Nuclear Disarmament Verification via Resonant Phenomena

ACDIS Seminar

Speaker: Areg Danagoulian, MIT
Norman C. Rasmussen Assistant Professor
of Nuclear Science and Engineering

February 19th in 136 Loomis Laboratory, 3:30 to 4:30 pm

Nuclear disarmament treaties are not sufficient in and of themselves to neutralize the existential threat of nuclear weapons. Technologies are necessary for verifying the authenticity of the nuclear warheads undergoing dismantlement before counting them towards a treaty partner's obligation.

Using Monte Carlo simulations and experimental proof-of-concept measurements, these techniques are shown to reveal no isotopic or geometric information about the weapon, while readily detecting hoaxing attempts.

The talk will discuss the concept and recent results, and will give a general overview of nuclear security research pursued at MIT.

ACDIS

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