

International Conference on Advances in Nuclear Forensics - IAEA CN-218



Monday, July 7, 2014 - Thursday, July 10, 2014

IAEA HQ

Scientific Program

Nuclear Forensics within a National Nuclear Security Infrastructure

This topic encompasses the following subjects:

- 1) The role of nuclear forensics.
- 2) Threat of nuclear and other radioactive materials out of regulatory control: nuclear smuggling, orphan sources.
- 3) The IAEA's Incident and Trafficking Database (ITDB) findings and lessons learned.
- 4) Nuclear forensics awareness and understanding.
- 5) National framework for implementing nuclear forensics capabilities.
- 6) International instruments and national legislation and regulations bearing on nuclear forensics.

Implementing Nuclear Forensics in Support of Investigations

This topic encompasses the following subjects:

- 1) Model Action Plan for Nuclear Forensics.
- 2) Organizational structure: administrative, technical and human capital.
- 3) Radiological crime scene management.
- 4) Nuclear forensics laboratory.
- 5) Interpretation and attribution.
- 6) Utilization of a national nuclear forensics library.

Applications of Nuclear Forensics in Nuclear Security

This topic encompasses the following subjects:

- 1) Examination of nuclear and other radioactive materials.
- 2) Handling of evidence contaminated with radioactive material.
- 3) Interactions with other investigating agencies.
- 4) Synergies and utilizing existing resources — national experiences.

Nuclear Forensics Science - An Emerging Discipline

This topic encompasses the following subjects:

- 1) Signatures.
- 2) Methods.
- 3) Data interpretation.
- 4) The effect of radiation on forensic evidence.
- 5) Future of nuclear forensics (panel discussion — capacity building).
- 6) Synergies with other scientific disciplines (e.g. geology, materials science, etc.).

Nuclear Forensics Findings

This topic encompasses the following subjects:

- 1) Confidence in nuclear forensics findings (e.g. procedures, standards, demonstrated competencies, national nuclear forensics library).
- 2) Reporting and communication of findings.

Nuclear Forensics Capacity Building

This topic encompasses the following subjects:

- 1) Awareness, training and exercises.
- 2) Research and development.
- 3) Education and development of expertise.

International and Regional Coordination and Cooperation to Provide Assistance in Nuclear Forensics

This topic encompasses the following subjects:

- 1) IAEA nuclear security recommendations and guidance and the relevant national experience.
- 2) Nuclear Forensics International Technical Working Group (ITWG).
- 3) Global Initiative to Combat Nuclear Terrorism (GICNT).
- 4) Other initiatives and Summits.
- 5) Current and future role of the IAEA in nuclear forensics.