

Muharrem Mane, Ph.D.

Research Areas: Multidisciplinary design optimization, modeling and simulation of complex systems, operations research, network analysis, systems-of-systems analysis and evaluation

Muharrem Mane is an Associate Engineer and spends most of his research efforts in Project Air Force.

Prior to joining RAND he spent three years as a Research Scientist in the School of Aeronautics and Astronautics at Purdue University, where he was the Chief Scientist of the Center for Integrated Systems in Aerospace, directed by Dr. Daniel DeLaurentis. Muharrem's research interests center on the development and application of tools and methods that enable the analysis and design of complex families of systems. His research encompasses Multidisciplinary Design Optimization (MDO), Operations Research (OR) techniques, Network Analysis, and Modeling and Simulation to study the interactions, capabilities, and design requirements of these complex systems.

Muharrem has conducted multidisciplinary research in systems-of-systems in the context of aerospace, defense, and systems acquisition applications. He has led a multidisciplinary team of graduate students working on the modeling and simulation of the Ballistic Missile Defense System with the goal of identifying underlying architecture features that lead to successful engagement of large missile raids. While at Purdue he was part of a NASA-funded project evaluating future aircraft technologies and their environmental impact to guide policy-making and design of new systems. Muharrem has also spent time studying the impact of developmental interdependencies on the acquisition of defense systems and systems of systems as part of a multi-year effort sponsored by the Naval Postgraduate School.

Muharrem Mane received his doctorate degree in Aerospace Systems from Purdue University in 2008. He also holds a MS in Aeronautics and Astronautics and an MS in Civil Engineering, both from Purdue University.