



Nathaniel W. Gardner is a Research Aerospace Engineer working within the Structural Dynamics Branch, more specifically the Landing and Impact Research (LandIR) Facility, at NASA Langley Research Center (LaRC). With over 15 years of Digital Image Correlation and R&D experience, he specializes in structural dynamics and aircraft crashworthiness, with an emphasis on utilizing photogrammetry, along with traditional instrumentation, to better understand and characterize the structural response. Nate received both his undergraduate degree (B.S.M.E.) and Ph.D. (M.E. - Solid Mechanics) from the University of Rhode Island in 2007 and 2012 respectively. Since joining NASA in 2013, Nate has worked on numerous projects, including the testing and analysis of the Mars 2020 Heat Shield, Mars 2020 Rover wheel, Orion Heat Shield, Space Launch System (SLS), Frangible Joint Empirical Testing (FJET), Shell Buckling Knockdown Factors (SBKF) and Multi-Bay Box (MBB) for Blended Wing design and published multiple journal papers and NASA

Technical Memorandums. He is currently working on the Revolutionary Vertical Lift Technology (RVLT) Impact Dynamics Project, conducting research into various aspects of electric Vertical Takeoff and Landing (eVTOL) crashworthiness, as well as supporting Mars Sample Return and Artemis projects.