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**Affiliation**: European University Institute (EUI)

**Position/Educational Level:**PhD Researcher in Economics

**Discipline**: Economics with a specialization in the intersection of technology and international security

**Provisional Title:**"AI-Driven Nuclear Risk Reduction Strategies"

**Summary:**

This presentation will examine the potential of Artificial Intelligence (AI) to alter nuclear risk reduction and disarmament strategies. It will analyze how AI technologies can be harnessed to improve verification mechanisms, enhance the monitoring of nuclear material, and facilitate more effective diplomacy through predictive analytics. The focus will be on concrete applications of AI in detecting clandestine nuclear programs, assessing compliance with international treaties, and reducing the risks of accidental or unauthorized use of nuclear weapons.

The research will present an analysis of current AI advancements pertinent to nuclear security, including machine learning algorithms capable of sifting through vast datasets for anomaly detection, and AI-driven simulation models that can predict potential crisis escalation points. It will also critically assess the challenges and ethical considerations of integrating AI into nuclear command and control systems, highlighting the importance of robust governance frameworks to prevent escalation and ensure stability.

Furthermore, the presentation will offer policy recommendations for international bodies, national governments, and civil society to navigate the complex landscape of AI and nuclear security. These will include proposals for research initiatives, transparency measures, and regulatory approaches to ensure that AI contributes positively to global peace and security efforts.