David M. Stepp, Ph.D.

Dr. Stepp received his Ph.D. in Mechanical Engineering and Materials Science from Duke University in 1998, where he investigated the high-strain rate deformation and damage accumulation mechanisms governing tantalum and developed a novel, statistically-based, computational algorithm to enhance positron annihilation lifetime spectroscopy under the guidance of Dr. Phillip Jones. Dr. Stepp has published research in the areas of smart materials, structural ceramics, and polymer degradation and failure mechanisms. Dr. Stepp has served as the U.S. Army Research Office (ARO) Chief Scientist since January 2019. In this role, he: functions as the ambassador and lead interface between ARO and the scientific community; provides technical direction, advice and guidance on basic research plans and programs ensuring an innovative and future focused scientific effort; and serves as principal scientific/technical advisor and principal for ensuring technical excellence of the scientific portfolio. Previously, he was selected to serve as the Acting Director of ARO from June 2018 until April 2019. He served as the Director of Engineering Sciences (overseeing the Electronics, Materials Science and Mechanics Divisions at ARO) from 2016 to 2018 (and April 2019 until January 2019), and as the program manager for the Mechanical Behavior of Materials extramural basic research program since 1999. Dr. Stepp also served as the Chief of the Materials Science Division at ARO from 2004 until 2017, and led a team to extend the frontiers of materials science in order to realize unprecedented material properties and provide new foundations and paradigms to enhance future war fighter and battle systems capabilities. Dr. Stepp has also served as an Adjunct Assistant Professor at Duke University in the Department of Mechanical Engineering and Materials Science since 1999, where he is conducting research exploring fundamental microstructure-property relationships in transparent polymers and fragmentation in transparent engineering materials. In addition, Dr. Stepp serves as an U.S. Army representative to the NSTC Subcommittee on Nanoscale Science, Engineering, and Technology (NSET).