



William R. Van Dalsem

Adjunct Lecturer, Mechanical Engineering

Bio

BIO

Bill recently completed 40+ years at NASA. Bill's goal is to help the next generation of engineers address the complex challenges facing society, such as climate change, and the resulting critical needs to achieve greener energy and transportation and reduce the impact of wildfires and droughts.

He graduated from Stanford with a Ph.D. in Mechanical Engineering (with a minor in Aeronautics and Astronautics) in 1984, as well as a Master's in Mechanical Engineering in 1981. Bill received his Bachelor's in Mechanical Engineering from the University of California, Santa Barbara where his capstone project was an operational diffuser augmented wind turbine. Bill was a University of California Regent Scholar.

At NASA, Bill began as a research scientist in computational fluid dynamics, eventually providing leadership to organizations that provided aerodynamic support to activities ranging from the Space Shuttle to V/STOL aircraft. Bill led NASA-wide programs which brought high-performance computing to bear on Earth sciences, multi-disciplinary physics to aerospace design, and explored the application of nano and quantum technologies to NASA missions. Bill led NASA Ames' Intelligent Systems Division, which provided critical software to NASA's Earth-like planet detecting Kepler mission, two missions to the Moon, and many innovative small spacecraft missions. Bill spent seven years as a senior systems engineer in the NASA Ames Office of the Chief Engineer. Bill served as the Deputy Director and Chief Strategy Officer of the NASA Ames Aeronautics Directorate, when among his other duties he envisioned a Data & Reasoning Fabric to enable autonomous aircraft to provide critical services in complex environments. In 2020, Bill received NASA's highest recognition, the NASA Distinguished Service Medal.

Bill is learning about exciting new challenges and creative student solutions from his participation in the Stanford Mechanical Engineering Senior Capstone Program. In return, he is trying to provide some lessons learned from working some of NASA's most exciting and challenging missions.

Stanford Mechanical Engineering Senior Capstone Program:

<https://me170.stanford.edu>