



**Anna-Maria Rivas McGowan, Ph.D.**  
NASA ST  
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Dr. Anna-Maria McGowan is the NASA Senior Engineer for Complex Systems Design. Dr. McGowan's research and agency leadership focus on innovative, interdisciplinary methodologies for designing and engineering systems that are highly complex where she uses both quantitative and qualitative research methods. She integrates seminal research in fields external to aerospace that have the potential for high impact when integrated with engineering approaches to improve aerospace system performance, efficiency, and broader societal impacts. Her recent research includes integrating theoretically-grounded organization science with engineering design and development to improve interdisciplinary research practices and increase innovation.

Dr. McGowan has over 25 years of experience in aerospace, conducting research and managing large projects in diverse areas that include design science, advanced and morphing aircraft, systems engineering, aeroservoelasticity, active flow control, and organization science. Based at the NASA Langley Research Center, Dr. McGowan has served as a NASA senior advisor, senior project manager, DARPA agent, NSF visiting scientist, NATO consultant, short course instructor, flight test leader, wind-tunnel test engineer, senior researcher, and NASA spokesperson. Her career has advanced innovation for commercial and military systems through cross-disciplinary approaches and incorporating novel technologies and new methods. Dr. McGowan continues to actively foster cross-agency collaborations in the InterAgency Working Group for Engineering Complex Systems that she co-founded with the National Science Foundation.

Dr. McGowan's prior positions at NASA include: 1) Project Manager of NASA's Convergent Aeronautics Solutions (CAS) Project, operationalizing NASA's strategic vision for transformative, entrepreneurial approaches; 2) Technology Integration Manager for NASA's Subsonic Fixed Wing Project, addressing near-term technical integration and initiating long-term interdisciplinary research efforts; 3) DARPA Agent and NASA Principal Investigator for DARPA's Morphing Aircraft Structures Phase III program, leading a successful, high-risk RPV flight test program going from concept to flight in 2 years; 4) Acting Deputy Director for the Aerospace Vehicle Systems Program Office, assuming responsibility for the \$650M program annual budget and GS14-15 staff; and 5) Project Manager for NASA's Morphing Project of the 21st Century, conceiving and managing the ambitious forward-looking project for over 4 years.

Dr. McGowan has a B.S. in Aeronautical and Astronautical Engineering from Purdue University, M.S. in Aerospace Engineering/Engineering Mechanics from Old Dominion University, and Ph.D. in Design Science in Engineering from the University of Michigan. Dr. McGowan has taught short courses and presented guest lectures in several countries, and served as a consultant to national laboratories, major industries, and government agencies across the US. Dr. McGowan is an AIAA Associate Fellow and received the AIAA Sperry Award; alumni awards from Purdue University, Old Dominion University, and the University of Michigan; and the National Women of Color Technical Innovation in Government Award. She has also earned numerous NASA individual and group achievement awards, including the NASA Exceptional Achievement Medal. In her spare time, Dr. McGowan is an outdoor enthusiast and community volunteer. Her travels often take her to Trinidad and Tobago in the Caribbean where her family and culture originate.