

Nuclear Engineering Seminar

Dr. Camille Palmer

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Camille Palmer is an Associate Professor and is currently serving as the Associate School Head in the School of Nuclear Science and Engineering at Oregon State University. Dr. Palmer's professional interests emphasize international nuclear security and nonproliferation where she pursues collaborative and interdisciplinary research with the School of Public Policy, Electrical Engineering and Computer Science, and Robotics. Prior to academics, she was a staff member in Los Alamos National Laboratory's X-Division in both the Thermonuclear Applications (X-2) and Foreign and Improvised Nuclear Design (XTD-4) groups. During her time in X-Division she trained at LANL's Theoretical Institute for Thermonuclear and Nuclear Studies (TITANS). Dr. Palmer has also supported the nuclear hardness and survivability of the Minuteman III delivery systems as an engineer with Northrop Grumman Mission Systems. Her experience in nuclear weapons and weapon effects informs and guides her research on interdisciplinary projects to support nuclear nonproliferation. Dr. Palmer holds a Ph.D. in Nuclear and Radiological Engineering from the University of Cincinnati.

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3:30pm | WALC 1018

Nuclear Security and Safeguards at Oregon State University

Abstract

While the number of nuclear weapons has drastically reduced since the Cold War, the threat of a nuclear detonation remains a viable and concerning prospect. Several collaborative and interdisciplinary projects at Oregon State University (OSU) are seeking to enhance the capability to detect nuclear material misuse. The disciplines of robotics, analytical chemistry, nuclear science, and policy integrate to help reduce the possibility of nuclear material diversion for non-peaceful uses by state or non-state actors. This talk will provide a background on nuclear treaty verification and nonproliferation challenges and provide an overview of research collaborations within OSU, and in partnership with national laboratories, to address several featured challenges. Specifically, two robotics projects with application to nuclear safeguards will be highlighted along with the exploration of a new isotopic indicator of reactor class in used nuclear fuel.