IAEA
原子用于和平与发展
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

地址：Vienna International Centre, PO Box 100, 1400 Vienna, Austria
电话：(+43 1) 2600 • 传真：(+43 1) 26007
电子信箱：Official.Mail@iaea.org • 因特网：https://www.iaea.org

复函请援引：EVT2405595
直接拨打分机：(+43 1) 2600-21807

国际原子能机构（原子能机构）秘书处向原子能机构各成员国致意，并荣幸地提请注意将于 **2025 年 10 月 20 日至 24 日**在**奥地利维也纳原子能机构总部**举行的**人工智能的核安保应用技术会议**（以下称“活动”）。

另外，还将允许通过思科网讯（Cisco Webex）以虚拟方式参加这次活动。

这次活动的目的是加强成员国之间在人工智能和机器学习用于核安保领域的合作和信息交流。

随附“资料单”提供这次活动的进一步详情。

这次活动将使用英文。

请各成员国指派一名或几名参加者参加这次活动。大力鼓励各成员国确定女性参加者。

原子能机构一般不承担参加者参加活动的差旅费和其他费用。但原子能机构可支配有限资金，用于帮助支付某些参加者的参加费用。根据具体申请通常可向每个国家的一名参加者提供此种援助，条件是原子能机构认为该参加者将为这次活动做出重要贡献。如随附“资料单”所示，应**不迟于 2025 年 8 月 30 日**通过 InTouch+平台提交财政支助的申请。

应注意，原子能机构对个人财产遭受的任何损坏或损失概不赔偿。原子能机构也不向原子能机构活动的参加者提供健康保险。因此，个人应做私人保险安排。但是，原子能机构将就明显因为原子能机构工作而引起的事故和疾病提供保险。

如随附“资料单”所示，应**不迟于 2025 年 8 月 30 日**通过国家主管当局（外交部、常驻原子能机构代表团或国家原子能机构）在InTouch+平台（https://intouchplus.iaea.org）上将指派名单提交原子能机构。

一俟收到正式指派名单，这次活动的科学秘书将酌情就进一步的安排（包括差旅详情）与参加者直接联系。

原子能机构对可能或旨在允许任何人访问或自行访问、删除或以其他方式损害或修改任何终端用户的任何数据或任何系统、服务器、设施或其他基础设施的任何病毒、蠕虫、陷阱门、后门、计时器、时钟、计数器或其他限制性程序、指令或设计，或其他恶意、非法或类似的未请求代码，包括监视软件或例行程序（统称“禁用代码”），均不承担任何责任，而且虚拟会议服务提供商已声明并担保，这些服务不会包含且任何终端用户也不会从用于举行虚拟会议的软件收到这些“禁用代码”。

国际原子能机构秘书处借此机会再次向原子能机构各成员国致以最崇高的敬意。

2025 年 5 月 2 日

附件（仅以英文印发）：资料单
论文提交表（B 表）

IAEA

Atoms for Peace and Development

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 • Internet: https://www.iaea.org

In reply please refer to: EVT2405595
Dial directly to extension: (+43 1) 2600-21807

The Secretariat of the International Atomic Energy Agency (IAEA) presents its compliments to the IAEA's Member States and has the honour to draw their attention to the **Technical Meeting on the Application of Artificial Intelligence for Nuclear Security** (hereinafter referred to as "event") to be held at the IAEA's Headquarters in Vienna, Austria, from **20 to 24 October 2025**.

In addition, the event will allow for virtual participation via Cisco WebEx.

The purpose of the event is to enhance the cooperation and information exchange among Member States in the areas of artificial intelligence and machine learning for nuclear security.

The attached Information Sheet provides further details of the event.

The event will be held in English.

Member States are invited to designate one or more participants for this event. Member States are strongly encouraged to identify women 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 via the InTouch+ platform not later than **30 August 2025**, as indicated in the enclosed Information Sheet.

It should be noted that compensation is not payable by the IAEA for any damage to or loss of personal property. The IAEA also does not provide health insurance coverage for participants in IAEA events. Arrangements for private insurance coverage on an individual basis should therefore be made. The IAEA will, however, provide insurance coverage for accidents and illnesses that clearly result from any work performed for the IAEA.

Designations should be submitted to the IAEA via the InTouch+ platform (https://intouchplus.iaea.org) through the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) not later than **30 August 2025**, as indicated in the enclosed Information Sheet.

The Scientific Secretary of the event will liaise with the participants directly concerning further arrangements, including travel details, as appropriate, once the official designations have been received.

The IAEA takes no responsibility for, and the provider of the virtual meeting services has represented and warranted that the Services shall not contain, and that no end user shall receive from the software used to hold the virtual meeting, any virus, worm, trap door, back door, timer, clock, counter or other limiting routine, instruction or design, or other malicious, illicit or similar unrequested code, including surveillance software or routines which may, or is designed to, permit access by any person, or on its own, to erase, or otherwise harm or modify any data or any system, server, facility or other infrastructure of any end user (collectively, a "Disabling Code").

The Secretariat of the International Atomic Energy Agency avails itself of this opportunity to renew to the IAEA's Member States the assurances of its highest consideration.

2025-05-02

Enclosures: Information Sheet

Form for Submission of a Paper (Form B)

IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Form B
EVT2405595

Form for Submission of a Paper

Technical Meeting on the Application of Artificial Intelligence for Nuclear Security

IAEA Headquarters, Vienna, Austria

and virtual participation via Cisco WebEx

20-24 October 2025

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 (R.Busquim@iaea.org) and to the Administrative Secretary (C.Semper@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: 15 July 2025

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:		

I hereby agree to assign to the International Atomic Energy Agency (IAEA):

☐ the copyright; or

☐ the non-exclusive, worldwide, free-of-charge licence (this option is only for those authors whose parent institution does not allow them to transfer the copyright for work carried out in that institution) granting the IAEA world rights to present the aforementioned material online via iaea.org or through INDICO, and for the use of the aforementioned material in IAEA publications, including any future editions, in all languages, and in all formats available now, or to be developed in the future (digital formats, hard copy etc.).

Please note: If granting the licence mentioned above, please supply any copyright acknowledgement text required.

Furthermore, I herewith declare:

☐ that the material submitted to the IAEA is original, except for such excerpts from copyrighted works as may be included with the permission of the copyright holders thereof, has been written by the stated authors, has not been published before, and is not under consideration for publication by another entity;

☐ that any permissions and rights to publish required for third-party content, including but not limited to figures and tables, have been obtained, that all published material is correctly referenced; and

☐ 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:**

IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Technical Meeting on the Application of Artificial Intelligence for Nuclear Security

IAEA Headquarters
Vienna, Austria
and virtual participation via Cisco WebEx

20 - 24 October 2025

Ref. No.: EVT2405595

Information Sheet

Introduction

In recent years, there has been growing interest in developing and applying Artificial Intelligence (AI) and Machine Learning (ML) to nuclear technologies. AI/ML has the potential to enable advanced analysis of nuclear security data and the development of innovative detection techniques and algorithms.

AI/ML have the potential to reshape nuclear security systems and measures, offering unprecedented capabilities for addressing growing challenges in protecting nuclear materials, other radioactive materials, associated facilities and activities, and detecting criminal or intentional unauthorized actions. Computer security anomaly detection techniques and measures based on AI/ML have the potential to detect process anomalies and initiate automated responses before malicious cyber-attacks can lead to the real-world consequences of a nuclear security event.

AI/ML technologies may enable real-time analysis of complex behavioral and operational data gathered from physical protection systems. Advanced algorithms can monitor personnel access patterns, monitoring systems, sensor networks, and facility logistics to identify anomalies suggestive of insider threats or unauthorized access attempts. AI/ML have also the potential to integrate inputs from radiation detection systems and surveillance systems, employing adaptive algorithms to optimize security responses during adversarial scenarios. Further developments in computer vision may enhance perimeter monitoring and AI-assisted risk modelling for nuclear material accountancy and control purposes.

This event aims to provide a collaborative platform for discussing and advancing AI/ML applications, addressing Member States' needs to understand their potential in supporting the safe and secure use of nuclear technologies. By fostering interdisciplinary dialogue, the event aims to bridge cutting-edge research with practical implementation, ensuring AI/ML technologies strengthen nuclear security systems and measures.

Objectives

The objective of the event is to encourage interaction among experts from all over the world to promote the use of artificial intelligence and machine learning for nuclear security activities. It aims to enhance understanding and capacity building in the development and integration of AI/ML tools in this domain.

Expected Outputs

- A comprehensive report summarizing key, findings, recommendations, and areas for future research.
- A catalogue of potential activities to advance AI/ML integration in nuclear security.
- Enhanced collaboration and partnerships among Member States and stakeholders for implementing AI/ML solutions in nuclear security.

Target Audience

- **System Designers and Engineers:** Professionals involved in the design and deployment of AI/ML tools and technologies for nuclear security applications.
- **Operators and Regulators:** Personnel responsible for the operational oversight and regulatory compliance of nuclear security systems.
- **Subject-Matter Experts:** Specialists in nuclear security, computer security, AI/ML, and related technical fields.
- **International and Technical Organizations:** Representatives from organizations specializing in AI, machine learning, and nuclear security technologies.

Working Language

English.

Structure

The event will feature the following components:

- **Plenary Sessions:** Keynotes and presentations by invited experts on the thematic areas of AI/ML and nuclear security.
- **Working Group Sessions:** Focused discussions and interactive panels addressing specific challenges, innovations, and strategies in AI/ML applications for nuclear security.
- **Networking Opportunities:** Sessions designed to foster interaction and knowledge-sharing among participants.

Topics

The meeting will address the following key topics:

AI for Threat Detection and Anomaly Analysis

Exploration of machine learning techniques for detecting anomalies and identifying threats in nuclear security data, sensor fusion, radiation detection, and predictive analytics to enhance real-time threat detection and material control. This includes case studies on operationalizing AI/ML tools, including lessons learned from pilot projects.

Risk Mitigation in AI Implementation

Examination of issues such as algorithmic bias in training datasets, adversarial attacks on AI models, overreliance on automated decision-making in high-stakes scenarios, and ethical frameworks for the adoption of AI technologies.

AI in Computer Security for Nuclear Systems

Discussion on enhancing computer security measures using AI tools for continuous monitoring, intrusion detection, and automated threat response systems.

AI for Physical Protection Systems in Nuclear Facilities

Analysis of AI-driven solutions for physical security, such as computer vision in surveillance systems, access control, and incident response mechanisms.

International Collaboration in AI for Nuclear Security

Strategies for strengthening international partnerships to harmonize AI/ML regulatory frameworks, improve data-sharing mechanisms, and address dual-use concerns.

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 **30 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 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 **30 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 the 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 in above Topics Section.

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 500 words. It should be sent electronically through Indico, not later than **15 July 2025**. Authors will be notified of the acceptance of their proposed presentations by **30 August 2025**.

In addition to the registration already submitted through the InTouch+ platform, participants have to submit the abstract, together with the Form for Submission of a Paper (Form B), 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 **15 July 2025**.

Submission of a paper should be confirmed, together with the submission of the main application via the InTouch+ platform, by **15 July 2025**.

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 **30 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: https://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

The event will commence at 10:00 on Monday, 20 October 2025, and is expected to end at 13:00 on Friday, 24 October 2025.

The event agenda and the information on local arrangements will be sent to the designated participants approximately one month before the beginning of the event.

IAEA Contacts

Scientific Secretary

Mr Rodney Busquim e Silva
Division of Nuclear Security
Department of Nuclear Safety and Security
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 21807/21719
Fax: +43 1 26007
Email: R.Busquim@iaea.org

Co-Scientific Secretary

Mr Shaju George Chittilappilly Kunjappu
Division of Nuclear Security
Department of Nuclear Safety and Security
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 22126
Fax: +43 1 26007
Email: S.G.Chittilappilly@iaea.org

Administrative Secretary

Ms Camilla Semper
Division of Nuclear Security
Department of Nuclear Safety and Security
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 26635
Fax: +43 1 26007
Email: C.Semper@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.

Event Web Page

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

www.iaea.org/events/EVT2405595

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