

Karen E. Willcox

Karen E. Willcox is Professor of Aeronautics and Astronautics at the Massachusetts Institute of Technology. She is also Co-Director of the MIT Center for Computational Engineering and formerly the Associate Head of the MIT Department of Aeronautics and Astronautics. Prior to joining the MIT faculty, she worked at Boeing Phantom Works with the Blended-Wing-Body aircraft design group. Her research at MIT has produced scalable computational methods for design of next-generation engineered systems, with a particular focus on model reduction as a way to learn principled approximations from data and on multi-fidelity formulations to leverage multiple sources of uncertain information. Willcox is currently Co-director of the Department of Energy DiaMonD Multifaceted Mathematics Capability Center on Mathematics at the Interfaces of Data, Models, and Decisions. She leads an Air Force MURI on optimal design of multi-physics systems. She also leads an Air Force Data-Driven Dynamic Applications Systems project team that is developing and flight testing a self-aware UAV.