



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: **EVT2100684**

Dial directly to extension: (+43 1) 2600-26729

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 Computer Security for Small Modular Reactors and Microreactors** (hereinafter referred to as "event") to be held at the IAEA's Headquarters in Vienna, Austria, from **21 to 25 February 2022**.

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

The purpose of the event is to enhance cooperation and information exchange among Member States and selected organizations in the areas of instrumentation and control, and computer security, regarding the near-term deployment of small modular reactors and microreactors.

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 participants 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 **29 October 2021** 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, Mr Rodney Busquim e Silva, Division of Nuclear Security, Department of Nuclear Safety and Security (Email: R.Busquim@iaea.org), and to the Administrative Secretary, Ms Camilla Semper (Email: C.Semper@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.

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.



2021-07-30

Enclosures: Information Sheet
Participation Form (Form A)
Form for Submission of a Paper (Form B)
Grant Application Form (Form C)



Technical Meeting on Instrumentation and Control and Computer Security for Small Modular Reactors and Microreactors

**IAEA Headquarters, Vienna, Austria
and Virtual Participation via Cisco WebEx**

21–25 February 2022

Ref. No.: EVT2100684

Information Sheet

Introduction

In the last decade, there has been significant development in Small Modular Reactor (SMR) and Microreactor (MR) technologies. SMRs and MRs provide low carbon energy like traditional nuclear power plants, but they are more affordable, more adaptable for load following demands, and suitable for off-grid applications. SMRs and MRs usually have simplified and compact designs with built-in passive safety systems.

The increased digital automation, unique environmental conditions, remote supervisory control and remote maintenance, with reduced on-site staffing, reinforces the need for instrumentation and control (I&C) solutions and computer security measures being considered and maintained during the entire SMR/MRs lifecycle, from design to operation to decommissioning.

One of the biggest challenges for the near-term deployment of SMR/MRs is to accelerate their technology development and to demonstrate the level of readiness both for electricity and non-electricity applications, while maintaining compliance with standards for safety and security.

The IAEA, in playing its central role in strengthening and improving cooperation in, and the coordination of international efforts in the nuclear field, will bring together relevant subject matter experts, from nuclear and non-nuclear organizations, to discuss and identify I&C and computer security related issues and challenges related to the unique technological and operational characteristics of SMR/MRs.

Objectives

The objective of the event is to serve as an international forum for enhancing interaction and information exchange among international experts for I&C and computer security aspects, including challenges for the near-term deployment of SMR/MRs. The intention is also to foster Member States' cooperation and technical exchange on activities that have the potential to advance the safety and security of SMR/MRs.

Target Audience

Professionals such as system designers, operators, regulators and subject-matter experts in industrial control systems, cybersecurity and nuclear technology, and other stakeholders, as well as professionals from international and technical organizations that support the design, development and deployment of SMR/MRs.

Working Language

English.

Expected Outputs

The results of the event will be summarized in a report that will provide a catalogue of potential future activities and cooperation in the areas of I&C and computer security, coordinated by the IAEA, which could provide effective and efficient support to Member States and stakeholders interested in the early deployment of SMR/MRs.

Structure

The event programme will consist of:

- **Plenary Sessions** dedicated to invited speakers and that are related to the I&C and computer security thematic areas.
- **Working Group Sessions** dedicated to speakers who have submitted an abstract related to the I&C and computer security topics. These sessions include panel and group discussions.

The plenary and the working group sessions' organizers will be responsible for the overall scientific content, including selecting the speakers, organizing the technical and discussion sessions.

Topics

The plenary sessions will cover the following I&C and computer security thematic areas:

- **Challenges for Innovative I&C Technologies and Computer Security for SMR/MRs**

Keywords: instrumentation and control, computer security, smart sensor, sensor and actuator miniaturization, unique environmental conditions, processing capacity, wireless communication, load-following, smart grid connections, application of systems engineering approach, autonomous and remote operation.

- **Safety and Security Integration of I&C and Computer Security for SMR/MRs**

Keywords: safe and secure by design, interfaces between safety and security, risk-informed approach, common computer security framework, analysis of consequences: postulated design-based accidents, computer security scenarios, multi-unit plants, independence of modules, autonomous and remote operation, one-house approach.

- **Regulatory Approach for SMR/MRs**

Keywords: computer security regulatory framework, I&C innovations regulatory readiness, computer security by design, prescriptive and performance-based regulations, technology-neutral regulations, harmonization of international regulation, design basis treat (DBT).

The working group sessions will cover some of the following topics:

- **Integration of Safety and Security for SMR/MRs**

Keywords: instrumentation and control, common computer security framework, diversity of design, multi-unit plants, independence of modules, autonomous operation, remote operations, safety and security by design, system engineering approach.

- **Innovations on I&C and new Digital Technologies**

Keywords: instrumentation and control, computer security, anomaly detection, data integration, performance assessment, new sensors and actuators, unique environmental conditions, optimization, digital twin, machine learning, artificial intelligence, OPC-Unified Architecture, Time Sensitive Network.

- **SMR/MRs Regulation**

Keywords: DBT, postulated attack vectors, technology-neutral regulation, prescriptive and performance-based approaches, regulation for international market, I&C innovations regulatory readiness.

- **I&C and Computer Security Supply Chain for SMR/MRs**

Keywords: instrumentation and control, computer security throughout the supply chain, commercial off the shelf, off-site modular construction, management of supply chain security risks.

- **Advanced I&C and Computer Security Modelling and Simulation**

Keywords: integrated modelling, I&C digital twin and virtual systems, threat scenario simulation, network data capture, data integration, data management, training, vulnerability management.

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 **29 October 2021**. 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 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 4 pages (including figures and tables) and should not exceed 1200 words. It should be sent electronically to Mr Rodney Busquim e Silva, the Scientific Secretary of the event (see contact details below), not later than **29 October 2021**. Authors will be notified of the acceptance of their proposed presentations by **29 November 2021**.

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 **29 October 2021**.

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 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 **29 October 2021**.

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:

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, 21 February 2022, and is expected to end at 12:30 on Friday, 25 February 2022.

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 26729

Fax: +43 1 26007

Email: R.Busquim@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 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/EVT2100684

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

Participation Form

Technical Meeting on Instrumentation and Control and Computer Security for Small Modular Reactors and Microreactors

IAEA Headquarters, Vienna, Austria

21–25 February 2021

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.

Deadline for receipt by IAEA through official channels: 29 October 2021

Representing following Member-State/ non-Member State/entity or invited organization:		
Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Name of Institute/Affiliation:		
Address of Institute/Affiliation:		
Tel. (Fax) Office/Mobile:		
Email:		
Date of birth (YYYY-MM-DD):	Place of birth:	
Nationality:	Passport number:	
Date/Place of issue of passport:	Passport valid until:	

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. Relevance of the event:

How do you envisage applying the knowledge and/or experience gained from the event to your current work role?

5. Language ability:

The designating authority confirms that the participant is proficient in the language in which the event is to be held.

Yes

6. Medical Status

Both the designating authority and the applicant acknowledge that the applicant shall be solely responsible for his or her fitness to travel, as well as for any medical requirements or precautions in connection with traveling to the event, including vaccinations or immunizations.

Yes

Date: **Signature of applicant:** _____

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

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

Technical Meeting on Instrumentation and Control and Computer Security for Small Modular Reactors and Microreactors

IAEA Headquarters, Vienna, Austria

21–25 February 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 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: 29 October 2021

Title of the paper:		
If applicable: Abstract ID in IAEA-INDICO:		
Family name(s) and first name(s) of all author(s) (same as in passport(s):	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 (same as in passport):	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 for the use of the aforementioned material in this and any future editions of the publication, 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:

Grant Application Form

Technical Meeting on Instrumentation and Control and Computer Security for Small Modular Reactors and Microreactors

IAEA Headquarters, Vienna, Austria

21–25 February 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 R.Busquim@iaea.org and to the Administrative Secretary C.Semper@iaea.org.

Deadline for receipt by IAEA through official channels: 29 October 2021

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** _____