



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: **EVT2103895**

Dial directly to extension: (+43 1) 2600-24213

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 Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization** (hereinafter referred to as "event") to be held at the IAEA's Headquarters in Vienna, Austria, from **30 August to 2 September 2022**.

The purpose of the event is to provide an international forum to discuss and promote the judicious use of instrumentation and control and other advanced digital technologies to support the improvement and optimization of nuclear power plant performance. The event will also provide an opportunity to review a draft IAEA Nuclear Energy Series publication, provisionally entitled *Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization*.

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 to represent the Government at this event. Member States are strongly encouraged to identify suitable 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 at the time of designating the participant(s) using the attached Grant Application Form (Form C).

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 through the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) not later than **15 June 2022** using the attached Participation Form (Form A). Completed and authorized Participation Forms should be sent either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Copies should be sent by email to the Scientific Secretary of the event, Ms Nelly Ngoy Kubelwa, Division of Nuclear Power, Department of Nuclear Energy (Email: N.Ngoy-Kubelwa@iaea.org), and to the Administrative Secretary, Ms Olga Gloeckler (Email: O.Gloeckler@iaea.org). 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.

Should Governments wish, in addition, to appoint one or more observers to assist and advise the designated participants, they are kindly requested to inform the IAEA of the names and contact details of any such observers by the above date. In accordance with the established rules, Governments are expected to bear the cost of attendance of any observers they may send to IAEA events. Compensation is not payable by the IAEA for any damage to or loss of observers' personal property or for illness, injury or death occurring while travelling to or in connection with their attendance at IAEA events.

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.



2022-04-26

Enclosures: Information Sheet
 Participation Form (Form A)
 Grant Application Form (Form C)



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Technical Meeting on Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization

IAEA Headquarters, Vienna, Austria

30 August–2 September 2022

Ref. No.: EVT2103895

Information Sheet

Introduction

Different non-nuclear sources of energy, including renewables and fossil fuels, have improved their efficiency levels, are being constructed rapidly, operate at reduced cost, and thus have become competitive economically. At the same time, on the nuclear side, lessons learned from past construction projects and increasingly growing safety requirements have led to additional safety measures, which normally increase costs in construction and operation. Also, with the ever-growing share of non-controlled renewables in electricity mixes, nuclear power plants (NPPs) may increasingly need to operate in load-following modes rather than in base-load modes, which puts further challenges to a cost-effective and competitive operation. As a result, a number of NPPs across the world have had to cease operation not because of ageing or safety issues, but because they could no longer compete economically.

Many industries were able to improve the efficiency and the economic performance of their facilities and products through the judicious use of advanced digital technologies, while still ensuring high levels of safety and security. The nuclear industry would greatly benefit from their experience to improve the economic performance and competitiveness of existing and future NPPs.

Many novel designs and advanced technologies are currently under study for both existing NPPs and new constructions to establish more efficient nuclear processes and design standardisation. The amount

of data acquired at NPPs has gradually increased, and the continuous development of data-based, intelligent analysis technologies can support fault diagnosis and prediction of important equipment to set up adequate operation and maintenance strategies.

Recognizing the relevance of the above-mentioned issues, at their 2021 meeting the members of the Technical Working Group on Nuclear Power Plant Instrumentation and Control recommended to the IAEA that it should initiate relevant activities to address these problems in the nuclear power engineering field. In response, the IAEA is developing a new Nuclear Energy Series report provisionally entitled *Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization* to provide guidance to Member States in this area.

Objectives

The purpose of the event is to provide an international forum to discuss and promote the judicious use of instrumentation and control and other advanced digital technologies to support the improvement and optimization of nuclear power plant performance. The event will also provide an opportunity to review a draft IAEA Nuclear Energy Series publication, provisionally entitled *Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization*.

Target Audience

In view of the subject of the event, participation is limited to IAEA Member States that currently operate nuclear power plants (NPPs) or are constructing their first NPP units. Participation is solicited from representatives of nuclear facilities and regulatory bodies, utilities, technical support organizations, designers, developers, vendors, and research organizations engaged in the field of I&C design and the application of such systems at NPPs. To ensure maximum effectiveness in the exchange of information, participants should be persons actively involved in the subject matter of the event.

The event is, in principle, open to all officially designated persons. The IAEA, however, reserves the right to limit participation due to limitations imposed by the available facilities. The maximum number of participants for this event is 50. It is therefore recommended that interested persons take the necessary steps to secure their official designation as early as possible.

Working Language

The working language of the event will be English; no interpretation will be provided.

Structure

The draft manuscript of the new IAEA Nuclear Energy Series report, provisionally entitled *Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization*, will be provided to the participants prior to the event. This draft will serve as the basis for dialogues at the event. Participants will be requested to review selected parts of the document and to provide their remarks and comments.

Topics

Presentations are invited on all approaches related to the plant performance optimization using instrumentation and control and other advanced digital technologies. The following list provides examples of presentation topics that would be appropriate for the event:

- Plant performance overview;
- Use of modelling;
- Model & Simulation Based Systems Engineering;
- Virtual reality based training;
- Model supported operation,
- Digitally-aided verification of manufactured products and installation on site;
- Diagnostics and prognostics;
- Improved detection and analysis of early signals;
- Improved fleet management;
- Supporting methodologies;
- Tools;
- Lessons learned from experience (case studies, operating experience, proven practices, etc.).

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 **15 June 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 the above deadline.

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

Expenditure 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 on whose behalf assistance is requested will make an important contribution to the event.

The application for financial support should be made using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **15 June 2022**.

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 are listed on the following IAEA web page:

<https://www-pub.iaea.org/iaeameetings/GeneralInfo/Guide/VIC>.

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

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

Presentations

Presentations should be prepared as Microsoft PowerPoint (ppt) or Portable Document Format (pdf) files. Computer-based projection facilities will be provided. Authors are requested to provide the Scientific Secretary with electronic copies of their presentation files in advance of their scheduled presentation slot so that the files can be duly uploaded. Electronic versions of the presentations are also necessary to ensure timely issuance of the proceedings to be prepared and distributed in electronic form.

It is not mandatory for all participants to submit a presentation. However, the IAEA welcomes and encourages contributions in this format. Time for the presentations will be limited to 25 minutes followed by a 5-minute discussion period. The number of presentations may have to be limited so as to leave sufficient time for discussions and review of the draft IAEA Nuclear Energy Series report provisionally entitled *Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization*.

Additional Information

The event will start on Tuesday, 30 August 2022, at 9.30 a.m. and end on Friday, 02 September 2022, at 2.00 p.m.

The event agenda, together with information on local arrangements, will be sent to the designated participants in due course.

General information on hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page: <https://www.iaea.org/sites/default/files/20/01/hotels.pdf>.

Additionally, participants may elect to make their own bookings at hotels in the area of the event location.

IAEA Contacts

Scientific Secretary:

Ms Nelly Ngoy Kubelwa
Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 24213

Email: N.Ngoy-Kubelwa@iaea.org

Administrative Secretary:

Ms Olga Gloeckler
Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 22804

Email: O.Gloeckler@iaea.org

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

Participation Form

Technical Meeting on Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization

IAEA Headquarters, Vienna, Austria

30 August–2 September 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 or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary N.Ngoy-Kubelwa@iaea.org and to the Administrative Secretary O.Gloeckler@iaea.org.

Deadline for receipt by IAEA through official channels: 15 June 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 <input type="checkbox"/> No <input type="checkbox"/> Would you prefer to present your paper as a poster? Yes <input type="checkbox"/> No <input type="checkbox"/> 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.

Grant Application Form

Technical Meeting on Instrumentation and Control and Other Advanced Digital Technologies for the Support of Plant Performance Optimization

IAEA Headquarters, Vienna, Austria

30 August–2 September 2022

To be completed by the applicant 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 N.Ngoy-Kubelwa@iaea.org and to the Administrative Secretary O.Gloeckler@iaea.org.

Deadline for receipt by IAEA through official channels: 15 June 2022

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended	
			from	to

2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked	
			from	to

3. Description of work performed over the last three years:

4. Institute's/Member State's programme in field of event:

Date: **Signature of applicant:** _____

Date: **Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority** _____