In the project “Quantum Embedding for Quantum Defects in Wide-Band-Gap Semiconductors”, Dr. Michael Swift (Center for Computational Materials Science at the Naval Research Lab) will develop a computational framework to predict the properties of quantum defects in wide-band-gap semiconductors, with a focus on identifying potential qubits and single-photon emitters for quantum information applications. The project will leverage a "quantum embedding" methodology to accurately describe the excited-state structure of quantum defects, which is critical for their operation. The successful development of this capability will significantly advance the state of the art in quantum defect research and enable the identification of promising materials and defects for experimental realization. Ultimately, this project has the potential to enable the development of novel quantum technologies with broad-ranging impacts on DoD focus areas, from Decision Superiority and Cyber to Power and Energy.