NAVAL SCIENCE AND TECHNOLOGY

ENGR 3109: Navy STEM Professional Development Seminar

Wednesday, February 28, 2018
5:00 pm to 6:00 pm
UConn, Storrs Campus – Laurel Hall 205

“Navy Undersea Vehicle Structural Acoustics and Stealth”

DESCRIPTION: A broad array of technologies is involved in allowing the U.S. Navy’s undersea vehicles to operate in a covert and stealthy manner and live up to their apt name as the ‘Silent Service.’ Keeping this technological edge in a chaotic and ever-changing world involves both the fundamental understanding of the physics of structural acoustics and structural vibrations as well as the application of these and other engineering technologies to the acoustic and non-acoustic silencing of advanced undersea vehicles. This seminar includes both an examination of the definition and importance of vibro-acoustics physics and how it is applied by scientists and engineers to both manned and unmanned Navy undersea vehicles and associated systems. A short discussion of other related cutting-edge technologies that also support the undersea Navy and help keep it the quietest military force in the world will also be included.

DR. ROBERT M. KOCH, P.E., U.S. NAVY SENIOR TECHNOLOGIST
NUWC, UNDERSEA TACTICAL STEALTH CHIEF TECHNOLOGY OFFICE

Dr. Robert Koch, P.E. has been the U.S. Navy’s Senior Technologist (ST) in Undersea Tactical Stealth Systems, residing in the Chief Technology Office at the Naval Undersea Warfare Center (NUWC) Division, Newport since 2009. Prior to that, he was the Head of the NUWC Division Newport Solid Mechanics and Design Branch, managing 20+ technical employees, and also a Chief Research Scientist in Applied Mechanics. Dr. Koch is an internationally recognized and widely published researcher in structural- and hydro-acoustics noise propagation and control, advanced mathematical analysis of transient dynamic high-energy shock events, and general theoretical and applied mechanics formulations. He received his Ph.D. in Applied Mechanics from Polytechnic University of New York in 1991 and is also a Registered Professional Engineer (P.E.) in the State of Rhode Island. Dr. Koch has also been an Adjunct Professor of Engineering, teaching undergraduate engineering courses for the past 30 years at Polytechnic University and Roger Williams University, Bristol, RI.