



Department of  
Engineering Physics  
UNIVERSITY OF WISCONSIN-MADISON

INSTITUTE FOR  
**N**uclear  
**C**LEAR  
ENERGY SYSTEMS



*Presents:*

Tom Gray

Nonproliferation and Arms Control Analyst  
Pacific Northwest National Laboratory

## **Nuclear Security: Challenges and Opportunities**

**Abstract:** To prevent, detect and respond to acts and threats of nuclear terrorism, the International Community has undertaken a wide variety of efforts. Leading those efforts is the International Atomic Energy Agency (IAEA), which develops nuclear security requirements and guidance, in addition to offering training, technical advice, peer reviews and advisory services. The US Government desires to complement and reinforce the efforts of the IAEA and the international community through its own activities to build technical and operational capacity to secure nuclear and radiological material.

Given the ever-evolving nature of the threat of nuclear terrorism and the wide array of the nuclear security activities in response, it can be difficult to understand. Additionally, few nuclear engineering curricula devote much attention to the field of nuclear security, despite the urgent technical problems facing the field. The purpose of this presentation is to provide an overview of Nuclear Security. It will focus on the relevant actors and activities, both at the international and domestic level, the current challenges facing those actors, and some of the novel technical solutions to those challenges. While the presentation will highlight some of the activities, by both the IAEA and the US Government in the area of nuclear security, it represents the views of the author only and should not be interpreted as official policy by the IAEA or the US Government.

**Biography:** Tom has been fortunate to work on a wide variety of topics related to nuclear nonproliferation, technology and policy. He began his career as a Nuclear Submarine Officer in the US Navy, where he served as the Chemistry and Radiological Controls Officer and the Strategic Communications Officer aboard the USS Alabama. Following his Navy service, Tom made the transition from nuclear operations to nuclear nonproliferation technology and policy. He has served as a fellow in the office of the Deputy Administrator for Defense Nuclear Nonproliferation within the National Nuclear Security Administration, and more recently as a Nuclear Security Officer at the International Atomic Energy Agency in Vienna, Austria.

Currently, Tom is working as a Nonproliferation and Arms Control Analyst at Pacific Northwest National Laboratory (PNNL), where he is focused on leveraging PNNL's outstanding research capabilities in fundamental science to solve challenging security problems, both nationally and internationally, including nuclear nonproliferation, nuclear security, and arms control.

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