The Abdus Salam International Centre for Theoretical Physics

International School on Nuclear Security

Cosponsor(s): In collaboration with: IAEA - International Atomic Energy Agency and the Italian Ministry of Foreign Affairs. Co-sponsored by: C.E.I. - Central European Initiative and KFAS - Kuwait Foundation for the Advancement of Science.
Organizer(s): Directors: A. Braunegger-Guelich (IAEA), Claudio Tuniz (ICTP)
Trieste - Italy, 11 - 22 April 2011

Venue: Leonardo da Vinci Building Main Lecture Hall

Final programme

Monday, 11 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: C. Tuniz

08:00 - 09:30	(Room: Leonardo da Vinci Building, Lobby) **Registration and administration**
09:30 - 10:00	**F. Quevedo; F. Formica; M. Gregoric; G. Pfanzelter** / *ICTP; Italian Ministry of Foreign Affairs; IAEA; CEI* **Opening**
10:00 - 10:15	**A. Braunegger-Guelich** / *IAEA, Vienna* **Programme Overview; Logistics**
10:15 - 10:45	**Participants** **Introduction of Participants**
10:45 - 11:15	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:15 - 11:45	**M. Gregoric** / *IAEA, Vienna* **Introduction**
11:45 - 12:30	**W. Potter** / *Centre of NonProliferation Studies (CNS), U.S.A.* **International nuclear security concerns**

12:30 - 13:30	--- Lunch Break ---
13:30 - 14:15	**W. Potter** / *Centre of NonProliferation Studies (CNS), U.S.A.* **Nuclear security acts and potential consequences**
14:15 - 15:15	**F. Germani** / *Italian Ministry of Interior, Italy* **National Security System**
15:15 - 15:45	**A. Braunegger-Guelich** / *IAEA, Vienna* **Video: Discover the International Atomic Energy Agency (IAEA) The IAEA Nuclear Security Programme**
15:45 - 16:15	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
16:15 - 17:00	**M. Gregoric** / *IAEA, Vienna* **Other International Initiatives for Combating Nuclear Terrorism**
17:00 - 18:00	**W. Potter, M. Gregoric, A. Braunegger-Guelich** / *Centre of NonProliferation Studies (CNS), U.S.A.; IAEA; IAEA* **Questions & Answers Session**
19:00 - 21:00	(Room: Leonardo da Vinci Building Cafeteria) --- Reception ---

Tuesday, 12 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: A. Braunegger-Guelich

08:50 - 09:00	**A. Braunegger-Guelich** / *IAEA, Vienna* **Summary and Guidance**
09:00 - 09:45	**R. Wesley** / *IAEA, Vienna* **Illicit trafficking and other nuclear security events - international exchange of information**
09:45 - 10:30	**R. Wesley** / *IAEA, Vienna* **Nuclear security events - selected cases**
10:30 - 11:00	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:00 - 11:45	**M. Gregoric** / *IAEA, Vienna* **Nuclear Safety, Security, & Safeguards**
11:45 - 12:30	**A. Wetherall** / *IAEA, Vienna* **The International Legal Framework for Nuclear Security**
12:30 - 13:30	--- Lunch Break ---
13:30 - 14:15	**A. Wetherall** / *IAEA, Vienna* **Drafting Comprehensive Nuclear Laws - Nuclear Security Provisions and Model Criminal Provisions: Convention on the Physical Protection of Nuclear Material (CPPNM), 2005 CPPNM Amendment, Nuclear Terrorism Convention**
14:15 - 15:00	**M. Gregoric** / *IAEA, Vienna* **Nuclear Security Regulation**

15:00 - 15:30	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
15:30 - 16:15	**M. Gregoric** / *IAEA, Vienna* **The IAEA Nuclear Security Series - Fundamentals and Recommendation Documents**
16:15 - 16:45	**Video: The IAEA Office of Nuclear Security**
16:45 - 18:00	**Participants** **State experiences & discussions**

Wednesday, 13 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: C. Tuniz

08:50 - 09:00	**A. Braunegger-Guelich** / *IAEA, Vienna* **Summary and Guidance**
09:00 - 09:45	**A. Cavina** / *IAEA, Vienna* **Introduction to Information & Computer Security** Video Conference
09:45 - 10:30	**V. Kryuchencov** / *IAEA, Vienna* **Physical Protection Regime for Nuclear Material and Nuclear Facilities**
10:30 - 11:00	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:00 - 11:45	**V. Kryuchencov** / *IAEA, Vienna* **Design Basis Threat (DBT)**
11:45 - 12:30	**V. Kryuchencov** / *IAEA, Vienna* **Introduction to DBT exercise**
12:30 - 13:30	--- Lunch Break ---
13:30 - 14:45	**V. Kryuchencov** / *IAEA, Vienna* **Exercise: DBT**
14:45 - 15:15	**V. Kryuchencov** / *IAEA, Vienna* **Protection of nuclear material against unauthorized removal**
15:15 - 15:45	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
15:45 - 16:15	**V. Kryuchencov** / *IAEA, Vienna* **Protection of nuclear facilities against sabotage** NOTE: Change of venue for today afternoon sessions - EULER LECTURE HALL - Leonardo Building 1st floor (terrace level)
16:15 - 17:00	**K. Horvath** / *Hungarian Atomic Energy Authority (HAEA)* **Physical protection means and devices (Part 1)**
17:00 - 17:30	**V. Kryuchencov; A. Braunegger-Guelich** / *Hungarian Atomic Energy Authority (HAEA); IAEA, Vienna* **Plenary - Feedback on the exercise**

Thursday, 14 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: A. Braunegger-Guelich

08:50 - 09:00	**A. Braunegger-Guelich** / *IAEA, Vienna* **Summary and Guidance**
09:00 - 09:45	**K. Horvath** / *Hungarian Atomic Energy Authority (HAEA)* **Physical protection means and devices (Part 2)**
09:45 - 10:30	**K. Horvath** / *Hungarian Atomic Energy Authority (HAEA)* **Exercise: Target Identification**
10:30 - 11:00	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:00 - 11:45	**K. Horvath** / *Hungarian Atomic Energy Authority (HAEA)* **Contingency plans and response measures**
11:45 - 12:30	**K. Horvath** / *Hungarian Atomic Energy Authority (HAEA)* **Exercise and training on physical protection**
12:30 - 13:30	--- Lunch ---
13:30 - 14:15	**I. Khripunov** / *Center for International Trade and Security (CITS), U.S.A.* **Nuclear Security Culture - Concepts and methods for the implementation of nuclear security culture**
14:15 - 15:00	**I. Khripunov** / *Center for International Trade and Security (CITS), U.S.A.* **Critical elements of national export controls**
15:00 - 15:30	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
15:30 - 17:00	**I. Khripunov** / *Center for International Trade and Security (CITS), U.S.A.* **Exercise: Export Control**
17:00 - 17:30	**Participants** **Plenary - Feedback on the exercises**

Friday, 15 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: C. Tuniz

08:50 - 09:00	**A. Braunegger-Guelich** / *IAEA, Vienna* **Summary and Guidance**
09:00 - 09:45	**R. Barnes** / *IAEA, Vienna* **Safeguarding Nuclear Materials** Video Conference
09:45 - 10:30	**D. Winter** / *IAEA, Vienna* **Nuclear Security Regime for Radioactive Material and Associated Facilities**
10:30 - 11:00	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:00 - 11:45	**D. Winter** / *IAEA, Vienna* **Introduction to Security of Radioactive Sources**

11:45 - 12:30 **I. Shadad** / *IAEA, Vienna*
Inventory and Register of Radioactive Material
Video Conference

12:30 - 13:30 --- Lunch Break ---

13:30 - 14:15 **D. Winter** / *IAEA, Vienna*
Security measures of radioactive sources in use and storage

14:15 - 15:00 **D. Winter** / *IAEA, Vienna*
Exercise: Categorization

15:00 - 15:30 (Room: Leonardo da Vinci Building, Lobby)
--- Coffee Break ---

15:30 - 16:30 **D. Winter** / *IAEA, Vienna*
Exercise: Security Measures

16:30 - 17:15 **D. Winter; A. Braunegger-Guelich** / *IAEA, Vienna*
Plenary - Feedback on the Small Group Exercises

Saturday, 16 April 2011 (**Saturday**)

08:00 - 08:00 --- Departure by coach from ICTP premises ---

09:30 - 12:00 **Organizer: A. Braunegger-Guelich** / *IAEA, Vienna*
--- A technical visit to the seaport of Koper (Slovenia) ---

Monday, 18 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: A. Braunegger-Guelich

08:50 - 09:00 **A. Braunegger-Guelich** / *IAEA, Vienna*
Summary and Guidance

09:00 - 10:30 **A.-M. Eriksson-Eklund** / *IAEA, Vienna*
Transport Security of Nuclear and Radioactive Materials - Video: Video on Safe Shipment

10:30 - 11:00 (Room: Leonardo da Vinci Building, Lobby)
--- Coffee Break ---

11:00 - 11:30 **A.-M. Eriksson-Eklund** / *IAEA, Vienna*
Developing the Transport Security Plan

11:30 - 12:30 **A.-M. Eriksson-Eklund; H. Sannen** / *IAEA, Vienna; Senior Consultant*
Exercise on the Transport Security Plan

12:30 - 13:30 --- Lunch ---

13:30 - 14:15 **A.-M. Eriksson-Eklund** / *IAEA, Vienna*
Transport Safety and the Interface with Security

14:15 - 15:00 **S. Tozser** / *IAEA, Vienna*
The VINCA Project

15:00 - 15:30 (Room: Leonardo da Vinci Building, Lobby)
--- Coffee Break ---

15:30 - 16:00 **A.-M. Eriksson-Eklund; S. Tozser** / *IAEA, Vienna*
Video: Fuel Shipment - Discussion

16:00 - 17:00 **A.-M. Eriksson-Eklund; S. Tozser; H. Sannen** / *IAEA; IAEA; Senior Consultant*
Panel discussion

17:00 - 17:30 **A.-M. Eriksson-Eklund; A. Braunegger-Guelich** / *IAEA, Vienna*
Plenary - Feedback on the exercise

Tuesday, 19 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: C. Tuniz

08:50 - 09:00 **A. Braunegger-Guelich** / *IAEA, Vienna*
Summary and Guidance

09:00 - 09:45 **V. Berthou** / *EC JRC Ispra, Italy*
National nuclear security regime for nuclear and other radioactive material out of regulatory control

09:45 - 10:30 **V. Berthou** / *EC JRC Ispra, Italy*
Principles of radiation detection

10:30 - 11:00 (Room: Leonardo da Vinci Building, Lobby)
--- Coffee Break ---

11:00 - 11:45 **P. Peerani** / *EC JRC Ispra, Italy*
Overview of detection equipment

11:45 - 12:30 **Vehicle and people control at borders Radiation Portal Monitors**

12:30 - 13:30 --- Lunch ---

13:30 - 14:15 **P. Peerani** / *EC JRC Ispra, Italy*
Demonstration of instruments and procedures

14:15 - 14:30 --- Coffee break ---

14:30 - 17:00 (Room: ICTP-INFN Laboratory (Mlab))
EC JRC Ispra, Italy
Exercise: Radiation Detection

17:00 - 17:30 **V. Berthou; P. Peerani; A. Braunegger-Guelich** / *EC JRC Ispra; IAEA, Vienna*
Plenary - Feedback on the exercise

Wednesday, 20 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: A. Braunegger-Guelich

08:50 - 09:00 **A. Braunegger-Guelich** / *IAEA, Vienna*
Summary and Guidance

09:00 - 10:00 **J. Croft** / *Senior Consultant - former Head of Emergency Response at Health Protection Agency U.K.*
The Public Health Response to the Po-210 Incident in London, 2006

10:00 - 11:00	**J. De Baerdemaeker** / *Interpol* **Nuclear Security: The Law Enforcement Perspective**
11:00 - 11:30	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:30 - 12:30	**D. Smith** / *IAEA, Vienna* **Introduction to Nuclear Forensics: Identifying the Origins of Nuclear & Radioactive Materials**
12:30 - 13:30	--- Lunch ---
13:30 - 14:15	**D. Smith** / *IAEA, Vienna* **Nuclear Forensics as a deterrent and an accountancy tool**
14:15 - 15:15	**Chair: D. Smith** / *IAEA, Vienna* **Panel Discussion**
15:15 - 15:30	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
15:30 - 15:45	**Media video conference with IAEA, Vienna**
15:45 - 16:30	**T. Matikas** / *University of Ioannina, Greece* **Interdiction & Response I Planning**
16:30 - 17:15	**T. Matikas** / *University of Ioannina, Greece* **Interdiction & Response II Implementation**
17:15 - 18:00	**T. Matikas** / *University of Ioannina, Greece* **Nuclear Security Framework at Major Public Events** **Video: 2007: Pan American Games, Brazil & 2008: Olympic Games China**

Thursday, 21 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)
Chairperson: C. Tuniz

08:50 - 09:00	**A. Braunegger-Guelich** / *IAEA, Vienna* **Summary and Guidance**
09:00 - 09:45	**A. Braunegger-Guelich** / *IAEA, Vienna* **Nuclear Security Human Resource Development - IAEA Nuclear Security Training Programme - Nuclear Security Education**
09:45 - 10:30	**A. Braunegger-Guelich** / *IAEA, Vienna* **Supporting Nuclear Security at the National Level - Nuclear Security Support Centre: technical & scientific support and systematic approach to national nuclear security human resource development**
10:30 - 11:00	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:00 - 11:30	**D. Smith; A. Braunegger-Guelich** / *IAEA, Vienna* **Case Study and Final Exercise: An Investigation of Highly Enriched Uranium out of Regulatory Control: Briefing**
11:30 - 12:30	**Participants** **Case Study and Final Exercise**

12:30 - 13:30	--- Lunch Break ---
13:30 - 14:30	**Participants** **Case Study and Final Exercise**
14:30 - 18:00	**Participants** **Case Study and Final Exercise: An Investigation of Highly Enriched Uranium out of Regulatory Control: Small Group Presentations**

Friday, 22 April 2011 (Room:Leonardo da Vinci Building Main Lecture Hall)

09:00 - 10:30	**A. Braunegger-Guelich** / *IAEA, Vienna* **Plenary - Feedback on the Final Table Top Exercise**
10:30 - 11:00	(Room: Leonardo da Vinci Building, Lobby) --- Coffee Break ---
11:00 - 12:30	**ICTP/IAEA** **Round Table Discussion, Award of Certificates, Closing remarks**