Stephen Thomas is a Modeling Engineer at Celgene Corporation at Summit, New Jersey, USA. He is part of the Integrated Materials Engineering & Technology (IMET) group within Drug Product Development. At Celgene, he is working on developing a digital twin of the drug development process which involves developing strategies to capture the relevant physics involved in the life of a drug product starting from a single molecule to the dosage form and finally reaching the targets in the human body. Reaching this lofty goal involves combining molecular scale material models, macro scale experimental process models and data driven models.

After he earned a BE in Computer Science from Periyar University, India, he worked as a software developer for 10 years in various domains, such as industrial automation, machine vision, telecommunication (Nokia) and life sciences (General Electric Company). He then earned an MS and PhD in Materials Science and Engineering from Boise State University, USA in 2018. He has published 9 peer-reviewed papers and given 5 invited talks.

His primary research interest is in computational modeling of materials that span disparate time and space scales using methods such as coarse-grained molecular dynamics (CGMD) and concurrent coupling. His expertise lies in using high performance computers efficiently for scientific computing. His work as a post-doctoral research associate in Dr. Michela Taufer's GCLab at the University of Tennessee at Knoxville was to develop frameworks to perform in-situ analysis of molecular dynamics simulations on super computers to circumvent the performance bottleneck because of slow I/O-OPS compared to FLOPS. His Ph.D. research with the Boeing Company was to develop a fundamental understanding of reaction induced phase separation in toughened thermoset polymers using CGMD to reduce the time and materials required to develop new aircraft material formulations.