

Mark D. Carter



Dr. Carter is presently the Senior Vice President of Technology Development for Ad Astra Rocket Company (AARC) where he has worked since 2006. The company's focus is on commercial space applications and the development of a radio frequency (RF) driven plasma system (VASIMR[®]) for advanced space propulsion. The technologies involve a broad range of design and development expertise including self-consistent physics-based simulation, RF power coupling to complex anisotropic dielectrics, advanced manufacturing with ceramics, high-temperature and cryogenic thermal management, superconducting magnets, experimental design and data analysis, and systems engineering optimization. Prior to joining AARC, Dr. Carter spent over 23 years as a member of the research staff at Oak Ridge National Laboratory where his research focused on high-performance computer modeling of RF plasma processes. His work contributed to RF coupler design and analysis for experimental fusion devices in the United States at the Princeton Plasma Physics Laboratory, General Atomics, the Massachusetts Institute of Technology, and the University of Wisconsin. He performed analysis for fusion experiments in England, France, Germany, Japan, Korea, and the former Soviet Union as part of an international program for the US Department of Energy. Outside of fusion research, he completed industrially funded work for modeling plasma processing reactors in the semi-conductor industry (SEMATECH and Applied Materials, Santa Clara, CA). Dr. Carter has been published in several scientific journals and numerous proceedings. A list of publications is available on request or through Researchgate.net.