advances in Ion Beam Techniques and their Applications

**Zagreb, Croatia**

**14 to 18 November 2022**

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: [OfficialMail@iaea.org](mailto:OfficialMail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary, Mr Sotirios Charisopoulos, Division of Physical and Chemical Sciences, Department of Nuclear Sciences and Applications (Email: [S.Charisopoulos@iaea.org](mailto:S.Charisopoulos@iaea.org)) and to the Administrative Secretary, Ms Rozanna Bojdo, (Email: [R.Bojdo@iaea.org](mailto:R.Bojdo@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: 21 October 2022**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable:		
Do you intend to submit a paper?	Yes	No
Would you prefer to present your paper as a poster?	Yes	No
Title:		

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.





# Form for Submission of a Paper

## (Virtual Meeting) Training Workshop on Advances in Ion Beam Techniques and their Applications

**Zagreb, Croatia**

**14 to 18 November 2022**

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](mailto: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 ([S.Charisopoulos@iaea.org](mailto:S.Charisopoulos@iaea.org)) and to the Administrative Secretary ([R.Bojdo@iaea.org](mailto:R.Bojdo@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: 21 October 2022**

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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**Date:**

**Signature of main author:**