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Nota di contenuto	Overview of Subproject VitAM-Gust -- High-Fidelity Simulation for Identification of Steady and Dynamic Transport Aircraft Derivatives -- Robustness Improvements for a Differential Reynolds Stress Modeling using a Logarithmic Formulation -- Aeroelastic AIC-based Reduced Order Model with CFD-Corrections for Gust Encounter Simulations -- System Identification from Virtual Flight Test Data for a Flexible Transport Aircraft Changes Company -- Numerical Studies on the Impact of Atmospheric Turbulence on Aircraft Loads -- Spalart-Allmaras Turbulence Model Conditioning For Leading-Edge Vortex Flows -- Bayesian Calibration of Extended Menter-SST Turbulence Model for Vortical Flows -- VitAM-Flex - Modelling and Simulation to Study the Effects of Elastic Aircraft Structures on the Flight Physics.
Sommario/riassunto	This book reports on the results of a four-year collaborative project

between the German Aerospace Center (DLR), three German universities and the aircraft industry. The project was funded by the Ministry for Economic Affairs and Climate Action. In the book, different subprojects are presented, with their corresponding case studies. Readers will find extensive information on simulation strategies required for virtual flight testing, and verification and validation aspects. All in all, this book offers a timely update on the state-of-the-art in flow simulation techniques, flight mechanics methods, integrated multidisciplinary simulation, reduced-order models, and on the development of processes for automated generation of aerodynamic databases. It addresses both researchers and professionals in the field of aviation engineering.