

LENS/Condensed Matter Seminar

February 21, 2020

Speaker: Stephen W. Howell, Naval Surface Warfare Center Crane Division

Title: *“Quantum Science and Engineering at NSWC Crane”*

Abstract: We will present our perspective on quantum science and engineering (QSE) and discuss how novel quantum-enabled paradigms could impact NSWC Crane’s various mission areas. Furthermore, we will also discuss our newly initiated research efforts in the generation of entangled photons, quantum-enabled sensing, DFT calculations, and vacancy-enabled quantum systems.

The rapidly advancing field of QSE has recently demonstrated improvements to traditional computation, communication, and sensing paradigms that cannot be achieved classically. These new paradigms could have major impacts not just in the private and commercial sectors, but also for national security and military applications. Given the potential for disruptive impacts, the United States Military has begun investing in QSE R&D. Following guidance from our leadership in 2019, NSWC Crane has begun to seek R&D opportunities in an attempt to understand potential impacts enabled by QSE.