

## **Daniel L. Dumbacher**

Daniel (Dan) L. Dumbacher is a Professor of Engineering Practice in the School of Aeronautics and Astronautics at Purdue University. He teaches courses in systems thinking, systems engineering, and space policy. He is also helping establish the Purdue Systems Collaboratory to bring together the many perspectives and disciplines needed to address complex problems for today and the future, as well as prepare the next generation of practitioners, researchers, and leaders in systems thinking.

Prior to joining the faculty at Purdue, Mr. Dumbacher served as the Deputy Associate Administrator, Exploration Systems Development Division, for the Human Exploration and Operations Mission Directorate at NASA Headquarters. In that capacity, he provided leadership and management as the Program Director for Exploration Systems Development encompassing the Space Launch System, Orion, and Ground Systems Development and Operations (GSDO) development and integration efforts. He led a team of over 5000 people spanning all NASA Centers and Industry. He was responsible for a \$3B annual budget.

From 2007-2010, Mr. Dumbacher served as the Director of the Engineering Directorate at NASA's Marshall Space Flight Center. Appointed to the position in May 2007, Mr. Dumbacher led an organization of 1,400 civil service and 1,200 support contractor employees. Under his leadership, the Engineering Directorate supported the Space Shuttle propulsion elements, design and development of the Ares launch vehicles, operation of NASA's Payload Operations Center—the command post for scientific research activities on board the International Space Station, and supported all Marshall Space Flight Center International Space Station and Science missions.

Previously, Mr. Dumbacher was Deputy Director of the Ares Projects Office and, prior to that, was Deputy Director for Product Assurance in the Safety and Mission Assurance Office, focusing on Space Shuttle return-to-flight efforts. Other assignments included Manager of the X-37 Flight Demonstrator, Deputy Manager of the Space Launch Initiative Program, and Program Manager of the Second Generation Reusable Launch Vehicle Program. He has served as Deputy Manager of the X-33 Flight Vehicle Program and Manager of the Delta Clipper-Experimental Advanced Flight Vehicle Project. He also served as Assistant Manager of the Space Shuttle Main Engine Project and Manager of the Technology Test Bed Project, overseeing hot-fire testing of large liquid propulsion engines.

Mr. Dumbacher joined NASA in 1979 as a summer student performing thermal analysis on Spacelab missions, and in the summer of 1980 worked on turbomachinery and systems analysis of the Space Shuttle Main Engines. Following graduation from Purdue in 1981, he returned to NASA in the Liquid Propulsion Systems Branch performing systems analysis on the Space Shuttle Main Engine ground test and flight engines. In 1985 he ventured into missile vehicle integration work on the Strategic Defense Initiative for Teledyne-Brown Engineering. He returned to NASA in 1987 as the Chief Engineer for the Alternate Turbopump Development Project.

During his career, he has received numerous awards and honors. In 2014, he was awarded the coveted Silver Snoopy Award, and the NASA Distinguished Service Medal. In 2007, he was awarded the Presidential Rank Award for Meritorious service. In 2003, Purdue University recognized him with the Outstanding Mechanical Engineer award. He received the NASA Exceptional Achievement Medal in 2002 for accomplishments related to NASA's Space Launch Initiative Program, and in 1997 for his work on the DC-XA Project. In 1996, he was honored with a Marshall Director's Commendation for accomplishing two flight tests within 26 hours in the DC-XA Project flight test series.

Mr. Dumbacher earned a bachelor's degree in mechanical engineering from Purdue University in 1981 and a Master's in Business Administration from the University of Alabama in Huntsville in 1984. He has completed the Senior Managers in Government study program at Harvard University. Mr. Dumbacher has authored several papers on liquid propulsion technologies, space transportation systems development, and systems engineering.

Mr. Dumbacher is a native of Indianapolis, IN and attended Bishop Chatard High School. He and his wife Lee have three grown children: Erin, an Elliott School graduate in International Affairs from The George Washington University, residing in Washington, D.C., pursuing graduate studies at the Johns Hopkins School of Advanced International Studies, Dana, a 2011 graduate of Marquette University, currently pursuing graduate studies in Public Policy at the University of Minnesota, and Brad, a recent graduate of Marquette University and member of their Men's basketball staff, attending the University of Georgia Law School.

