



PROFILE

Technical Fellow
Materials Manufacturing Technology
Boeing Research & Technology
Engineering, Test & Technology
The Boeing Company

CITATION

A prolific innovator and internationally renowned expert in sensors and physics for nondestructive inspection and materials evaluation, whose work addresses product improvements, manufacturing, and service longevity in the aerospace, food, agricultural, and petrochemical industries.

MORTEZA SAFAI

Asian American Engineer of the Year

Mr. Morteza Safai is a Technical Fellow at The Boeing Company and an internationally known authority and expert in sensors and physics for nondestructive inspection (NDI) and materials evaluation. At Boeing, he is the Principal Investigator and technical lead for the development of NDI sensors and systems for nanotechnology NDI, X-ray backscattering system, X-ray CT, shearography, thermography, machine vision, and electro-optic bases sensors. His work developing new sensors addresses specific industry needs including product improvements, manufacturing, and service longevity and significantly impacts the aerospace, food, agriculture, and petrochemical industries.

In addition, Mr. Safai serves as the technical lead in Materials Manufacturing Technology (M&MT) road map development and the M&MT Functional Thrust Leader. He is the technical lead for the NASA Phase-II Advanced Composites Project (TC2), technical lead in the Boeing joint ASTAR (Agency for Science Technology and Research) Singapore Consortium, and technical lead in the development of automated crack detection in railroad axles.

Born in Iran, Mr. Safai moved with his family to Salt Lake City, Utah, in 1978. He earned his Bachelor of Science and Master of Science degrees in Physics from the University of Utah. Since then, he's built an impressive career, including 25 years with The Boeing Company. He was appointed a Boeing Associate Technical Fellow in 2007 and a full Technical Fellow two years later. He holds more than 210 US and international patents and patents pending and has 26 technical publications.

Mr. Safai's innovations are many. For example, from 2006 to 2019, he led the development of Boeing's X-ray backscattering system for aerospace application, and in 2011 was awarded the Special Invention Disclosure of the Year. In 2013, he developed the rapid inspection system of 787 lithium ion batteries; and in 2003, he led the development of a high-speed automated X-ray food inspection program at John Bean Technology Corp.

He is not only a technical leader, he also mentors and helps others—he teaches, trains, and mentors young engineers in fields of shearography, infrared, X-ray backscattering, and microwave. Mr. Safai is also a sought-after speaker nationally and internationally and shares his knowledge with the industry frequently.

Outside of work, Mr. Safai is a professional landscape artist and enjoys numerous outdoor activities, including skiing, mountain biking, and trail running. He and his wife and the rest of his family live in Newcastle, Washington.

