ACDIS
Program in Arms Control & Domestic and International Security

SEMINAR SERIES

PROF. MATT CAPLAN

UNIVERSITY OF ILLINOIS - VISITING PROFESSOR IN PHYSICS

Tuesday, September 2nd

5:00 PM – In-person & Zoom

Coble Hall #108 (801 S. Wright Street)

NUCLEAR TERRORISTS WEAR SUITS: IMPROVISED NUCLEAR WEAPONS WITH 60%-ENRICHED URANIUM

As little as 40 kg of 60%-enriched uranium can be used to build a crude nuclear weapon with a kiloton yield. While too large to fit on a missile, such a weapon could be delivered by shipping container. This analysis is motivated by the June 2025 Israeli and US attacks on Iran, especially the bombings of the nuclear facilities at Natanz, Fordow, and Isfahan. The Iranian stockpile of approximately 408 kg of 60%-enriched uranium is presently inaccessible to IAEA inspectors, likely removed before the bombings and stored in secret. The rapid clandestine relocation of this material in June 2025 creates an opportunity for aspiring nuclear terrorists to divert an amount that could be used in the construction of an improvised gun-type nuclear weapon in the style of Little Boy.

Matt Caplan is an Associate Professor of Physics at ISU and a Visiting Professor at UIUC for the 2025-2026 academic year. He primarily studies the interiors of white dwarfs and neutron stars, and he is a co-investigator of the Simons Collaboration for Extreme Electrodynamics of Compact Sources. Dr. Caplan was an inaugural Fellow of the Physicists Coalition for Nuclear Threat Reduction. At ISU he is the creator and chair of Twelve Thousand Bombs, a distinguished seminar series on nuclear weapons, and he hosts the eponymous podcast on NPR.

Scan the QR code to find out more!

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