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**Environmental Engineering**

**and Earth Sciences**

**EEES Department Seminar**

**Resolution of Public Radiation Alarms –**

**Insights and Experiences**

**Dr. George Lasche**

Soon after the terrorist attack of September 11, 2001, the possibility of further attacks either as an explosive nuclear device or as a radiation dispersal device was recognized. A wide variety of portable radiation detectors were rapidly developed and provided to customs and law enforcement officials, resulting in frequent false alarms in need of resolution that often seriously inconvenienced commercial and private traffic. A system was created to resolve these alarms quickly and yet provide good confidence in discriminating between false alarms and actual threats. That system and a variety of interesting challenges and events will be described.

**About Dr. Lasche:**

A picture containing person, person, smiling, suit

Description automatically generatedGeorge Patrick Lasché graduated from the U.S. Military Academy at West Point in 1969. He is a Hertz Fellow and a National Merit Scholar. He earned an M.S. in Physics and an M.S. in Nuclear Engineering from MIT, an MBA from LIU, and a PhD in Applied Physics from the University of California at Davis. He is an author of over 30 peer-reviewed scientific publications. He has served as an Associate Professor of Physics at West Point, as a Research Associate at Lawrence Livermore National Laboratory, as the DARPA Program Manager for nuclear and space programs, and as the State Department advisor to the UN inspection teams in Iraq leading to the discovery of Iraq’s nuclear weapons program, for which he received the Defense Superior Service Medal. At White Sands Missile Range he was the Director of the Vulnerability Assessment Laboratory and, later, the Director of the High Energy Laser Systems Test Facility. Subsequently he developed nuclear spectral analysis software for special applications for the Air Force Technical Applications Center, the Space and Missile Defense Command, the Defense Threat Reduction Agency, and the International Atomic Energy Agency. As a Distinguished Member of the Technical Staff of Sandia National Laboratories, he was the national leader for emergency resolution of suspicious nuclear radiation events. He is widely known as the author of the "Cambio" gamma spectrum file translation application. He is now the senior partner of Snakedance Scientific, LLC, where “VRF” gamma spectrum analysis software was developed based on holistic non-linear least-squares methods that he and his team members first applied to data from Supernova 1987A while on expedition in Antarctica.

**2:30 PM**

**Friday, November 4, 2022**

**Rich Laboratory Auditorium**

***Attendance is mandatory for graduate students enrolled in EES 8610, EES 9610, and GEOL 8610.***