

Dr. J. Tiberius Moran-Lopez National Nuclear Security Administration Bridging HED Plasma Sciences to Stockpile Stewardship and Defense Applications

The Department of Energy's National Nuclear Security Administration (NNSA) and the Department of Defense are the principal agencies responsible for the country's stockpile, and lead various efforts in high-energy-density (HED), plasma, and predictive sciences. Stockpile modernization is critical to the NNSA/DOD joint mission and involves diverse members, including the Nuclear Weapons Council (NNSA, Policy, Joint Staff, US STRATCOM) the Navy and Air Force, the national laboratories, intelligence agencies, and Congress. These organizations make significant efforts to recruit and develop early-career professionals across the country and prepare tomorrow's leaders in areas encompassing HED and plasma sciences, nonproliferation, and policy. More, these organizations partner with various academic institutes supporting NNSA and DOD programs to prepare the next generation of leaders in nuclear security. NNSA fellowships are great opportunities for early-career and mid-level professionals interested in such fields. These and related topics will be discussed.

About the Speaker: J. Tiberius Moran-Lopez established his research in high-energy-density (HED) shock-induced hydrodynamic instabilities and turbulence modeling at the University of Michigan and Lawrence Livermore National Laboratory. After completing his PhD in 2013, Tiberius continued with the NNSA Office of Defense Programs, leading projects in defense science predictive capabilities. Tiberius has also represented the NNSA on international agreements with European partners. Tiberius is a strong advocate for academic initiatives to prepare tomorrow's leaders in HED sciences and remains actively involved with universities across the country. In this spirit he also introduced the NNSA Development and Succession Planning Initiative, which is dedicated to strengthening foundations for the NNSA's early-career professionals and emerging leaders. In 2015 Tiberius received the Defense Programs Award of Excellence, and in 2017 was recognized by the DOE's Leadership, Education, and Development (LEAD) Programs. Currently on assignment to the Pentagon, Tiberius serves as technical advisor and analyst in the Office of Nuclear Matters.