

**CN-228 International Conference on Computer Security in a Nuclear
World: Expert Discussion and Exchange,
1-5 June, 2015, Vienna, Austria**

Preliminary Programme

This draft programme is provided to assist participants in planning.

Please submit any comments as soon as possible to Donald Dudenhoeffer, d.dudenhoeffer@iaea.org.

Monday 2015-06-01

Opening Session (1A1)

Time: 10:00-11:30 Location: M-Building, Room: M1/B

Yukiya Amano

Director General of the International Atomic Energy Agency
International Atomic Energy Agency (IAEA)

Jazi Eko Istiyanto

Chairman of the Nuclear Regulatory Agency, Republic of Indonesia, BAPETEN
Nuclear Regulatory Agency, Republic of Indonesia, BAPETEN (Indonesia)

Brahima Sanou

Director, Telecommunication Development Bureau (BDT)
International Telecommunication Union (ITU)

Leif Villadsen

Deputy Director
United Nations Interregional Crime and Justice Research Institute (UNICRI)

Frans Vreeswijk

General Secretary and CEO
International Electrotechnical Commission (IEC)

Khammar Mrabit

Director, Division of Nuclear Security
International Atomic Energy Agency (IAEA)

Keynote – National Perspective (1A2)

Time: 13:00 - 14:30 Location: M-Building, Room: M1/B

Anne Harrington

Deputy Administrator for Defense Nuclear Nonproliferation (NNSA)
National Nuclear Security Administration (USA)

Axel Vorwerk

Deputy Director General
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Head of Safety of
Nuclear Installations (Germany)

Guanghui Liu

Deputy Division Director of the Department of International Cooperation
China Atomic Energy Authority (China)

Keynote – National and Regional Perspectives (1C1)

Time: 15:00 - 16:30 Location: M-Building, Room: M1/B

Min Baek

Director General of Radiation Emergency Bureau
Nuclear Safety and Security Commission (Korea, Republic of)

Pedro Janices

National Director
National Office of Information Technologies of the Argentine Government (ONTI) (Argentina)

William Ostendorff

Commissioner
U.S. Nuclear Regulatory Commission (NRC) (USA)

Computer Security Demonstration (1D1)

Time: 16:45 - 18:15 Location: M-Building, Room: M1/B

Stephan Lechner

Director European Commission, Joint Research Centre,
Institute for the Protection and the Security of the Citizen (EC)

Computer Security Demonstration Narrated by Mark Fabro

International Team from Lofty Perch (Canada), US Department of Energy (USA), Codenomicon (Finland), Context Information Security (UK)

Tuesday 2015-06-02

Keynote – Addressing the Threat (Research and Regulation) (2A1)

Time: 09:00 - 10:40 Location: M-Building, Room: M1/B

Guillaume Poupard

Director General
National Cybersecurity Agency (ANSSI) (France)

Russian Federation (TBD)

Walid Ibrahim Zidan Mohamed

Vice Chairman
Egyptian Nuclear and Radiological Regulatory Authority (ENRRA) (Egypt)

R.S.Mundada

Head of Computer Division
Bhabha Atomic Research Centre (BARC) (India)

Keynote - Cyber Threat from a National View (2B1)

Time: 11:00 - 12:40 Location: M-Building, Room: M1/B

Toshio Nawa

Cyber Defense Institute, Inc. (Japan)

Vangelis Ouzounis

Head of Resilience and Critical Information Infrastructure Protection (CIIP) Unit
European Union Agency for Network and Information Security (ENISA)

Gary Gagnon

Senior Vice President and Chief Security Officer (CSO)

MITRE Corporation (USA)

Uwe Jendricke

German Federal Office for Information Security (BSI) (Germany)

Keynote – Trends in Cyber Attack and Defence (2C1)

Time: 14:00 - 15:40 Location: M-Building, Room: M1/B

Hypponen Mikko

Chief Research Officer

F-Secure (Finland)

Craig Rosewarne

Managing Director

Wolfpack Information Risk (South Africa)

John Stewart

Senior Vice President, Chief Security Officer

CISCO (USA)

Mark Raeburn

C.E.O.

Context Information Security Ltd (UK)

Cyber Threat Considerations in Developing a Design Basis Threat (DBT) (2D1)

Time: 16:00 - 18:00 Location: M-Building, Room: M1/B

| | | | |
|-----|--------------|---------------|--|
| 188 | S. Gaycken | (Germany) | Cyber-Nuclear Warfare and Appropriate Prevention |
| 74 | M. Schraever | (Netherlands) | Dutch Approach on DBT Cyber Security, Experiences and challenges in setting up and implementing a DBT Cyber Security |
| 116 | F. Suba | (Hungary) | Cybersecurity and DDBT – The Hungarian Approach |
| 145 | A. Cavina | (Italy) | Translating the DBT: a comparative analysis |

Computer Security Culture (2D2)

Time: 16:00 - 18:00 Location: M-Building, Room: BRA

| | | | |
|-----|-------------|------------|---|
| 5 | C. Speicher | (Germany) | The importance of security culture for computer security effectiveness |
| 142 | S. Tomažic | (Slovenia) | Slovenian case study on building and sustaining computer security culture |
| 7 | H. Sallam | (Egypt) | Human Factors Enhancement in Cyber Security |
| 34 | J. LeClair | (USA) | Social Engineering: A Threat to the Nuclear Industry |
| 17 | V. Lucic | (Serbia) | Strengthening cybersecurity culture within SRPNA |

Computer Security and System Design for Systems at Nuclear Facilities I (2D3)

Time: 16:00 - 18:00 Location: M-Building, Room: M2

| | | | |
|-----|------------|-------------------|--|
| 143 | J. Vaclav | (Slovak Republic) | Cyber Security in Slovakia |
| 31 | M. Awan | (Pakistan) | Determinants of Effective Cyber Security for a Nuclear Facility |
| 114 | R. Valkama | (Finland) | Transition into digital industrial automation and control systems within the nuclear regime |
| 56 | L. Dawson | (USA) | Methodology for Prioritizing Cyber-Vulnerable Assets in Nuclear Power Representative System Architecture |
| 183 | H. Waka | (Japan) | The threats and solutions for industrial control system security |

The Safety and Security Interface (2D4)

Time: 16:00 - 18:00 Location: M-Building, Room: PR

| | | | |
|-----|-------------|------------|---|
| 73 | T. Poussier | (AREVA NP) | Cybersecurity aspects of a safety display system |
| 28 | D. Chumak | (Ukraine) | Computer Security at Nuclear Facilities in Ukraine: Safety and Security Interface Considerations |
| 166 | M. Coden | (USA) | Cyber Safety: A Systems Thinking and Systems Theory Approach to Managing Cyber Security Risks |
| 193 | Z. Ma | (Germany) | Combining Safety and Security Analysis and Development for Cyber-physical Systems |

Wednesday 2015-06-03

Keynote – Industry Experiences and Practices (3A1)

Time: 09:00 - 10:40 Location: M-Building, Room: M1/B

Noboru Nakatani

Executive Director

INTERPOL Global Complex for Innovation (INTERPOL)

Richard Danzig

Vice Chair of the Board of Trustees

The RAND Corporation (USA)

GahmYong Kim

Vice President of Information Technology Office

Korea Hydro & Nuclear Power Co., LTD (Republic of Korea)

Steve Durbin

Managing Director

Information Security Forum ISF (ISF)

Computer Security Management in Nuclear Security I (3B1)

Time: 11:00 - 12:40 Location: M-Building, Room: M1/B

| | | | |
|-----|------------|-----------|---|
| 70 | S. Hashima | (Egypt) | Interference Management of Wireless Networks in a Nuclear Facility |
| 11 | H. Schugt | (Germany) | Integrated approach as a success factor of IT security management Practical experiences of an NPP |
| 98 | G. Kao | (USA) | Supply Chain Security Decision Analytics |
| 196 | M. Coden | (USA) | Patch Management in the Industrial Automation and Control Systems Environment: Introduction to ISA/IEC-TR62443-2-3 |

Computer Security Threat Analysis (3B2)

Time: 11:00 - 12:40 Location: M-Building, Room: BRA

| | | | |
|-----|--------------|------------|--|
| 81 | C. Glantz | (USA) | Assessing Computer Security Risks at a Nuclear Facility – A Semi-Quantitative Approach |
| 172 | P. Kleissner | (Austria) | Internet Attacks Against Nuclear Power Plants |
| 54 | F. McCrory | (USA) | An Adversary's View of Your Digital System |
| 42 | A. Kileo | (Tanzania) | The trend of cyber attacks and the future of security in nuclear technology industry for developing countries |
| 77 | J. Chugg | (USA) | Vehicle (In)Security |

General - Computer Security and System Design for Systems at Nuclear Facilities II (3B3)

Time: 11:00 - 12:40 Location: M-Building, Room: M2

| | | | |
|-----|-------------|------------|---|
| 186 | R. Cumming | (UK) | Taking a holistic view of cyber security risks in the nuclear industry |
| 53 | A. Buzdugan | (Moldova) | Information Security Development in the Moldovan Nuclear and Radiological Infrastructure |
| 135 | R. Anderson | (USA) | Cyber Informed Engineering: The Need for a New Risk Informed and Design Methodology |
| 121 | K. Xu | (China) | A Secure Approach for DCS Level 2 Communication Based on Network Coding |
| 146 | A. Ullah | (Pakistan) | An Intelligent and Hierarchical Intrusion Detection System Using Random Forest and One-Class Pyramid Neural Network |

Nuclear Security Regulatory Approaches to Information and Computer Security I (3B4)

Time: 11:00 - 12:40 Location: M-Building, Room: PR

| | | | |
|-----|--------------|-----------|--|
| 66 | P. Stoutland | (NTI) | Strengthening Cyber Security at Nuclear Facilities |
| 18 | M. Tronea | (Romania) | Regulatory Framework for the Protection of Nuclear Installations Against Cyber Threats |
| 171 | X. Zhenhua | (China) | An Introduction to Computer Security in Nuclear Facilities in China |
| 46 | T. Parkhouse | (UK) | UK Paper on Strategy for Dealing with Malicious Cyber Capabilities |

Poster Session I (Poster1)

Time: 12:40 - 13:00 Location: M-Building, Room: Poster Area

| | | | |
|----|----------------|-------------|--|
| 10 | B. Kaboro | (Kenya) | Kenya's perspective on Computer Security as an essential element in Nuclear Security |
| 24 | M. Firstenberg | (USA) | Examination of the Cybersecurity Effects of Anti-Virus Maintenance solutions |
| 26 | L. Nogueron | (Argentina) | Cyber Security During the Life Cycle of Digital Information Projects |
| 37 | A. Al-Sudani | (Iraq) | Assessment of Nuclear Security Regime In Iraq |
| 33 | B. Munaki | (Zimbabwe) | Cyberthreats Knowledge-Base for Nuclear Security Using Delphi Technique: Case for Zimbabwe |
| 41 | H. Susanto | (Indonesia) | Lesson learned from Network Security Upgrades in BAPETEN |

Computer Security Management in Nuclear Security II (3C1)

Time: 14:00 - 15:40 Location: M-Building, Room: M1/B

| | | | |
|-----|------------|----------------------|--|
| 168 | S. Smirnov | (Russian Federation) | Information Security in on-line Monitoring Systems |
| 103 | A. Rawat | (India) | User Authentication using Cognitive OTP |
| 12 | T. Wheeler | (USA) | Assessment of the Utility and Efficacy of Hazard Analysis Methods for the Prioritization of Critical Digital Assets for Nuclear Power Cyber Security |
| 165 | M. Coden | (USA) | Secure Remote Cyber Hardening of Industrial Control Systems in Nuclear Facilities in Compliance with International Standards |
| 61 | D. Blair | (USA) | Supply Chain Risk Management: The Challenge in a Digital World |

Cyber Trends and the Possible Impact on Nuclear Security (3C2)

Time: 14:00 - 15:40 Location: M-Building, Room: BRA

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|-----|------------|-------|--|
| 177 | M. Assante | (USA) | Invited Presentation - Future Trends and Strategies |
| 190 | R. Hahn | (USA) | Invited Presentation - The Case of Wireless Communications in Computer Security |

PANEL Discussion

Computer Security Considerations for Safeguards I (3C3)

Time: 14:00 - 15:40 Location: M-Building, Room: M2

- T. Varjoranta, Deputy Director General Department of Safeguards (SG), IAEA
 D. Flory, Deputy Director General Department of Safety and Security (NS), IAEA
- | | | | |
|-----|----------------|-----------|---|
| 59 | J. Stronkhorst | (EC) | Preparedness for future IT Security threats at EURATOM Safeguards data acquisition networks |
| 128 | T. Wiander | (Finland) | Computer Security and Safeguards |
| 89 | J. Doehle | (USA) | Computer Security in an Increasingly Mobile World: Recommendations for the Nuclear Community |

Nuclear Security Regulatory Approaches to Information and Computer Security II (3C4)

Time: 14:00 - 15:40 Location: M-Building, Room: PR

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|-----|-------------|-------------|--|
| 58 | C. Jung | (Canada) | Overview of Canadian regulatory framework for cyber security for nuclear facilities |
| 158 | M. Åkerholm | (Sweden) | The making of a new and modern information security regulation |
| 15 | M. Ridwan | (Indonesia) | Introducing Computer Security into Nuclear Security Framework in Indonesia: A Regulatory Body Perspective |
| 104 | M. Imase | (Japan) | Overview of the Computer Security Regulation for Nuclear Facilities in JAPAN |

Poster Session II (Poster2)

Time: 15:40 - 16:00 Location: M-Building, Room: Poster Area

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|-----|-----------|----------|--|
| 88 | E. Mkomwa | (Malawi) | Nuclear Security and Information Management System in Malawi: Achievements and Challenges |
| 79 | S. Godwin | (USA) | Threat Awareness and Sharing: A model for shifting advantage to the defender |
| 43 | C. Gupta | (India) | Role of Information Security Management Office and Open Web Application Security Project in Security of Government Infrastructure Associated With Nuclear Facilities |
| 192 | P. Sitbon | (France) | Reconciling security and operability for industrial systems with strict segregation |

Computer Security Management in Nuclear Security III (3D1)

Time: 16:00 - 18:00 Location: M-Building, Room: M1/B

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|----|----------------|----------------------------|--|
| 83 | C. Glantz | (USA) | Cybersecurity Procurement Language for Energy Delivery Systems: Application to Nuclear Facilities |
| 50 | B. Aji | (Indonesia) | Applicability of Computer Security to Radioactive Material Uses and Control: Indonesia Case Study |
| 22 | J. M'Boliguipa | (Central African Republic) | Protection and Transmission of Data in the form of Image "Zero" on a Computers Network within the Framework of the Nuclear Security. |
| 71 | R. Hoffman | (USA) | Team Composition and Management Considerations to address the Evolving Threat. |

Scenario-Based Panel Discussion: Emerging Nexus of Cyber and Nuclear Security Policy (3D2)

Time: 16:00 - 18:00 Location: M-Building, Room: BRA

PANEL Discussion

Computer Security Considerations for Safeguards II (3D3)

Time: 16:00 - 18:00 Location: M-Building, Room: M2

PANEL Discussion

National Experiences in Implementing Computer Security in Nuclear I (3D4)

Time: 16:00 - 18:00 Location: M-Building, Room: PR

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|-----|-----------------|-----------|---|
| 68 | S. Cui | (China) | The Administration of Computer and Information Security in China's Nuclear Power Plant |
| 16 | A. Kuvshinnikov | (Belarus) | Legislative and regulatory framework in the field of Computer Security in the Republic of Belarus |
| 139 | K. Kwon | (ROK) | ROK's Regulatory Efforts to Cyber Security |
| 153 | P. IVAN | (Spain) | Computer Security Programmes at Licensed Facilities: Almaraz and Trillo NPPs Cybersecurity Program |
| 49 | M. Assaf | (Jordan) | Coordination for Ensuring Computer Security in a Nuclear Security Regime by integrated with the other aspects of nuclear security |

Thursday 2015-06-04

Conducting Computer Security Assurance Activities I (4A1)

Time: 09:00 - 10:40 Location: M-Building, Room: M1/B

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|-----|------------|-----------|---|
| 72 | T. Nelson | (USA) | Observed Cyber Vulnerabilities During On-site Assessments of US Industrial Facilities with specific focus on Nuclear Facilities |
| 110 | J. Song | (ROK) | Design Concept of CSAMS(Cyber Security Assessment and Management System) for Digital Systems in Nuclear Facilities |
| 69 | G. Joseph | (India) | Secure Network Access System (SNAS) for Plant Network |
| 44 | M. Hutle | (Germany) | Vulnerability analysis of digital instrumentation and control systems important to safety – a methodical approach |
| 136 | J. Holappa | (Finland) | Threat based computer security supervisory oversight process |

Operator Experience in Implementing Computer Security (4A2)

Time: 09:00 - 10:40 Location: M-Building, Room: BRA

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|-----|--------------------------|---------------|--|
| 163 | R. Brunner P. Heagler | (Switzerland) | Invited Presentation: Cyber Security - perspective of an operator |
| 152 | S. Hilts | (Canada) | Operator Experience in Developing an Open-Source based Cyber Threat-Risk Assessment |
| 164 | D. Popa-Nemoiu | (Romania) | Cyber Security Plans for Major Automation Systems of Cernavoda NPP |
| 95 | R. Howsley | (WINS) | Contributing to the professional development of personnel accountable for computer security whilst strengthening synergies between physical and cyber security disciplines |

Computer Security for I&C Systems I (4A3)

Time: 09:00 - 10:40 Location: M-Building, Room: M2

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|-----|--------------|------------|---|
| 48 | V. Promyslov | (IEC) | Requirements to formal security models for NPP I&C |
| 159 | T. de Jesus | (Canada) | Leveraging determinism: "Fingerprinting" Industrial Control Systems (ICS) to detect and prevent cyber attacks |
| 179 | V. Sklyar | (Ukraine) | Security Case for FPGA-based I&C Systems |
| 102 | X. Shi | (China) | Design and Research of Information Security System for Nuclear Power Plant Control System |
| 30 | A. Mangi | (Pakistan) | Cyber threats to I&C systems of Nuclear Power Plants |

National Experiences in Implementing Computer Security in Nuclear II (4A4)

Time: 09:00 - 10:40 Location: M-Building, Room: PR

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|-----|----------------|-------------|--|
| 75 | A. Lochthofen | (Germany) | The German Guideline for the Protection of IT Systems in NPPs and the Assessment of Its Implementation |
| 151 | J. Sladek | (Canada) | Canadian Nuclear Cyber Security Working Group |
| 105 | S. MDOE | (Tanzania) | Tanzania: Cyber Laws And Considerations For Nuclear Security |
| 129 | D. Septikasari | (Indonesia) | Implementing Cybersecurity Framework in Nuclear Energy Regulatory Agency of Indonesia (BAPETEN) |

Poster Session III (Poster3)

Time: 10:40 -11:00 Location: M-Building, Room: Poster Area

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|----|----------------|-------------|--|
| 52 | G. Gluschke | (Germany) | Developing an Exercise Platform for Educational Activities on Nuclear IT/Cyber Security |
| 64 | N. Agbemava | (Ghana) | Industrial Control System (ICS) And Cyber Security Program For Nuclear Facility Safeguards And Security |
| 21 | B. Craig | (USA) | Computer Security Considerations for Nuclear and Radioactive Materials during Storage and Transport - A Case Study |
| 14 | M. Riasetiawan | (Indonesia) | Secure by Design Approach on Data Management and Preservation for Scientific-Nuclear Data |
| 85 | G. Landine | (USA) | Lessons Learned from Establishing a Nuclear Facility Computer and Information Security Program |

Conducting Computer Security Assurance Activities II (4B1)

Time: 11:00 - 12:40 Location: M-Building, Room: M1/B

| | | | |
|-----|----------------|----------|---|
| 126 | I. Shin | (ROK) | Lessons Learned from ROK's regulatory activities on Nuclear Facilities Cyber Security |
| 40 | G. Dandrieux | (France) | Approach for conducting a regulatory review of cybersecurity at nuclear facilities taking into account in a coordinated manner computer security, nuclear safety and physical protection issues |
| 23 | M. Firstenberg | (USA) | Analysis of the Capabilities of Cybersecurity Defenses |
| 112 | J. Lee | (ROK) | A Pilot Cyber Security Assessment of Nuclear Power Plant based on Regulatory Requirements |
| 84 | G. Landine | (USA) | Enhancing Information Security Management Systems for Nuclear Facilities |

Operator Experience in Implementing Computer Security II (4B2)

Time: 11:00 - 12:40 Location: M-Building, Room: BRA

| | | | |
|-----|---------------|--------|--|
| 180 | A. Shahkarami | (NEI) | Invited Presentation - Nuclear Industry Summit – Report on Working Group 1 -- Enhancing Cyber Security |
| 189 | D. Fox | (USA) | Invited Presentation - Experience and Lessons Learned in Conducting Facility Risk Assessments |
| 181 | R. Brunt | (WNA) | Invited Presentation - World Nuclear Association (WNA) WG on Security of the International Fuel Cycle |
| 185 | M. Gibson | (EPRI) | Invited Presentation - Introduction To The EPRI Cyber Security Research Portfolio |

Computer Security for I&C Systems II (4B3)

Time: 11:00 - 12:40 Location: M-Building, Room: M2

| | | | |
|-----|-------------|----------|---|
| 122 | D. Zhang | (China) | An essential safety approach for connecting to ICS network |
| 8 | E. Quinn | (USA) | A New International Standard on Cybersecurity for Nuclear Power Plants: IEC 62645 - Requirements for Security Programmes for Computer-Based Systems |
| 144 | D. Nikolic | (Serbia) | Cyber Attacks on I & C systems of Critical Infrastructure: Review and Challenges |
| 115 | P. Pederson | (USA) | Lessons Learned in Applying the Robust ICS Planning and Evaluation (RIPE) Program to a Nuclear Power Plant |

Designing for Security and Defense in Depth (4B4)

Time: 13:00 -14:00 Location: M-Building, Room: PR

| | | | |
|-----|-------------|-------------|--|
| 191 | G. Shannon | (IEEE) | Invited Presentation |
| 19 | L. Mao | (China) | Research on Cyber Security Isolation Strategy in Nuclear Power Plant |
| 124 | M. Hewes | (Australia) | Building and Breaking the Protection Provided by an Optical Data Diode Using Spare Parts |
| 20 | M. Kulkarni | (India) | Computer Security considerations while interconnecting the diverse systems in Nuclear Facility |
| 45 | E. Marszal | (USA) | Inherent Safety Against Cyber Attack for Process Facilities |

Poster Session IV (Poster4)

Time: 12:40 -13:00 Location: M-Building, Room: Poster Area

| | | | |
|-----|--------------------|---------|--|
| 87 | O. Martin | (USA) | Knowledge Security: Raising Awareness for Nuclear Scientists, Technicians and Engineers |
| 78 | S. Godwin | (USA) | Insider Threat: Leveraging Workflow to inform a risk-based Approach |
| 76 | S. Scirè Scappuzzo | (Italy) | Automatic Radwaste Monitoring: Computer Security Issues |
| 82 | C. Glantz | (USA) | Computer Security Awareness eLearning for Nuclear Facility Decision Makers |
| 111 | G. Jang | (ROK) | A Study on the Design Requirements on Cyber Security for Safety I&C Systems in Developing Korea NPPs |

Conducting Computer Security Assurance Activities III (4C1)

Time: 14:00 - 15:40 Location: M-Building, Room: M1/B

| | | | |
|-----|--------------------------|---------------|--|
| 150 | A. van der Weerd | (Netherlands) | Creating an IT Vulnerability scoring system for nuclear facilities |
| 137 | J. Rodriguez | (USA) | Developing a Cyber Emergency Response Team for the International Nuclear Community of Interest – Considerations and importance of information sharing products |
| 125 | A. Conjares | (Philippines) | Level of Computer Security Awareness at the Philippine Nuclear Research Institute: An Assessment |
| 141 | J. Sladek | (Canada) | Patch Management for Industrial Computer Systems in Nuclear Facilities |
| 132 | A. Takanen J. Seppälä | (Finland) | Security analysis of various industrial devices |

The Cyber Insider Threat (4C2)

Time: 14:00 - 15:40 Location: M-Building, Room: BRA

| | | | |
|-----|-------------|----------------------|--|
| 113 | M. Corcoran | (UK) | The Insider Threat |
| 167 | S. Zhurin | (Russian Federation) | Countermeasures against Cyber-insiders at Nuclear Facilities |
| 55 | M. Snell | (USA) | The Treatment of Blended Attacks in Nuclear Security Effectiveness Assessments |

PANEL Discussion

Computer Security Considerations for Research Reactors (4C3)

Time: 14:00 - 15:40 Location: M-Building, Room: M2

| | | | |
|-----|------------|-------------|--|
| 120 | C. Stevens | (Australia) | Australia's IPPAS mission – Demonstrating a Research Reactor Computer Security Programme |
| 157 | M. Thomas | (Jamaica) | Cyber Security and Safety for Small Research Reactor Facilities |

PANEL Discussion

Secure Software Development (4C4)

Time: 14:00 - 15:40 Location: M-Building, Room: PR

| | | | |
|-----|-------------|-----------|---|
| 156 | G. White | (USA) | Secure Coding Practices, Tools, and Processes |
| 13 | E. Shafei | (Egypt) | Developing Security Processes for Critical Software System |
| 32 | K. Gomulski | (Poland) | Modern approach to security of software for nuclear facility in Swierk Computing Centre |
| 149 | B. Konorev | (Ukraine) | Invariant-oriented technology for independent verification of software, which implements critical functions |

Poster Session V (Poster5)

Time: 15:40 - 16:00 Location: M-Building, Room: Poster Area

| | | | |
|-----|----------------|-------------|--|
| 123 | L. Nogueron | (Argentina) | Regulatory Framework for Safe Disposal of Digital Information |
| 97 | R. Arias | (Mexico) | Focus on security measures in Internet browsing in a Research Center |
| 130 | S. Septikasari | (Turkey) | Software Security Concepts in Cekmece Nuclear Research and Training Center |
| 107 | P. Gomiz | (Argentina) | Computer Security applied to a Nuclear Waste Management System |
| 94 | J. Pérez | (Mexico) | Cybersecurity in a research environment. |

Implementation of the Graded Approach (4D1)

Time: 16:00 - 18:00 Location: M-Building, Room: M1/B

| | | | |
|----|-------------|-----------|---|
| 9 | K. Waedt | (Germany) | Domain Specific Cybersecurity Applied to I&C |
| 35 | E. Lee | (USA) | Consequence-Based, Graded Approach to Cyber Security |
| 63 | E. Lillo | (France) | Challenges in Considering National and International Cybersecurity Requirements and Performing a Criticality Analysis |
| 6 | T. Walter | (Germany) | Adapting the commercial tool verinice to German regulatory requirements and use for I&C |
| 62 | V. Vuillard | (France) | Graded approach to computer security in French NPPs |

Education, Training and Knowledge Management for Computer Security I (4D2)

Time: 16:00 - 18:00 Location: M-Building, Room: BRA

| | | | |
|-----|-------------|--------------|---|
| 174 | S. Spassov | (Bulgaria) | Building Expert Capacity in the Field of IT/Cyber Security through the Nuclear Security Masters' Programme of the University of National and World Economy, Sofia |
| 29 | M. Hossain | (Bangladesh) | Impacts of International Coordination on Computer and Information System Security in a Nuclear World: An Organizational Culture and Social perspectives |
| 51 | G. Gluschke | (Germany) | Educational Instruments for Nuclear IT/Cyber Security and Information Security Capacity Building |
| 65 | J. Weiss | (USA) | Scenario-based Training for Cyber Security of Nuclear Plant I&C Systems |
| 195 | B. Kaintoch | (UK) | Invited presentation - Computer Security Training Development |

Computer Security for Physical Protection Systems (4D3)

Time: 16:00 - 18:00 Location: M-Building, Room: M2

| | | | |
|-----|-----------|----------------------|--|
| 169 | V. Lykov | (Russian Federation) | Information Security in Automated Systems of Physical Protection at Nuclear Facilities |
| 60 | J. Clem | (USA) | Emulation of Cyber-Enabled Physical Attack Scenarios |
| 67 | J. Li | (China) | Providing Cyber-Physical Security of Nuclear Power Plants with Heterogeneous Sensors |
| 80 | S. Godwin | (USA) | Traditional Vulnerability Assessment – Exposed and Vulnerable Itself |
| 39 | S. Drapey | (Ukraine) | Implementation of Computer Security Culture in the Scope of Physical Protection in Ukraine |

Technical Talk on Computer Security Issues for I&C (4D4)

Time: 16:00 - 18:00 Location: M-Building, Room: PR

| | | | |
|-----|-------------|----------------------|---|
| 147 | J. Larson | (USA) | Summary of Attacker Community Research Against Cyber Physical Systems |
| 184 | V. Thakur | (India) | Regin - Malware Framework for International Espionage |
| 182 | K. Wilhoit | (USA) | The State of SCADA Malware |
| 170 | A. Nikishin | (Russian Federation) | ICS Threats. A Kaspersky Lab view, predictions and reality |
| Xxx | M. Fabro | (Canada) | Denial of Control: Implications of Denial of Service Attacks in Critical Infrastructure Control Systems |

Friday 2015-06-05

International and Legal Frameworks for addressing Computer Security in Nuclear Security Regimes (5A1)

Time: 09:00 - 10:40 Location: M-Building, Room: M1/B

| | | | |
|-----|----------------|-------------------------------------|---|
| Xxx | E. Kang | (USA) | Looking Forward: How does cyber security fit into an international nuclear security framework |
| 138 | V. Boulanin | (Sweden) | International and legal frameworks addressing cyber-attacks against nuclear facilities: the state of play |
| xxx | J. Herbach | (Netherlands) | Invited Presentation |
| 187 | M. Hadji-Janev | (The fmr Yugoslav Rep of Macedonia) | Evaluating the applicability of the existing principles and standards of international law to cyber |

Computer Security Culture and Capacity Building for Nuclear Security (5A2)

Time: 09:00 - 10:40 Location: M-Building, Room: BRA

| | | | |
|-----|--------------|-----------|---|
| 178 | N. Malisevic | (Germany) | Invited presentation - Cybersecurity Norms in reducing cyber threats |
| 109 | O. Hakam | (Morocco) | Development of a Regional Development Course on Computer Security in Nuclear Field |
| 36 | Y. Reboul | (France) | Computer Security Training based on NSS17 & NST037 at French NPPs |
| 57 | C. Spirito | (USA) | Multinational Confidence Building Measures (CBMs) in support of Nuclear Safety and Security |

Computer Security for I&C Systems III (5A3)

Time: 09:00 - 10:40 Location: M-Building, Room: M2

| | | | |
|-----|------------|-----------|---|
| 38 | J. Bouard | (IEC) | International Standardisation in Nuclear I&C Engineering: Snapshot on Cybersecurity Activities |
| 148 | K. Kanhui | (China) | Cyber Security Considerations in Nuclear Power Plant Digital IC System |
| 119 | S. Jung | (ROK) | Design of a Logging System for a Cyber Security Test-bed of Instrumentation and Control systems in Nuclear Power Plants |
| 127 | T. Holczer | (Hungary) | The Design and Implementation Of A Plc Honeypot For Detecting Cyber Attacks Against Industrial Control Systems |
| 194 | M. Assante | (USA) | Industrial Control Systems (ICS) Cyber-Security Response to Physical Breaches |

Role of IAEA Guidance and International Standards in Computer Security (5B1)

Time: 09:00 - 10:40 Location: M-Building, Room: M1/B

PANEL Discussion (ITU, IEC, ISA, IEEE)

Education, Training and Knowledge Management for Computer Security II (5B2)

Time: 11:00 - 12:40 Location: M-Building, Room: BRA

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|-----|--------------------|-----------|---|
| 134 | U. Jendricke | (Germany) | Cooperative IT Crisis Management of Public and Private Actors in Germany – Lessons Learned |
| 140 | C. Spirito | (USA) | Integrating cyber dimensions in recognizing and responding to threats to nuclear facilities: challenges and lessons of recent high profile cyber incidents. |
| 92 | A. Choukri | (Morocco) | A Course on IT/Cyber Security in the Nuclear Master Programme at the University of Ibn Tofail in Morocco |
| 101 | N. Noro | (Japan) | Curriculum Development of the Computer Security Training Course in Japan |
| 117 | R. Busquim e Silva | (Brazil) | Can we Build Computer Nuclear Security by Applying Knowledge from Different Sectors? |

Conducting Computer Security Incident Reponse, Forensic and Crime Scene Investigation for Industrial Control and I&C Systems (5B3)

Time: 11:00 - 12:40 Location: M-Building, Room: M2

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|-----|-------------|-----------|--|
| 154 | R. Widh | (Sweden) | Building national cybersecurity competence and Incident handling targeted towards critical infrastructure, a governmental view |
| 155 | A. Chetaine | (Morocco) | Cyber security and prevention to protect nuclear DATA |
| 27 | S. Bittner | (USA) | Adaptive Cyber Forensics |
| 93 | D. Smith | (IAEA) | Lessons Learned from the Conduct of Forensics Examinations of Nuclear and Other Radioactive Material out of Regulatory Control |

Closing Ceremonies (5C1)

Time: 12:40 -13:30 Location: M-Building, Room: M1/B

D. Flory

Deputy Director General, Department of Nuclear Safety and Security
International Atomic Energy Agency (IAEA)

DRAFT Programme Overview

International Conference on Computer Security in a Nuclear World: Expert Discussion and Exchange
1–5 June 2015, Vienna, Austria

| Sunday 31 March 2015 | | | | |
|-----------------------------|--|--|--|--|
| | <i>PRE REGISTRATION</i> | | | |
| Monday 01 June 2015 | | | | |
| 10:00 – 11:30 | <i>Conference Opening (1A1)</i> | | | |
| 11:30 – 13:00 | <i>Lunch- Free Time</i> | | | |
| 13:00 – 14:30 | <i>Keynote – National Perspective (1B1)</i> | | | |
| 14:30-15:00 | <i>Break</i> | | | |
| 15:00 – 16:30 | <i>Keynote – National and Regional Perspectives (1C1)</i> | | | |
| 16:45 – 18:10 | <i>Computer Security Demonstration (1D1)</i> | | | |
| 18:15 | <i>Reception</i> | | | |
| Tuesday 02 June 2015 | | | | |
| 09:00 – 10:40 | <i>Keynote – Addressing the Threat (Research and Regulation) (2A1)</i> | | | |
| 10:40 – 11:00 | <i>Break</i> | | | |
| 11:00 – 12:40 | <i>Keynote - Cyber Threat from a National View (2B1)</i> | | | |
| 12:40 - 14:00 | <i>Lunch – Free Time</i> | | | |
| 14:00 – 15:40 | <i>Keynote – Trends in Cyber Attack and Defence (2C1)</i> | | | |
| 15:40 – 16:00 | <i>Break</i> | | | |
| 16:00 – 18:00 | <i>Cyber Threat Considerations in Developing a Design Basis Threat (DBT) (2D1)</i> | <i>Computer Security Culture (2D2)</i> | <i>Computer Security and System Design for Systems at Nuclear Facilities I (2D3)</i> | <i>The Safety and Security Interface (2D4)</i> |

| Wednesday 03 June 2015 | | | | |
|-------------------------------|---|--|--|--|
| 09:00 – 10:40 | Keynote – Industry Experiences and Practices (3A1) | | | |
| 10:40 – 11:00 | Break | | | |
| 11:00 – 12:40 | Computer Security Management in Nuclear Security I (3B1) | Computer Security Threat Analysis (3B2) | Computer Security and System Design for Systems at Nuclear Facilities II (3B3) | Nuclear Security Regulatory Approaches to Information and Computer Security I (3B4) |
| 12:40 – 13:00 | Poster Session 1 - Poster Area / Break | | | |
| 13:00 – 14:00 | Lunch – Free Time | | | |
| 14:00 – 15:40 | Computer Security Management in Nuclear Security II (3C1) | Cyber Trends and the Possible Impact on Nuclear Security (3C2) | Computer Security Considerations for Safeguards I (3C3) | Nuclear Security Regulatory Approaches to Information and Computer Security II (3C4) |
| 15:40 – 16:00 | Poster Session 2 - Poster Area / Break | | | |
| 16:00 – 18:00 | Computer Security Management in Nuclear Security III (3D1) | Scenario-Based Panel Discussion: Emerging Nexus of Cyber and Nuclear Security Policy (3D2) | Computer Security Considerations for Safeguards II (3D3) | National Experiences in Implementing Computer Security in Nuclear I (3D4) |
| Thursday 04 June 2015 | | | | |
| 09:00 – 10:40 | Conducting Computer Security Assurance Activities I (4A1) | Operator Experience in Computer Security I (4A2) | Computer Security for I&C Systems I (4A3) | National Experiences in Implementing Computer Security in Nuclear II (4A4) |
| 10:40 – 11:00 | Poster Session 3 - Poster Area / Break | | | |
| 11:00 – 12:40 | Conducting Computer Security Assurance Activities II (4B1) | Operator Experience in Computer Security II (4B2) | Computer Security for I&C Systems II (4B3) | Designing for Security and Defence in Depth (4B4) |
| 12:40 – 13:00 | Poster Session 4 - Poster Area | | | |
| 13:00 – 14:00 | Lunch – Free Time | | | |
| 14:00 – 15:40 | Conducting Computer Security Assurance Activities III (4C1) | The Cyber Insider Threat (4C2) | Computer Security Considerations for Research Reactors (4C3) | Secure Software Development (4C4) |
| 15:40 – 16:00 | Poster Session 5 - Poster Area / Break | | | |
| 16:00 – 18:00 | Implementation of the Graded Approach (4D1) | Education, Training and Knowledge Management for Computer Security I (4D2) | Computer Security for Physical Protection Systems (4D3) | Technical Talk on Computer Security Issues for I&C (4D4) |

| Friday 05 June 2015 | | | | |
|----------------------------|--|---|--|--|
| 09:00 – 10:40 | <i>International and Legal Frameworks for addressing Computer Security in Nuclear Security (5A1)</i> | <i>General - Computer Security Culture and Capacity Building for Nuclear Security (5A2)</i> | <i>Computer Security for I&C Systems III (5A3)</i> | |
| 10:40 – 11:00 | Break | | | |
| 11:00 – 12:40 | <i>Role of IAEA Guidance and International Standards in Computer Security (5B1)</i> | <i>Education, Training and Knowledge Management for Computer Security II (5B2)</i> | <i>Conducting Computer Security Incident Response, Forensics and Crime Scene Investigation (5B3)</i> | |
| 12:40 – 13:30 | <i>Closing Ceremonies (5C1)</i> | | | |

Session Tracks

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|--|---|
| | <i>0. Plenary Sessions</i> |
| | <i>1. Cyberthreats in Nuclear Security</i> |
| | <i>2. Computer Security and System Design for Systems at Nuclear Facilities</i> |
| | <i>3. Coordination for Ensuring Computer Security in a Nuclear Security Regime</i> |
| | <i>4. Nuclear Security Regulatory Approaches to Information and Computer Security</i> |
| | <i>5. Computer Security Programmes at Licensed Facilities</i> |
| | <i>6. Computer Security Management in Nuclear Security</i> |
| | <i>7. Computer Security Culture and Capacity Building for Nuclear Security</i> |
| | <i>8. Special Topics</i> |
| | <i>9. International and Legal Considerations in Relation to Computer Security for Nuclear Regimes</i> |
| | <i>Poster Sessions</i> |