Nuclear Engineering Seminar

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Wednesday, March 31, 2021

3:30pm | Webex

Computational Radiation Imaging and Computed Tomography for Detection of Nuclear Materials

Abstract

In this presentation, we will discuss and explore recent advances in computational radiation imaging and computed tomography, including tunable X-ray sources and cosmic ray muon tomography, and their applications to nuclear engineering.

Dr. Stylianos Chatzidakis is an Assistant Professor in the School of Nuclear Engineering at Purdue University. Prior to joining Purdue, he was R&D Staff and Weinberg Distinguished Fellow at Oak Ridge National Lab (ORNL). Dr. Chatzidakis received his Ph.D. in Nuclear Engineering from Purdue University, his M.Sc. in Energy Physics from the Grenoble Institute of Technology in France and his Diploma in Mechanical Engineering (5-year program) from the National Technical University of Athens. Dr. Chatzidakis's research focuses in the fields of X-ray and cosmic ray muon tomography, quantum cybersecurity and signal encryption, development of 3D printed radiation tolerant sensors and anomaly detection using intelligent algorithms. He is one of the developers of the Tube Acoustic and Pressure measurement System (TAPS) and the Mobile Examination and Remediation Facility (MERF) at ORNL.