International Conference on Computer Security in the Nuclear World: Security for Safety

19 – 23 June 2023

PROGRAMME

Organized by the
International Atomic Energy Agency (IAEA)

IAEA Headquarters Vienna, Austria

Conference Description

Introduction

The purpose of the conference is to provide a forum for presentations and discussion on nuclear security efforts within the area of computer security; for the review of emerging trends in computer security and areas that need to be addressed; for the consideration of possible objectives and priorities for nuclear security efforts in computer security; and for discussion on how the IAEA and other international organizations can contribute to international cooperation in this growing area.

The conference will provide a global forum for competent authorities, operators, system and security integrators and vendors, and other relevant entities engaged in computer security activities related to nuclear security or safety, to exchange information and foster international cooperation in computer security as an integral element of nuclear security and safety. It aims to do so through:

- Presentations and discussion on nuclear security and safety efforts within the area of computer security (including achievements, experience gained, and lessons learned)
- Review of emerging trends in computer security and areas that need to be addressed
- Consideration of possible objectives and priorities for nuclear security or safety efforts in computer security, and of how current approaches may evolve to address these and future challenges
- Consideration of how the IAEA and other international organizations can contribute to international cooperation in this important area

Registration and Attendance

Conference participants are advised to arrive at Checkpoint 1/Gate 1 of the Vienna International Center at least one hour before the start of the Conference on the first day in order to allow for timely registration, security check, and issue of grounds passes. Gate 1 will be open at 07:30 for registration on Monday morning. Alternatively, participants can also register on Sunday, 18 June from 15:00 to 18:00.

Grantees and Invited Speakers who have received financial support from the IAEA should please register their attendance at the Information Desk at the entrance of the M Building. The Information Desk and the Conference Secretariat in MOE67 will be staffed throughout the Conference and will be ready to assist at any time.

Conference App

The IAEA Conferences and Meetings App provides one-stop access to information on the Conference Programme, the exhibition, and scheduled side events. The app also allows users to put together their own personalized schedule of events. Via this app, participants will be able to follow the livestreaming of the conference, view the abstract associated with each presentation, view the latest Conference Programme, interact with other participants, and view PowerPoint presentations released after each event. Participants will receive an email inviting them to register for the app approximately one week before the conference.

Conference Website & NUSEC Portal

In addition to the Conference App, the schedule, registration procedures, and more general information will be available on the Conference Website at https://www.iaea.org/events/cybercon23.

Conference Overview

The Conference will successively present plenary sessions and parallel technical sessions. Plenary sessions will include on stage demonstrations related to computer security risks and mitigation.

A so called "Cyber-Village" will also be opened during breaks and technical sessions where hands-on computer security demonstrations will be presented.

All sessions are related to the main themes of the conference:
- Theme 1: State-Level Strategy and Regulatory Approaches
- Theme 2: Computer Security Programme Implementation
- Theme 3: Computer Security in Supply Chain Management
- Theme 4: Practical Implementation of Computer Security Assurance Activities
- Theme 5: Sustainability of Computer Security
- Theme 6: Human Resources Contribution to Computer Security
- Theme 7: International Cooperation in Computer Security for A Nuclear Security Regime
- Theme 8: Computer Security of Emerging Digital Technologies for Nuclear Activities

Monday will start with an opening plenary with distinguished speakers and a scenario-based storyline about cyber-attacks on a fictitious country that will set the stage for follow-on plenary sessions.

Monday afternoon and each half day from Tuesday to Thursday will commence with a plenary panel session followed by parallel technical sessions. Friday will conclude with a presentation of the Presidents' Report following plenary sessions related to emerging technologies.

Panel sessions will take place in Board Room B/M1, and the parallel technical sessions will take place in Board Room B/M1, Board Room A, and Conference Room M2.

An IAEA welcome reception for all participants will be held on Monday evening.

Poster Presentations

Poster presentations will be conducted in the Poster Area M01 (1st Floor, M Building) on Tuesday, Wednesday, and Thursday during the coffee/tea breaks.

Poster presenters are kindly requested to affix their poster on the assigned poster board by Tuesday 09.00 at the latest and to be at their poster during the session assigned to them to provide information and answer questions (this information is available in this programme).

Posters will remain on display for the entire week of the Conference, and should be removed by 14:00 on Friday.

Posters can also be provided as **Interactive Content Presentations** (ICPs).

All ICP presenters are kindly requested to attend the ICP briefing to receive final logistical instructions. These briefings will occur daily at 08:30 at the ICP Station on the assigned day of their presentation (M Building, Ground Floor, Press room).

Furthermore, it is suggested that ICP presenters make use of the preview centre on the ground floor (M0E68) for a final check of their presentations, and to familiarize themselves with the touch-screen displays at least one day in advance of their respective presentations.

Cyber-Village

A Cyber-Village will host hands-on computer security demonstrations with expert discussions on computer security protections based on IAEA computer security principles and recommendations in Room M4, M6, and the Press Room on Tuesday, Wednesday and Thursday as scheduled.

Participants will be able to attend demonstrations on the fictitious Asherah Nuclear Power Plant, Gula Hospital, and on radiation detection equipment to understand computer security implications and mitigation techniques to defend against cyber-attacks.

Participants will also be able to sign expressions of interest for a new computer security regulation drafting school that will begin in 2024, and a newly developed virtual training environment deployment for member states. These two activities will also be showcased in the Cyber-Village.

Discussions

All sessions are being recorded and will be made available the next day via the IAEA conference & meetings app. Anyone who wishes to take the floor, e.g., during discussions, should, after having been recognized by the Chairperson, use one of the microphones available in the meeting room and begin their question or comment by stating their name, country, or organization. Participants are asked to be as concise as possible. Questions can also be addressed via the conference app through the Q&A function of each session. Relevant questions will be made public via the conference app by the Technical Officer assigned to the session.

The Media

The opening session is open to the press. All other sessions will be limited to Conference participants.

Scenario-based demonstrations and discussion

Scenario-Based demonstrations will be conducted throughout the week.

Monday morning, the full story relating to the fictitious State of Anshar's nuclear activities and associated computer security concerns will be presented. Then, seven demonstrations on Monday afternoon, Tuesday, Wednesday, and Thursday will detail particular parts of the full story.

Several demonstrations will host interactive activities through polling questions where audience members will be invited to use their personal electronic devices, such as mobile phone, tablet, or laptop, to provide their input on themes and topics relevant to the Conference.

Each of the seven dedicated demonstrations will be followed by a Q&A in Board-Room B, and then continued in Cyber-Village (Press-Room) with hands-on demonstrations.

Side Events

A number of side events are scheduled throughout the Conference Programme, organized by interested Member States, Organizations, and the IAEA, which relate to a number of topics relevant to Computer Security in the Nuclear World. Side events are open to all Conference participants.

A full schedule of side events can be found at the end of this Programme.

Exhibition

Exhibitors will provide an overview of their capability to mitigate or support mitigation of cyber-risks. Please take the time to visit and talk with the exhibition booths.

Coffee Breaks

Coffee and tea will be available during the morning and afternoon breaks courtesy of voluntary contributions. The coffee breaks will be held on the ground floor and first floor of the M Building. Please take the time to visit and network with colleagues, attendees, and presenters.

Internet Access

Public access Wi-Fi is available throughout the IAEA buildings. Select access point WLAN-GUEST and the connection will be automatic. No password is needed.

Bank and Post Office

Banking Services and a post office are located on the first floor of the C Building.

Conference Presidency:

Conference President: Ms Na Young Lee

IAEA Secretariat:

Scientific Secretaries: Mr Trent Nelson
Mr Christophe Pilleux

Scientific and   Ms Charlotte Grace Gherardini
Administrative Support: Mr Bryan Denehy
Ms Hayley Sears
Mr Frank Wong

Conference Coordinator: Mr Sanjai Padmanabhan

Conference Venue:

International Atomic Energy Agency
Vienna International Centre (VIC)
M Building

Wagramer Strasse 5
A-1400 Vienna, Austria
Tel.: (+43 1) 2600 21330

Working Language: English

Resolutions: No resolutions may be submitted for consideration on any subject;
no votes will be taken.

Programme Committee:

Chairperson:

Cantemir Ciareu	Romania	Chair PCM 1, 3 & 4
Charlotte East	Australia	Co-Chair PCM 1
Heliton Briglia	Brazil	Co-Chair PCM 2
Nadia Nawwar	Egypt	Co-Chair PCM 2, 3 & 4

Members

Lucas Nogueron	Argentina	Dhanu Dwiadhika	Indonesia
Nick Howarth	Australia	Djoko Hari Nugroho	Indonesia
Paul Smith	Austria	Lilis Susanti Setianingsih	Indonesia
David Allison	Austria	Jeong Ho Lee	Republic of Korea
Leonardo De Andrade	Brazil	Hyunjoo Lee	Republic of Korea
Jefferson Pinto	Brazil	Mohamed Belabar	Morocco
Macdonald Marienna	Canada	Mamane Bawa	Niger
LI Jianghai	China	Ethel Ofoegbu	Nigeria
LI Ruonan	China	Oluwafemi Adegbulugbe	Nigeria
LIU Xiaojun	China	Dumitru Musat	Romania
LI Yong	China	Andrey Gubanok	Russian Federation
Wencai Tang	China	Gleb Lebedev	Russian Federation
Sai Wang	China	Ekaterina Rudina	Russian Federation
Ming Yao	China	Alexander Bulychev	Russian Federation
Bairui Zhang	China	Pavel Tsvetov	Russian Federation
Bo Zong	China	Samo Tomažič	Slovenia
Hitham Shaheen	Egypt	Matthew Lloyd Davies	United Kingdom
Mohamed Ahmed	Egypt	Yvonne Bannister	United Kingdom
Mahmoud Sabry	Egypt	Rakesh Burgul	United Kingdom
Soliman Ahmed Galal	Egypt	Mike Saint-John Green	United Kingdom
Tony Huhtakangas	Finland	Sarah Ayers	United States of America
Frédéric Boën	France	Nancy Fragoyannis	United States of America
Olivier Fichot	France	James Beardsley	United States of America
Laurent Moutenot	France	Gregory White	United States of America
Wolfram Rother	Germany	Anne MacQuaid	United States of America
Joseph Gigi	India	Robert Anderson	United States of America
Makarand Kulkarni	India	Sarah Minot Asrar	United States of America
Jinadass Rajan	India	Brian Yip	United States of America
Intan Savitri	Indonesia		

Note: Underline = Participated in all meetings

IAEA Mobile Conference Application

 Participants are encouraged to download the "IAEA Conference and Meetings" App available on Google Play and the iTunes Store.

Android   **iPhone**

The functions and features of the App for smartphones and tablets will be used for various purposes during the event:

 View an up-to-date Programme

 Check floor map of the sessions and exhibitors

 Read abstracts and full-papers of speakers

 Participate in voting during sessions

 Raise questions to speakers during session

 Send message to other participants

 Receive announcements via push-notification

If you have questions or require assistance on the App, please contact the Information Desk at the entrance of the M Building.

TIMETABLE

Sunday, 19 June 2023

Time	Session Title / Activity	Venue
15:00–18:00	Registration	Gate 1

Monday, 19 June 2023

Time	Session No.	Session Title / Activity	Venue
07:30-ongoing		*Registration*	Gate 1
10:00-11:00	PS 1.1	*Opening Session*	Board Room B (BR-B)/M1
11:00-11:30		*Coffee Break*	
11:30-13:00	PS 1.3	*Demonstration by the IAEA*: Cyber-Attacks in the Fictitious State of Anshar	BR-B/M1
13:00-14:00		*Lunch Break*	
14:00-15:00	PS 1.4	*Plenary Session on Theme 1* State-Level Strategy and Regulatory Approaches	BR-B/M1
15:00-15:30		*Coffee Break*	
15:30-17:00	TS 1.1a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	BR-B/M1
15:30-17:00	TS 1.1b	*Technical Session on Theme 2* Computer Security Programme Implementation	BR-A
15:30-17:00	TS 1.1c	*Technical Session on Theme 6* Human Resources Contribution to Computer Security	M3
15:30-17:00	TS 1.1d	*Technical Session on Theme 8* Computer Security of Emerging Digital Technologies for Nuclear Activities	M2
17:00-17:30		*Break*	
17:30-18:15	PS 1.5	*Demonstration by India:* The Air Gap – The Perfect Defense or a Complete Myth?	BR-B/M1
18:30-19:30		*IAEA Welcome Reception*	M-Building – Ground Floor

Tuesday, 20 June 2023

Time	Session No.	Session Title / Activity	Venue
09:00-09:45	PS 2.1	*Plenary Session on Theme 2* Computer Security Programme Implementation	BR-B/M1
09:45-10:30	PS 2.2	*Demonstration by the Republic of Korea:* Safety-Security Interface	BR-B/M1
10:30-11:00		*Coffee Break*	
10:30-12:30	CV 2.1	*Cyber-Village*	M4, M6 & Press-Room
10:30-11:00	Po 2.1	*Poster Session 1*	M01
11:00-12:30	TS 2.1a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	BR-A
11:00-12:30	TS 2.1b	*Technical Session on Theme 2* Computer Security Programme Implementation	BR-B/M1
11:00-12:30	TS 2.1c	*Technical Session on Theme 4* Practical Implementation of Computer Security Assurance Activities	M3
11:00-12:30	TS 2.1d	*Technical Session on Theme 8* Computer Security of Emerging Digital Technologies for Nuclear Activities	M2
11:00-12:30	CV 2.1	*Virtual Training Village on Learners Platform and Computer Security Exercises*	M6
12:30-14:00		*Lunch Break*	
12:45-13:30	SE 2.1	*Side Event* Securing Operational Technology for Nuclear Material Transport *Nuclear Transport Solutions, United Kingdom*	BR-B/M1
12:45-13:30	SE 2.2	*Side Event* Gula Hospital Cyber-Attack Mitigation and Response *IAEA with the University of São Paulo (USP), Brazil and the Department of Energy - Office of Radiological Security (ORS), United States of America*	Cyber-Village
12:45-13:30	SE 2.3	*Side Event* Nuclear Security e-Learning: Supporting Capacity Building in Information and Computer Security, *IAEA*	M2
14:00-14:45	PS 2.3	*Plenary Session on Theme 3* Computer Security in Supply Chain Management	BR-B/M1
14:45-15:30	PS 2.4	*Demonstration by France:* Computer security maintenance for critical industrial assets	BR-B/M1
15:30-16:00		*Coffee Break*	
15:30-17:30	CV 2.2	*Cyber-Village*	M4, M6 & Press-Room
15:30-16:00	Po 2.2	*Poster Session 2*	M01
16:00-17:30	TS2.2a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	M3
16:00-17:30	TS2.2b	*Technical Session on Theme 2* Computer Security Programme Implementation	BR-A
16:00-17:30	TS2.2c	*Technical Session on Theme 3* Computer Security in Supply Chain Management	BR-B/M1
16:00-17:30	TS2.2d	*Technical Session on Theme 5* Sustainability of Computer Security	M2
16:00-17:30	CV 2.2	*Virtual Training Village on Advanced Incident Response Tools*	M6

Wednesday, 21 June 2023

Time	Session No.	Session Title / Activity	Venue
09:00-09:45	PS 3.1	*Plenary Session on Theme 4* Practical Implementation of Computer Security Assurance Activities	BR-B/M1
09:45-10:30	PS 3.2	*Demonstration by the United Kingdom:* Gaining Security Assurance in the Supply Chain	BR-B/M1
10:30-11:00		*Coffee Break*	
10:30-12:30	CV 3.1	*Cyber-Village*	M4, M6 & Press-Room
10:30-11:00	Po 3.1	Poster Session 3	M01
11:00-12:30	TS3.1a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	M3
11:00-12:30	TS3.1b	*Technical Session on Theme 2* Computer Security Programme Implementation	BR-B/M1
11:00-12:30	TS3.1c	*Technical Session on Theme 3* Computer Security in Supply Chain Management	M2
11:00-12:30	TS2.1d	*Technical Session on Theme 4* Practical Implementation of Computer Security Assurance Activities	BR-A
11:00-12:30	CV 3.1	*Virtual Training Village on Advanced Incident Response Tools*	M6
12:30-14:00		*Lunch Break*	
12:45-13:30	SE 3.1	*Side Event* Transport and Cybersecurity – What are the Risks? *Ministry of Ecological Transition (MTE) with the Institute for Radiological Protection and Nuclear Safety (IRSN), France*	BR-B/M1
12:45-13:30	SE 3.2	*Side Event* Asherah NPP Cyber-Attack Analysis and Response *IAEA with the Austrian Institute of Technology GmbH (AIT), Austria, Bruce Power, Canada and Olin Corporation, United States of America*	Cyber-Village
14:00-14:45	PS 3.3	*Plenary Session on Theme 5* Sustainability of Computer Security	BR-B/M1
14:45-15:30	PS 3.4	*Demonstration by Australia:* The Role of Intelligence Collection	BR-B/M1
15:30-16:00		*Coffee Break*	
15:30-17:30	CV 3.2	*Cyber-Village*	M4, M6 & Press-Room
15:30-16:00	Po 3.2	Poster Session 4	M01
16:00-17:30	TS3.2a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	BR-B/M1
16:00-17:30	TS3.2b	*Technical Session on Theme 2* Computer Security Programme Implementation	M3
16:00-17:30	TS3.2c	*Technical Session on Theme 5* Sustainability of Computer Security	M2
16:00-17:30	TS3.2d	*Technical Session on Theme 8* Computer Security of Emerging Digital Technologies for Nuclear Activities	BR-A
16:00-17:30	CV 3.2	*Virtual Training Village on Learners Platform and Computer Security Exercises*	M6
17:45-20:00	SE3.4	*Reception* Young Professionals and Nuclear Security with *the World Institute for Nuclear Security (WINS) and the United Nations-Nuclear Young Generation (UN-NYG)*	VIC Bar

Thursday, 22 June 2023

Time	Session No.	Session Title / Activity	Venue
09:00-09:45	PS4.1	*Plenary Session on Theme 6* Human Resources Contribution to Computer Security	BR-B/M1
09:45-10:30	PS 4.2	*Demonstration by China:* Behavioral Analytics: Detecting the Insider Threat	BR-B/M1
10:30-11:00		*Coffee Break*	
10:30-12:30	CV 4.1	*Cyber-Village*	M4, M6 & Press-Room
10:30-11:00	Po 4.1	Poster Session 5	M01
11:00-12:30	TS4.1a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	BR-A
11:00-12:30	TS4.1b	*Technical Session on Theme 2* Computer Security Programme Implementation	BR-B/M1
11:00-12:30	TS4.1c	*Technical Session on Theme 5* Sustainability of Computer Security	M2
11:00-12:30	TS4.1d	*Technical Session on Theme 6* Human Resources Contribution to Computer Security	M3
11:00-12:30	CV 4.1	*Virtual Training Village on Learners Platform and Computer Security Exercises*	M6
12:30-14:00		*Lunch Break*	
12:45-13:30	SE 4.1	*Side Event* Computer Security Exercises and IDS-SIEM Detection/Response *IAEA with Tsinghua University, China*	Cyber-Village
12:45-13:30	SE 4.2	*Side Event* Women in Nuclear Security *IAEA - Women in Nuclear Security Initiative (WINSI)*	M2
14:00-14:45	PS 4.3	*Plenary Session on Theme 7* International Cooperation in Computer Security for a Nuclear Security Regime	BR-B/M1
14:45-15:30	PS 4.4	*Demonstration by the United States of America:* Guarding Against the Insider Threat	BR-B/M1
15:30-16:00		*Coffee Break*	
15:30-17:30	CV 4.2	*Cyber-Village*	M4, M6 & Press-Room
15:30-16:00	Po 4.2	*Poster Session 6*	M01
16:00-17:30	TS4.2a	*Technical Session on Theme 1* State-Level Strategy and Regulatory Approaches	M3
16:00-17:30	TS4.2b	*Technical Session on Theme 4* Practical Implementation of Computer Security Assurance Activities	BR-A
16:00-17:30	TS4.2c	*Technical Session on Theme 7* International Cooperation in Computer Security for a Nuclear Security Regime	BR-B/M1
16:00-17:30	TS4.2d	*Technical Session on Theme 8* Computer Security of Emerging Digital Technologies for Nuclear Activities	M2
16:00-17:30	CV 4.2	*Virtual Training Village on Advanced Incident Response Tools*	M6

Friday, 23 June 2023

Time	Session No.	Session Title / Activity	Venue
09:00-10:30	PS 5.1	*Plenary Session on Theme 8* Computer Security of Emerging Digital Technologies for Nuclear Activities	BR-B/M1
10:30-11:00		*Coffee Break*	
11:00-12:30	PS 5.2	*Plenary Session on Theme 8* Computer Security of Emerging Digital Technologies for Nuclear Activities	BR-B/M1
12:30-13:00		*Closing Session*	BR-B/M1

DETAILED PROGRAMME

SUNDAY, 18 June 2023

Time	Session No.	Session Title / Activity	Venue
15:00–18:00		Registration	Gate 1

MONDAY, 19 June 2023, PS 1.1

10:00–11:00   **OPENING SESSION**   **BR-B/M1**

Name and Title	Country/ Organisation	Title
Rafael Mariano Grossi Director General	IAEA	Opening Statement
Na Young Lee Conference President	Republic of Korea	Opening Remarks
Robert Lee Chief Executive Officer	Dragos	Current State of Computer Security and Critical Infrastructure

MONDAY, 19 June 2023, PS 1.3

11:30–13:00   **DEMONSTRATION SESSION**   **BR-B/M1**

Chair	Scott Purvis Section Head - Information Management Section | Division of Nuclear Security | IAEA
Technical Officer	Christophe Pilleux, IAEA

Speaker	Country/ Organisation	Title
D. Dudenhoeffer	United States of America	Narrator for Cyber-Attacks in the Fictitious State of Anshar
C. Hinderstein	United States of America	Interactive Discussion
G. Božič	Slovenia	Interactive Discussion

MONDAY, 19 June 2023, PS 1.4

14:00–15:00   **PLENARY SESSION – TH1**   **BR-B/M1**

State-Level Strategy and Regulatory Approaches

Chair	Paul Shanes Superintending Inspector - Professional Lead for Cyber Security | Office for Nuclear Regulation (ONR) | United Kingdom
Technical Officer	Trent Nelson, IAEA
Rapporteur	Shannon Eggers, United States of America

Speaker	Country/ Organisation	Title
S. Tomažič	Slovenia	090 - Key Computer Security Regulation Elements
M. Pillai	United Kingdom	176 - Developing and Implementing Cross-Sector Cyber Strategy
N. Delaunay	IAEA	IAEA Regulatory Validation
J. Sladek	Canada	Canadian Regulatory Approaches

MONDAY, 19 June 2023, TS 1.1a

15:30–17:00   **TECHNICAL SESSION – TH1**   **BR-B/M1**

State-Level Strategy and Regulatory Approaches

Chair   John Sladek
                     Technical Specialist - Systems Engineering Division/Directorate of Assessment and Analysis |
                     Canadian Nuclear Safety Commission (CNSC) |Canada

Technical Officer Trent Nelson**,** IAEA

Rapporteur   Jeff Knight, United States of America

Speaker	Country	Title
B. Yip	United States of America	033 - Primary Contributing Causes of Cybersecurity Inspection Findings at U.S. Nuclear Power Plants
W. Cain	United Kingdom	194 - Transitioning to an Outcome Focused Regulatory Regime for Civil Nuclear Security
B. Stauffer	Switzerland	197 - Swiss Computer Security Regulatory Approach: Different Roles, Common Objectives

MONDAY, 19 June 2023, TS 1.1b

15:30–17:00   **TECHNICAL SESSION – TH2**   **BR-A**

Computer Security Programme Implementation

Chair   Marienna MacDonald
                     Section Head - Information and Control Systems |
                     National Canadian Nuclear Laboratories (CNL) | Canada

Technical Officer Mitchell Hewes, IAEA

Rapporteur   Robert Anderson, United States of America

Speaker	Country	Title
I. Ocheme	Nigeria	005 - Review and Strengthening Cybersecurity of Sensitive Digital Assets (SDAs) in a Radioactive Facility
J. Benjamin	United States of America	050 - Establishing an OT Security Operations Center (SOC) for Nuclear
C. Martin	France	092 - Cybersecurity with its Specificities as an Integrated Approach Within the Nuclear Security and Nuclear Safety Management in EDF Nuclear Generation Division

MONDAY, 19 June 2023, TS 1.1c

| 15:30–17:00 | TECHNICAL SESSION – TH6 | M3 |

Human Resources Contribution to Computer Security

Chair	Makarand Kulkarni Head - Directorate of Regulatory Affairs and Communications | Atomic Energy Regulatory Board (AERB) | India
Technical Officer	Christophe Pilleux, IAEA
Rapporteur	Bryan Denehy, IAEA

Speaker	Country	Title
S. Ige	Nigeria	023 - Curbing Cyber Threats with Dynamic Human Resource Management Policies
P. Bianchi	Brazil	124 - Potential Organizational Behavior Management (OBM) Contributions for Raising Computer Security Awareness and Insider Threat Mitigation
I. Junianto	Indonesia	059 - Optimizing Cyber Security Knowledge Management to Face Challenges at Nuclear Security in Indonesia
L. Nikolaev	Russian Federation	208 - Using cyber ranges as a new way of addressing the lack of computer security competence

MONDAY, 19 June 2023, TS 1.1d

| 15:30–17:00 | TECHNICAL SESSION – TH8 | M2 |

Computer Security of Emerging Digital Technologies for Nuclear Activities

Chair	Jianghai Li Associate Professor - Senior Researcher | Tsinghua University | China
Technical Officer	Rodney Busquim, IAEA
Rapporteur	Anne McQuaid, United States of America

Speaker	Country	Title
A. Kim	United States of America	038 - A Zero Trust Framework for Nuclear Facilities
L. Peters	Germany	016 - Machine Learning Based Predictive Control to Ensure Integrity of Industrial Automation and Control Systems
C. Lamb	United States of America	076 - Information Protection in Nuclear Systems

MONDAY, 19 June 2023, PS 1.5

| 17:30–18:15 | DEMONSTRATION SESSION | BR-B/M1 |

| **Chair** | Makarand Kulkarni
Head - Directorate of Regulatory Affairs and Communications \|
Atomic Energy Regulatory Board (AERB) \| India |
| **Technical Officer** | Christophe Pilleux, IAEA |

Speaker	Country	Title
J. Gigi, V. Boppanna	India	The Air Gap – The Perfect Defense or a Complete Myth?

| **18:30–19:30** | **IAEA Welcome Reception** | **MOE** |

TUESDAY, 20 June 2023, PS 2.1

09:00–09:45	**PLENARY SESSION – TH2**	**BR-B/M1**

Computer Security Programme Implementation

Chair	Scott Hilts Director - Information Security Programs and Strategy| Bruce Power |Canada
Technical Officer	Mitchell Hewes, IAEA
Rapporteur	Christian Deura, United Kingdom

Speaker	Country	Title
C. Martin	France	Implementing a Computer Security Programme for Nuclear Security
F. Al Bousi	United Arab Emirates	Cyber Security Incident Response for Nuclear Facilities

TUESDAY, 20 June 2023, PS 2.2

09:45–10:30	**DEMONSTRATION SESSION**	**BR-B/M1**

Chair	Na Young Lee Director General - Office of Nuclear Nonproliferation| Korea Institute of Nuclear Nonproliferation and Control (KINAC) | Republic of Korea
Technical Officer	Christophe Pilleux, IAEA

Speaker	Country	Title
J. Lee, Y. Lee	Republic of Korea	Safety Security Interface

TUESDAY, 20 June 2023, CV 2.1

10:30–12:30	**CYBER-VILLAGE SESSION**	**M4, M6, Press Room**

Technical Officer	Trent Nelson, IAEA

Title	Room
Technical exchange Village on NSS 13, 14 and 15 topics	M4
Virtualized Training Village	M6
Country Demonstrations Village	Press Room

TUESDAY, 20 June 2023, Po 2.1

10:30–11:00 **POSTER SESSION** **M01**

Technical Officer Christophe Pilleux, IAEA

Poster Station	Paper No.	Name	Designating Member State/ Organization	Title
01	010	L. Cepeda	Dominican Republic	Sustainable Implementation of Cybersecurity in The Regulatory Framework of the Dominican Republic
07	051	M. Kandil	Egypt	Interface Between Safety and Security at Cyber Security in NPP I&C System
13	067	M. Ahmed	Sudan	The Burden of Nuclear Information Security in Sudan: Weaknesses and Strengths
19	088	D. Rahayu	Indonesia	Analysis Of Computer Security Regulations Readiness at Nuclear Installation Towards the First NPP in Indonesia
25	116	S. Bicakci	Türkiye	Between Compliance and Operability: Building Holistic Trust Management for Nuclear Power Plants
31	119	I. Lee	Republic of Korea	Proposal for NPPs Cyber Security Test-bed Concept

TUESDAY, 20 June 2023, TS 2.1a

11:00–12:30 **TECHNICAL SESSION – TH1** **BR-A**

State-Level Strategy and Regulatory Approaches

Chair Lilis Susanti Setianingsih
Radiation Regulatory Officer |
Nuclear Energy Regulatory Agency (BAPETEN) | Indonesia

Technical Officer Jim Beardsley, IAEA

Rapporteur Innocent Ocheme, Nigeria

Speaker	Country	Title
S. Hilts	Canada	095 - Canadian National Standard and its Use in Supporting Regulatory Activities
B. Kaeruza	Zimbabwe	126 - Computer Security in Zimbabwe's Nuclear Security Regime.
M. Mulyadi	Indonesia	006 - Design of Computer Security Incident Handling Procedures in Nuclear Installations in Indonesia
H. Lee	Republic of Korea	150 - Nuclear Regulatory System in the Republic of Korea

TUESDAY, 20 June 2023, TS 2.1b

11:00–12:30	TECHNICAL SESSION – TH2	BR-B/M1

Computer Security Programme Implementation

Chair	Greg White Computer Scientist | Lawrence Livermore National Laboratory (LLNL) | United States of America
Technical Officer	Jorge Luis Hernandez, IAEA
Rapporteur	Bryan Denehy, IAEA

Speaker	Country	Title
L. Campbell	United States of America	139 - PowerPoint Isn't Working: Changing How We Teach Computer Security to Increase Retention and Awareness in Hybrid Learning Environments
F. Al Bousi	United Arab Emirates	171 - Operator Experience in Implementing Cyber Security in a New Build NPP
J. Li	China	174 - A Cyber-Physical Integrated Approach to Discriminate Insider Threat from Common Abnormal Behaviors: A Case Study of I&C Systems

TUESDAY, 20 June 2023, TS 2.1c

11:00–12:30	TECHNICAL SESSION – TH4	M3

Practical Implementation of Computer Security Assurance Activities

Chair	Hitham Shaheen Senior Information Technology Project Manager | Egyptian Nuclear and Radiological Regulatory Authority (ENRRA) | Egypt
Technical Officer	Robert Larsen, IAEA
Rapporteur	Samuel Clements, United States of America

Speaker	Country	Title
C. Martin	France	103 - Computer Security Assessment in EDF Nuclear Generation: An Onion Layers Structure
S. Maldonado	United States of America	158 - Emerging Technologies for Enhanced Cyber Detection and Response
W. Cain	United Kingdom	107 - Intelligence-led, Cyber Kill Chain-Designed Assurance "A Risk-Informed Approach to Assurance Testing"

TUESDAY, 20 June 2023, TS 2.1d

| 11:00–12:30 | **TECHNICAL SESSION – TH8** | **M2** |

Computer Security of Emerging Digital Technologies for Nuclear Activities

Chair	Lucas Nogueron IT & Cybersecurity Manager	National Atomic Energy Commission (CNEA)	Argentina
Technical Officer	Assel Khamzayeva, IAEA
Rapporteur	Sarah Ayers, United States of America

Speaker	Country	Title
J. Song	Republic of Korea	032 - Considerations of Cyber Security for i-SMR
M. Rowland	United States of America	053 - Recent Progress on Simulating Physical Protection Systems for Radioactive Materials as Part of the IAEA's Cooperative Research Program
L. Pietre Cambacedes	France	115 - Key Cybersecurity Principles and Aspects of the NUWARD SMR design

TUESDAY, 20 June 2023, CV 2.1

| 11:00–12:30 | **Virtual Training Village on Learners Platform and Computer Security Exercises** | **M6** |

TUESDAY, 20 June 2023, PS 2.3

| 14:00–14:45 | **PLENARY SESSION – TH3** | **BR-B/M1** |

Computer Security in Supply Chain Management

Chair	Jean-Hughes Zorio Expert - Cyber Security	Electricity of France (EDF)	France
Technical Officer	Rodney Busquim, IAEA
Rapporteur	Lea Cibrić, Slovenia

Speaker	Country/ Organisation	Role
J. Sladek	Canada	Regulator
B. Moss	Canada	Operator
S. Eggers	United States of America	Expert
A. Choren	World Nuclear Association	Vendor

TUESDAY, 20 June 2023, PS 2.4

| 14:45-15:30 | **DEMONSTRATION SESSION** | **BR-B/M1** |

| **Chair** | Régine Gaucher
Head of International and Regulatory Affairs - Nuclear Security Department | Defense and Security Directorate | France |
| **Technical Officer** | Christophe Pilleux, IAEA |

Speaker	Country	Title
H. Bury	France	Computer security maintenance for critical industrial assets

TUESDAY, 20 June 2023, CV 2.2

| 15:30–17:30 | **CYBER-VILLAGE SESSION** | **M4, M6, Press Room** |

Technical Officer   Rodney Busquim, IAEA

Title	Room
Technical Exchange Village on NSS 13, 14 and 15 topics	M4
Virtualized Training Village	M6
Country Demonstrations Village	Press Room

TUESDAY, 20 June 2023, Po 2.2

| 15:30–16:00 | **POSTER SESSION** | **M01** |

Technical Officer   Christophe Pilleux, IAEA

Poster Station	Paper No.	Name	Designating Member State/ Organization	Title
02	094	H. Johnson	Liberia	Computer Security in Supply Chain Management
08	175	S. Kekouomi	Cameroon	Cameroon's Integrated Approach to Computer Security with Regulatory Authorities
14	003	J. Fiel	Brazil	Cyber Attacks Impacts on A Nuclear Security System of a Brazilian Nuclear Installation
20	030	I. Rusmanatmojo	Indonesia	Computer Security Hazard Identification on the Online Nuclear Material Licensing in Indonesia
26	055	T. Malatim	Libya	Computer Security as a Part of Nuclear Knowledge Management Process

TUESDAY, 20 June 2023, TS 2.2a

| 16:00-17:30 | **TECHNICAL SESSION – TH1** | **M3** |

State-Level Strategy and Regulatory Approaches

Chair   Nadia Nawwar
Physical Security - Engineering Department Nuclear Research Center | Egyptian Atomic Energy Authority (EAEA) | Egypt

Technical Officer   Sarah Henry Bolt, IAEA

Rapporteur   Daniel Warner, United States of America

Speaker	Country	Title
E. Benner	United States of America	022 - Ensuring Appropriate Cybersecurity while Enabling Digital I&C Adoption
G. White	United States of America	052 - Best Practices and Challenges in Adding Cybersecurity to Existing State Regulations on the Physical Security of Radioactive Materials
J. Buettner	Germany	054 - Implementing Cyber Security into German Security Regime for Radioactive Material
J. Vaclav	Slovakia	186 - Protection of ICT and ITS in Slovak Nuclear Installation

TUESDAY, 20 June 2023, TS 2.2b

16:00-17:30   **TECHNICAL SESSION – TH2**   **BR-A**

Computer Security Programme Implementation

Chair   Scott Hilts
          Director - Information Security Programs and Strategy| Bruce Power | Canada

Technical Officer   Tufail Ahmad, IAEA

Rapporteur   Saša Kuhar, Slovenia

Speaker	Country	Title
C. Quester	Germany	028 - Keeping Track of The Threat Landscape
C. Romao	Brazil	046 - Implementation of a Cyber DBT in a Nuclear Security Program
K. Son	Republic of Korea	145 - Study on the Cyber Threat Detection Techniques Based on Network and Process-Level Data in NPPs

TUESDAY, 20 June 2023, TS 2.2c

16:00-17:30   **TECHNICAL SESSION – TH3**   **BR-B/M1**

Computer Security in Supply Chain Management

Chair   Faisal Mousa Ibrahim Al Bousi
          Information and Cyber Security Director | Nawah Energy Company| United Arab Emirates

Technical Officer   Alessia Rodriguez y Baena, IAEA

Rapporteur   LeeZa Duval, IAEA

Speaker	Country	Title
A. Francis	Nigeria	019 - The Impact of Supply Chain Attacks on Cybersecurity
P. Park	Republic of Korea	105 - Study on Applying IEC 62443 4-2 requirements on RG 5.71 with Implementing NEI 13-10's Graded Approach
L. Campbell	United States of America	140 - Supply Chain Risk Management in the Nuclear Industry
M. Macdonald	Canada	201 - Supply Chain Cyber Security Assurance Methodology

TUESDAY, 20 June 2023, TS 2.2d

16:00-17:30   **TECHNICAL SESSION – TH5**   **M2**

Sustainability of Computer Security

Chair   Rosemary Butare
          Cybersecurity Auditor | Rwanda Utilities Regulatory Authority (RURA) | Rwanda

Technical Officer   Jordan Swarthout, IAEA

Rapporteur   Charlie Nickerson, United States of America

Speaker	Country	Title
G. Venge	Zimbabwe	045 - Sustainability of Computer Security
S. Eggers	United States of America	191 - Cyber-Informed Engineering Guidance—Implementing CIE through the Systems Engineering Lifecycle
D. Christensen	United States of America	192 - Computer Security Continuous Monitoring Programs and the Nuclear Industry

TUESDAY, 20 June 2023, CV 2.2

| 16:00-17:30 | CV 2.2 | Virtual Training Village on Advanced Incident Response Tools | M6 |

WEDNESDAY, 21 June 2023, PS 3.1

| 09:00–09:45 | PLENARY SESSION – TH4 | BR-B/M1 |

Practical Implementation of Computer Security Assurance Activities

Chair	Na Young Lee Director General - Office of Nuclear Nonproliferation| Korea Institute of Nuclear Nonproliferation and Control (KINAC) | Republic of Korea
Technical Officer	Rodney Busquim, IAEA
Rapporteur	Gigi Joseph, India

Speaker	Country	Title
M. Tomažič	Slovenia	014 - The KiVA2022 International Cyber Security Exercise for Nuclear Facilities
M. Rowland	United States of America	161 - Cyber-Physical Environment to Evaluate Blended Attack Exercises

WEDNESDAY, 21 June 2023, PS 3.2

| 09:45–10:30 | DEMONSTRATION SESSION | BR-B/M1 |

| **Chair** | Paul Shanes
Superintending Inspector - Professional Lead for Cyber Security\|
Office for Nuclear Regulation (ONR) \| United Kingdom |
| **Technical Officer** | Christophe Pilleux, IAEA |

Speaker	Country	Title
W. Cain	United Kingdom	Gaining Security Assurance in the Supply Chain

WEDNESDAY, 21 June 2023, CV 3.1

| 10:30–12:30 | CYBER-VILLAGE SESSION | M4, M6, Press Room |

| **Technical Officer** | Mitchell Hewes, IAEA |

Title	Room
Technical exchange Village on NSS 13, 14 and 15 topics	M4
Virtualized Training Village	M6
Country Demonstrations Village	Press Room

WEDNESDAY, 21 June 2023, Po 3.1

11:00–11:30	POSTER SESSION		M01

Technical Officer   Christophe Pilleux, IAEA

Poster Station	Paper No.	Name	Designating Member State/ Organization	Title
03	056	E. Lungu	Zambia	Practical Implementation of Computer Security Assurance Activities
09	058	A. Meliana	Indonesia	Cybersecurity Education Workshop for Raising Awareness among Nuclear Energy Research Organization employees in Indonesia.
15	060	E. Kirdan	Germany	OPC UA Security for Nuclear
21	061	G. Abdiyeva	Azerbaijan	Network-Based Intrusion Detection with Machine Learning Algorithms
27	212	A. Bezu	Ethiopia	The Role of Computer Security for Radioactive Source Safety: Review of Ethiopia Regulatory System, Radioactive Waste Processing and Storage Facility System
32	082	A. Niane	Senegal	Overview Of National Strategies and Actions Related to Computer Security Regulation and Cybersecurity in Nuclear Security

WEDNESDAY, 21 June 2023, TS 3.1a

11:00–12:30	TECHNICAL SESSION – TH1	M3

State-Level Strategy and Regulatory Approaches

Chair   Eric Benner
Chief of Staff | Nuclear Regulatory Commission |
United States of America

Technical Officer   Valerie Rouillet-Chatelus, IAEA

Rapporteur   Jeffrey Knight, United States of America

Speaker	Country	Title
J.H. Zorio	France	111 - Graded Approach for Cybersecurity at EDF: Focus on Key Design Principles
P. Giżowska	Poland	154 - The Role of Policy Experts, Lawyers and Regulators in The Nuclear Cyber World: Building Computer Security Capabilities Where You Least Expect Them
F. Al Muhairi	United Arab Emirates	202 - Implementation of a Strong Cyber Security Program at the UAE Barakah NPP

WEDNESDAY, 21 June 2023, TS 3.1b

11:00–12:30	**TECHNICAL SESSION – TH2**	**BR-B/M1**

Computer Security Programme Implementation

Chair	Ludovic Pietre-Cambacedes Expert - Cyber Security | Electricity of France (EDF) | France
Technical Officer	Austin Hammer, IAEA
Rapporteur	Anne McQuaid, United States of America

Speaker	Country	Title
J. Benjamin	United States of America	049 - Building Incident Response Programs for Nuclear
G. Gomez	Argentina	073 - OT Network Segmentation for a Greenfield Nuclear Fuel Facility Project
N. Howarth	Australia	199 - Application of IAEA Guidance NSS 17-T (Rev. 1) at ANTSO

WEDNESDAY, 21 June 2023, TS 3.1c

11:00–12:30	**TECHNICAL SESSION – TH3**	**M2**

Computer Security in Supply Chain Management

Chair	Marienna Macdonald Section Head - Information and Control Systems | National Canadian Nuclear Laboratories (CNL) | Canada
Technical Officer	Jim Beardsley IAEA
Rapporteur	Constantin Sumanariu, Romania

Speaker	Country	Title
B. Gorton	United States of America	024 - Implementation of Supply Chain Risk Management within the Office of Radiological Security
O. Rest	Germany	029 - Cybersecurity in the Supply Chain
S. Eggers	United States of America	190 - The 'Crawl, Walk, Run' Approach to Implementing Software Bill of Materials (SBOM) in Nuclear Facilities

WEDNESDAY, 21 June 2023, TS 3.1d

11:00–12:30   **TECHNICAL SESSION – TH4**   **BR-A**

Practical Implementation of Computer Security Assurance Activities

Chair	David Allison Scientific Researcher and PhD Candidate - Security & Communication | Center for Digital Safety & Security | Austrian Institute of Technology GmbH (AIT) | Austria
Technical Officer	Yun Goo Kim, IAEA
Rapporteur	Clifford Glantz, United States of America

Speaker	Country/ Organisation	Title
T. Šeruga	Slovenia	117 - The Amazing Cyber Race
R. Marques	Brazil	180 - Cyber Guardian Exercise 4.0 for Protection of Critical Infrastructures and International Cooperation on Cybersecurity
N. Javed	Pakistan	069 - Vulnerability Severity Scoring System in IT vs. OT Environment
F. Al Bousi	United Arab Emirates	168 - C2M2 Assessment for Nuclear Facilities

WEDNESDAY, 21 June 2023, CV 3.1

11:00-12:30   CV 3.1   Virtual Training Village on Advanced Incident Response Tools   **M6**

WEDNESDAY, 21 June 2023, PS 3.3

14:00–14:45   **PLENARY SESSION – TH5**   **BR-B/M1**

Sustainability of Computer Security

Chair	Nancy Fragoyannis Senior Level Advisor for Non-proliferation and International Nuclear Security | Nuclear Regulatory Commission (NRC) | United States of America
Technical Officer	Mitchell Hewes, IAEA
Rapporteur	Olivier Fichot, France

Speaker	Country	Title
A. Schug	Germany	027 - Sustainability of Computer Security – From Incidents to Intrusion
M. StJohn Green	United Kingdom	Interactive Discussion
H. Leopold	Austria	Interactive Discussion

WEDNESDAY, 21 June 2023, PS 3.4

14:45–15:30   **DEMONSTRATION SESSION**   **BR-B/M1**

Chair	Marianne Morton Chief Information and Digital Officer | Australian Nuclear Science and Technology Organisation (ANSTO) | Australia
Technical Officer	Christophe Pilleux, IAEA

Speaker	Country	Title
N. Howarth	Australia	The Role of Intelligence Collection

WEDNESDAY, 21 June 2023, CV 3.2

15:30–17:30	CYBER-VILLAGE SESSION	M4, M6, Press Room

Technical Officer   Trent Nelson, IAEA

Title	Room
Technical exchange Village on NSS 13, 14 and 15 topics	M4
Virtualized Training Village	M6
Country Demonstrations Village	Press Room

WEDNESDAY, 21 June 2023, Po 3.2

15:30–16:00	POSTER SESSION	M01

Technical Officer   Christophe Pilleux, IAEA

Poster Station	Paper No.	Name	Designating Member State/ Organization	Title
04	098	Y. Hasan	Indonesia	Assessment of Human Behavioural and Organizational Factors in Computer Security: Indonesian Nuclear Installation Approach
10	099	J. Choi	United States of America	Cybersecurity Challenges for Autonomous- or Semi-Autonomous-Controlled Novel Advanced Small Modular Reactors (SMRs)
16	120	F. El-samie	Egypt	A Hybrid Model for Iris Template Privacy Preserving Using Cancellable Biometrics and Elliptic Curve Cryptography
22	134	L. Barenghi	Argentina	Recommendations For the Implementation of Computer Security and Information Security Measures in Activities Related to Ionizing Radiation, Nuclear and Radioactive Materials.
28	137	D. Pavlicevic	Montenegro	Computer Vision for Nuclear Safety and Security

WEDNESDAY, 21 June 2023, TS 3.2a

16:00–17:30	TECHNICAL SESSION – TH1	BR-B/M1

State-Level Strategy and Regulatory Approaches

Chair   Fatima Al Muhairi
Sr. Engineer - Nuclear Security | Federal Authority for Nuclear Regulation (FANR) | United Arab Emirates

Technical Officer   Thierry Pelletier, IAEA

Rapporteur   Robert Anderson, United States of America

Speaker	Country	Title
D. Nugroho	Indonesia	017 - The Development of Nuclear Computer Security Regulations in Indonesia: A Guide on The Assessment of Trustworthiness
D. Warner	United States of America	044 - History of Cybersecurity Under Two Regulators for Balance of Plant Digital Assets at US Nuclear Plants
J. Benjamin	United States of America	047 - Developing Resilient DBTs for Computer Security

WEDNESDAY, 21 June 2023, TS 3.2b

16:00–17:30   **TECHNICAL SESSION – TH2**   **M3**

Computer Security Programme Implementation

Chair   Laurent Mandard
Director for Nuclear Defense Safety - Nuclear Security and Safeguards | Institute for Radiological Protection and Nuclear Safety (IRSN) | France

Technical Officer   Quillan Rose, IAEA

Rapporteur   Hitham Shaheen, Egypt

Speaker	Country	Title
N. Agbemava	Ghana	152 - Challenges with computer security regulation development in Ghana
A. Arreola	Mexico	207 - Increasing Cyber Resilience for Programmable Logic Controllers (PLC´s) in Mexico
D. Christensen	United States of America	193 - Providing Guidance for Creating Zero Trust Architecture for Nuclear Facilities

WEDNESDAY, 21 June 2023, TS 3.2c

16:00–17:30   **TECHNICAL SESSION – TH5**   **M2**

Sustainability of Computer Security

Chair   Michael Rowland
Sandia National Laboratories (SNL) | United States of America

Technical Officer   Nigel Tottie, IAEA

Rapporteur   Andrew Hahn, United States of America

Speaker	Country	Title
S. Pigault	France	113 - Computer Security by Design for Critical Industrial Original Equipment Manufacturer (OEM) equipment
S. Clements	United States of America	146 - Safety Versus Security: What's The Difference and Why It Matters!
R. Brown	Canada	200 - Incident Response
T. Walter	Germany	004 - Evolution and Sustainability of IT-Security within NPPs

WEDNESDAY, 21 June 2023, TS 3.2d

16:00–17:30   **TECHNICAL SESSION – TH8**   **BR-A**

Computer Security of Emerging Digital Technologies for Nuclear Activities

Chair   Nick Howarth
General Manager - Cyber Security and Operational Technology | Australian Nuclear Science and Technology Organisation (ANSTO)| Australia

Technical Officer   Nelly Ngoy Kubelwa, IAEA

Rapporteur   Charlie Nickerson, United States of America

Speaker	Country	Title
S. Lee	Republic of Korea	149 - A Case Study of Regulatory Approaches for Cyber Security in SMRs
C. Lamb	United States of America	077 - Nuclear System Remote Operations Attack Surfaces
G. White	United States of America	163 - International Efforts on Performing Effective and Secure Remote Cybersecurity Inspections

WEDNESDAY, 21 June 2023, CV 3.2

| 16:00–17:30 | **Virtual Training Village on Learners Platform and Computer Security Exercises** | **M6** |

THURSDAY, 22 June 2023, PS 4.1

| 09:00–09:45 | **PLENARY SESSION – TH6** | **BR-B/M1** |

Human Resources Contribution to Computer Security

Chair	Valerie Derouet Director – Computer Security Centre of Excellence | Electricity of France (EDF) | France
Technical Officer	Rodney Busquim, IAEA
Rapporteur	Rosemary Butare, Rwanda

Speaker	Country	Title
E. Ofoegbu	Nigeria	Human Capacity Development for Computer Security – Nigeria Experience
K. Sands	United Kingdom	031 - A Maturing Nuclear Industry Relies on a Younger Generation: A Review of Evolving Perspectives and their Impact on Human Resourcing
M. Gordillo	Argentina	096 - Raising Awareness About Use of Technological Resources That Contribute to Cyber Security Within the Nuclear Regulatory Authority

THURSDAY, 22 June 2023, PS 4.2

| 09:45–10:30 | **DEMONSTRATION SESSION** | **BR-B/M1** |

| **Chair** | Zong Bo
Division of Nuclear Security \| State Nuclear Security Technology Center \|
China |
| **Technical Officer** | Christophe Pilleux, IAEA |

Speaker	Country	Title
J. Li	China	Behavioral Analytics: Detecting the Insider Threat

THURSDAY, 22 June 2023, CV 4.1

| 10:30–12:30 | **CYBER-VILLAGE SESSION** | **M4, M6, Press Room** |

| **Technical Officer** | Rodney Busquim, IAEA |

Title	Room
Technical exchange Village on NSS 13, 14 and 15 topics	M4
Virtualized Training Village	M6
Country Demonstrations Village	Press Room

THURSDAY, 22 June 2023, Po 4.1

| 10:30–11:00 | **POSTER SESSION** | M01 |

Technical Officer   Christophe Pilleux, IAEA

Poster Station	Paper No.	Name	Designating Member State/ Organization	Title
05	141	A. Chetaine	Morocco	Complementarity between Information and Cyber Security.
11	147	V. Boppanna	India	Behaviour Monitoring and Anomaly Detection of Computer Systems in Instrumentation and Control Network
17	156	S. Lee	Republic of Korea	Adopt Virtualization in Honeynet to Accumulate Cyber Breach Data
23	157	T. Nguyen	Vietnam	Human Resources Contribution to Computer Security of Regulatory Body of Vietnam
29	178	J. Javier	Mexico	Computer Security in Research Centers: Interrelationship Between Operational Technology and Information Security in Nuclear Security.

THURSDAY, 22 June 2023, TS 4.1a

| 11:00–12:30 | **TECHNICAL SESSION – TH1** | BR-A |

State-Level Strategy and Regulatory Approaches

Chair   Samo Tomažič,
Head - Cyber Security Division |
Slovenian Nuclear Safety Administration (SNSA) | Slovenia

Technical Officer   Ayadh Alzyoud, IAEA

Rapporteur   Jeffrey Knight, United States of America

Speaker	Country	Title
I. Garcia	United States of America	001 - U.S.A. Regulatory Efforts for Cybersecurity of Advanced Reactors
M. Kulkarni	India	089 - Regulation of Nuclear and Computer Security by AERB, India
G. Sen	Türkiye	155 - Development of Regulatory Approach for Computer Security of Nuclear Facilities in Türkiye
J. Sladek	Canada	165 - Changes to Regulation of Cyber Security for Canadian Nuclear Facilities and Activities

THURSDAY, 22 June 2023, TS 4.1b

| 11:00–12:30 | TECHNICAL SESSION – TH2 | BR-B/M1 |

Computer Security Programme Implementation

Chair Michael StJohn Green
Director | Mike StJohn-Green Consulting Limited | United Kingdom

Technical Officer Brunelle Battistella, IAEA

Rapporteur Nadia Nawwar, Egypt

Speaker	Country	Title
H. Bury	France	112 - Computer Security Maintenance for Critical Industrial Assets: The Jointed View of EDF and Framatome
C. Glantz	United States of America	148 - The Cybersecurity Capability Maturity Model for Nuclear Facilities: A Programmatic Self-Evaluation Tool
J. Benjamin	United States of America	048 - Defensible Network Architecture for Nuclear

THURSDAY, 22 June 2023, TS 4.1c

| 11:00–12:30 | TECHNICAL SESSION – TH5 | M2 |

Sustainability of Computer Security

Chair Marianne Morton
Chief Information and Digital Officer |
Australian Nuclear Science and Technology Organisation (ANSTO) | Australia

Technical Officer Wilhelm Mandl, IAEA

Rapporteur Paulina Giżowska, Poland

Speaker	Country	Title
M. Mahmoodvand	Iran	043 - Assessing Cybersecurity Mesh Architecture for Using at Nuclear Facilities
M. Ali Awan	Pakistan	068 - PNRA's Strategy for Regulating Extensively Digitized NPPs: A Case Study
L. Nieto	Argentina	172 - Classification of Cyberattacks Applying Machine Learning Techniques in CNEA Network Infrastructure
L. Reuter	Austria	127 - Supporting Flexible and Engaging Computer Security Training Courses with the Online Learners Platform and Hands-on Exercises

THURSDAY, 22 June 2023, TS 4.1d

| 11:00–12:30 | **TECHNICAL SESSION – TH6** | **M3** |

Human Resources Contribution to Computer Security

Chair	Anne McQuaid
	Project Manager | Pacific Northwest National Laboratory (PNNL) | United States of America
Technical Officer	Yura Shin, IAEA
Rapporteur	Drew Christensen, United States of America

Speaker	Country/ Organisation	Title
V. Derouet	France	101 - French Nuclear Security Centre of Excellence for Nuclear Operators/French CoE: A Tool for Enhancing OT/I&C Computer Security.
L. Dandurand	Estonia	177 - The Evolving Role of Cyber Ranges for Computer Security
R. Evans	World Institute for Nuclear Security	170 - Diversity within the Cybersecurity Workforce as a Principal Contribution to Cybersecurity Risk Reduction
M. Rowland	United States of America	162 - International Efforts on Cybersecurity Nuclear Capacity Building within a 3-Model Framework

THURSDAY, 22 June 2023, CV 4.1

| 11:00–12:30 | **Virtual Training Village on Learners Platform and Computer Security Exercises** | **M6** |

THURSDAY, 22 June 2023, PS 4.3

| 14:00–14:45 | **PLENARY SESSION – TH7** | **BR-B/M1** |

International Cooperation in Computer Security for a Nuclear Security Regime

Chair	Scott Purvis
	Section Head - Information Management Section | Division of Nuclear Security | IAEA
Technical Officer	Trent Nelson, IAEA
Rapporteur	Saša Kuhar, Slovenia

Speaker	Country	Title
A. Atkins	United States of America	International Collaboration and Partnerships on Computer Security for Nuclear Security
G. Bozic	Slovenia	Collaboration and Information Sharing during Computer Security Events

THURSDAY, 22 June 2023, PS 4.4

14:45–15:30   **DEMONSTRATION SESSION**   **BR-B/M1**

Chair   Art Artkins
                   Assistant Deputy Administrator for Global Material Security | Department of Energy/ National
                   Nuclear Security Administration (DOE/NNSA) | United States of America

Technical Officer   Christophe Pilleux, IAEA

Speaker	Country	Title
C. Nickerson	United States of America	Guarding Against the Insider Threat

THURSDAY, 22 June 2023, CV 4.2

15:30–17:30   **CYBER-VILLAGE SESSION**   **M4, M6, Press Room**

Technical Officer   Mitchell Hewes, IAEA

Title	Room
Technical exchange Village on NSS 13, 14 and 15 topics	M4
Virtualized Training Village	M6
Country Demonstrations Village	Press Room

THURSDAY, 22 June 2023, Po 4.2

15:30–16:00   **POSTER SESSION**   **M01**

Technical Officer   Christophe Pilleux, IAEA

Poster Station	Paper No.	Name	Designating Member State/ Organization	Title
06	035	E. Fitriyanti	Indonesia	The Role of Information Technology in Management of Inspection and Reporting for Research Reactors in Indonesia
12	167	S. Lee	Republic of Korea	Precise Duplexing Abnormal Detection of Nuclear Cyber Security
18	184	M. Unal	China	Analysis of Cyber-attacks towards Instrumentation and Control Systems with the ATT&CK Framework
24	185	L. Tabai	Nigeria	Information Security and Computer Security Interdependencies are Increasing due to the Use of Digital Technology - I&C systems vs IT Systems
30	188	C. Iamsumang	Thailand	Challenges and Lessons Learned from the Development of Computer Security Regulation for Nuclear Facilities in Thailand
33	205	F. Maruve	Zimbabwe	The Implementation of the Zimbabwe's National Cyber Security and Data Protection Act and the Radiation Protection Act in Countering Nuclear and Radiological Cyber Security Threats

THURSDAY, 22 June 2023, TS 4.2a

| 16:00–17:30 | **TECHNICAL SESSION – TH1** | **M3** |

State-Level Strategy and Regulatory Approaches

Chair	Jeff Knight ICS Nuclear Cyber Security Specialist | Idaho National Laboratory (INL) | United States of America
Technical Officer	Oum Keltoum Hakam, IAEA
Rapporteur	Nelson Agbemava, Ghana

Speaker	Country	Title
E. Ofoegbu	Nigeria	018 - Legislative Framework for Computer Security: Nigeria Experience, Current and Future Actions
F. Boen	France	100 - French New Nuclear Security Regulatory Requirements
C. Sumanariu	Romania	109 - Revision of Romanian Computer Security Regulation
R. Dollan	Germany	153 - Computer Security Regulations in Germany

THURSDAY, 22 June 2023, TS 4.2b

| 16:00–17:30 | **TECHNICAL SESSION – TH4** | **BR-A** |

Practical Implementation of Computer Security Assurance Activities

Chair	Nathan Faith Sr. Manager - Cybersecurity Governance- Risk & Compliance | Olin Corporation | United States of America
Technical Officer	Matthew Tremonte, IAEA
Rapporteur	Clifford Glantz, United States of America

Speaker	Country	Title
S. Hilts	Canada	128 - Benchmarking and Evaluation Services - Cybersecurity at Nuclear Facilities
D. Warner	United States of America	072 - Developing an Effective Cyber Security Training Program
G. Carrigan	United Kingdom	009 - Adopting a Thematic Approach to Cybersecurity Regulation
L. Cibrić	Slovenia	203 - Security and Resilience: ICT Business Continuity Management System at Slovenian NSA

THURSDAY, 22 June 2023, TS 4.2c

| 16:00–17:30 | TECHNICAL SESSION – TH7 | BR-B/M1 |

International Cooperation in Computer Security for A Nuclear Security Regime

Chair	Metka Tomažič Head of Emergency Preparedness Division	Slovenian Nuclear Safety Administration (SNSA)	Slovenia
Technical Officer	Branko Jovanovski, IAEA
Rapporteur	Lisa Campbell, United States of America

Speaker	Country/ Organisation	Title
J. Trajano	Singapore	065 - Regional Cooperation on Cyber Security and its Impact on Nuclear Security: The Case of ASEAN
L. Pietre-Cambacedes	France	108 - The IEC Cybersecurity Standard Series for Nuclear I&C: Overview and Perspectives
P. Legoux	World Institute for Nuclear Security (WINS)	173 - WINS Activities to Support International Efforts for Strengthening Cybersecurity at Nuclear Facilities

THURSDAY, 22 June 2023, TS 4.2d

| 16:00–17:30 | TECHNICAL SESSION – TH8 | M2 |

Computer Security of Emerging Digital Technologies for Nuclear Activities

Chair	Craig Erlanger Deputy Director - Nuclear Security and Incident Response	 Nuclear Regulatory Commission (NRC)	United States of America
Technical Officer	Sara Mroz, IAEA
Rapporteur	Andrew Hahn, United States of America

Speaker	Country	Title
T. Holczer	Hungary	122 - Machine Learning Based Time Series Generation for the Nuclear Industry
S. Maldonado	United States of America	159 - Software Defined-Networking (SDN) for Protection of PPS at Nuclear Facilities
S. Eggers	United States of America	189 - Twenty Years and Counting—Where are they? Practical Considerations for Commercializing AI/ML for Intrusion Detection in Nuclear Reactors

THURSDAY, 22 June 2023, CV 4.2

| 16:00-17:30 | CV 2.2 | Virtual Training Exercise on Advanced Incident Response Tools | M6 |

FRIDAY, 23 June 2023, PS 5.1

| 09:00–10:30 | PLENARY SESSION – TH8 | BR-B/M1 |

Computer Security of Emerging Digital Technologies for Nuclear Activities

Chair	Robert Anderson Sr. Controls Consultant | Idaho National Laboratory (INL) | United States of America
Technical Officer	Christophe Pilleux, IAEA
Rapporteur	Marienna Macdonald, Canada

Speaker	Country/ Organisation	Title
G. Daor	Organisation for Economic Co-operation & Development	213 - Landmark Agreement Adopted on Safeguarding Privacy in Law Enforcement and National Security Data Access
R. Busquim	IAEA	196 - Evolution of the Asherah NPP Simulator Towards a SMR Cyber Assessment Tool
D. Allison	Austria	130 - On Digital Twins to Support Computer Security Incident Response at Nuclear Facilities
L. Campbell	United States of America	138 - My Phone Says it's Time to Replace the Fuel Rods: The Impact and Application of Internet of Things (IoT) in Nuclear Environments

FRIDAY, 23 June 2023, PS 5.2

| 11:00–12:30 | PLENARY SESSION – TH8 | BR-B/M1 |

Computer Security of Emerging Digital Technologies for Nuclear Activities

Chair	Paul Smith Senior Scientist and Head - Center for Digital Safety and Security | Austrian Institute of Technology GmbH (AIT) | Austria
Technical Officer	Mitchell Hewes, IAEA
Rapporteur	Lilis Susanti Setianingsih, Indonesia

Speaker	Country	Title
O. D'Henin	France	020 - Hydra: An I&C Simulated Platform for Cyber Assessment
A. Hahn	United States of America	160 - Open-Source Emulation Platform for Hands-on Cyber Attack Training and Experimentation
I. GadAllah	Egypt	040 - FPGA Designs Versus Stored Program Computing for Operation Safety, Security and Reusability of Nuclear Reactor Digital I&C Systems
D. McColm	United Kingdom	057 - ICS Honeypots

FRIDAY, 23 June 2023, PS 5.3

| 12:30–13:00 | CLOSING SESSION | BR-B/M1 |

Name and Title	Country/organization	Title
Na Young Lee Conference President	Republic of Korea	Summary of the Conference
Lydie Evrard Deputy Director General and Head of the Department of Nuclear Safety and Security	IAEA	Closing Remarks

SCHEDULE OF SIDE EVENTS

Tuesday, 20 June 2023 - SE 2.1 – BR-B/M1 - 12:45–13:30

Securing Operational Technology for Nuclear Material Transport

Nuclear Transport Solutions, United Kingdom

To outline the importance of effective and resilient security across IT infrastructure and operational technology (OT) for transport assets; demonstrate a simulated malware attack against rail OT to illustrate potential threats to nuclear material transports; and, explain our adversary-focused risk assessment process for OT which helps us keep pace with developments in technology and adversary capabilities.

Tuesday, 20 June 2023 - SE 2.2 - Cyber-Village - 12:45–13:30

Gula Hospital Cyber-Attack Mitigation and Response

IAEA with the University of São Paulo (USP), Brazil and the Department of Energy - Office of Radiological Security (ORS), United States of America

Demonstration of an attack on a blood irradiator including detection and response capabilities to reduce/eliminate the attack.

Tuesday, 20 June 2023 - SE 2.3 – M2 - 12:45–13:30

Nuclear Security e-Learning: Supporting Capacity Building in Information and Computer Security

IAEA

The objective of this session is to showcase the suite of IAEA nuclear security e-learning modules and to engage a wide range of users in an interactive and hands-on presentation, including a quiz and demonstration of information and computer security modules.

Wednesday, 21 June 2023 - SE 3.1 – BR-B/M1 - 12:45–13:30

Transport and Cybersecurity – What are the Risks?

Ministry of Ecological Transition (MTE) with the Institute for Radiological Protection and Nuclear Safety (IRSN), France

France has launched a study in 2022 in order to have a better vision of digital risks in the field of road transport. The purpose of this side event is to present the methodology and the results of this study and give the opportunity to have exchanges on questions and conclusions raised.

Wednesday, 21 June 2023 - SE 3.2 - Cyber-Village - 12:45–13:30

Asherah NPP Cyber-Attack Analysis and Response

IAEA with the Austrian Institute of Technology GmbH (AIT), Austria, Bruce Power, Canada and Olin Corporation, United States of America

Demonstration of an attack on the pressurizer unit at the Asherah NPP including the analysis of the attack path and protective measures to reduce/eliminate the attack.

Wednesday, 21 June 2023 - SE 3.4 – VIC Bar - 17:45–20:00

Young Professionals and Nuclear Security
The World Institute for Nuclear Security (WINS) and the United Nations-Nuclear Young Generation (UN-NYG)

WINS aims to facilitate the engagement of young professionals in nuclear security. WINS is identifying challenges and opportunities of recruiting and retaining young professionals. WINS research indicates that we are only in the beginning stages of the journey to fully address the needs of young professionals in nuclear security. Through this engagement at CyberCon23, WINS wants to provide a forum for young professionals to engage in nuclear security as well as other activities including networking opportunities in order to have more fruitful discussions in this area.

Wednesday, 21 June 2023 - SE 3.5 – M2 - 17:45–18:30

Let's Play Hackers: GNSSI Cyber Range Demo
Global Nuclear Safety and Security Institute (GNSSI)
A small demonstration of the cyber range in action: we will do a simple reconnaissance and DNS brute force

Thursday, 22 June 2023 - SE 4.1 - Cyber-Village - 12:45–13:30

Computer Security Exercises and IDS-SIEM Detection/Response

IAEA with Tsinghua University, China

Demonstrate sustainability efforts through exercises and monitoring capabilities through Intrusion detection systems (IDS) and Security Information and Event Management (SIEM) for early threat identification for response and recovery.

Thursday, 22 June 2023 - SE 4.2 – M2 - 12:45–13:30

Women in Nuclear Security

IAEA - Women in Nuclear Security Initiative (WINSI)

Panel discussion on sharing programmes, initiatives and best practices to support gender equality in nuclear security.

IAEA PUBLICATIONS RELATED TO THE SUBJECT OF THE EVENT

- IAEA Nuclear Security Series No. 20 (2013) Nuclear Security Fundamentals Objective and Essential Elements of a State's Nuclear Security Regime
- IAEA Nuclear Security Series No. 13 (2011) Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)
- IAEA Nuclear Security Series No. 14 (2011) Nuclear Security Recommendations on Radioactive Material and Associated Facilities
- IAEA Nuclear Security Series No.15 (2011) Nuclear Security Recommendations on Nuclear and Other Radioactive Material out of Regulatory Control
- IAEA Nuclear Security Series No. 23-G (2015) Security of Nuclear Information
- IAEA Nuclear Security Series No. 42-G (2021) Computer Security for Nuclear Security
- IAEA Nuclear Security Series No. 17-T Rev. 1 (2021) Computer Security Techniques for Nuclear Facilities
- IAEA Nuclear Security Series No. 33-T (2018) Computer Security of Instrumentation and Control Systems at Nuclear Facilities
- IAEA TDL-005 (2016) Compute Security Incident Response Planning at Nuclear Facilities
- IAE TDL-006 (2016) Conducting Computer Security Assessments at Nuclear Facilities
- IAEA TDL-011 (2022) Computer Security Approaches to Reduce Cyber Risks in the Nuclear Supply Chain
- IAEA Nuclear Energy Series No. NR-T-3.30 (2020) Computer Security Aspects of Design for Instrumentation and Control Systems at Nuclear Power Plants
- IAEA Safety Standards Specific Safety Guide No. SSG-39 (2016) Design of Instrumentation and Control Systems for Nuclear Power Plants
- IAEA/INSEN Nuclear Security NS 22 (2013), Computer Security for Nuclear Security Professionals

PARTICIPATION IN IAEA SCIENTIFIC CONFERENCES

Governments of Member States and those organizations whose activities are relevant to the Conference subject matter are invited to designate participants. In addition, the IAEA itself may invite a limited number of scientists as invited speakers. Only participants designated or invited in this way are entitled to present papers and take part in the discussions.

Scientists interested in participating in any of the IAEA Conferences should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or national atomic energy authority.

PUBLICATIONS

All IAEA publications may be ordered directly from the Sales and Promotion Unit, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria.

Fax :   (+43 1) 2600-29302
Email :   sales.publications@iaea.org
Internet : http://www.iaea.org/books

FORTHCOMING SCIENTIFIC CONFERENCES SCHEDULED BY THE IAEA

2023

International Symposium on Isotope Hydrology (CN-320)
3-7 July, Vienna, Austria

Second International Conference on Climate Change and the Role of Nuclear Power (CN-315)
9-13 October, Vienna, Austria

29th IAEA Fusion Energy Conference (CN-316)
16-21 October, London, United Kingdom

International Conference on Waste and Environmental Safety: Integrated Approach to Strengthening Sustainable Development (CN-318)
6-10 November, Vienna, Austria

International Conference on Research Reactors: Achievements, Experience and the Way to a Sustainable Future (CN-319)
27-30 November, Dead Sea, Jordan

2024

International Conference on Enhancing Operational Safety of Nuclear Power Plants (CN-284)
15 – 19 April 2024, Beijing, China

International Conference on Nuclear Security ICONS 2024 (CN-321)
20 – 24 May 2024, Vienna, Austria

International Symposium on Food Safety and Quality Assurance (CN-322)
27 – 31 May 2024, Vienna, Austria

International Conference on the Management of Spent Fuel from Nuclear Power Reactors (CN-323)
10 – 14 June 2024, Vienna, Austria

International Conference on Nuclear Knowledge Management and Human Resources Development: Challenges and Opportunities (CN-324)
2 – 5 July 2024, TBA

International Conference on Hybrid Imaging (IPET 2024) (CN-326)
7 – 11 October 2024, Vienna, Austria

International Conference on Small Modular Reactors and their Applications (CN-327)
28 – 31 October 2024, Vienna, Austria

Ministerial Conference on Nuclear Science and Technology for Development (CN-328)
12 – 14 November 2024, Vienna, Austria

International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSO) in Enhancing Nuclear Safety and Security: Enhancing science and adaptability in a changing world and creating perspective for a young generation (CN-329)
2 – 6 December 2024, TBA

For information on forthcoming scientific meetings, please consult the IAEA web site: http://www.iaea.org/events