1. Record Nr. UNINA9910557619903321

Titolo	Aircraft Modeling and Simulation
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 electronic resource (126 pages)
Soggetti	Technology - History Engineering - History
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Various aerodynamics, structural dynamics, and control design and experimental studies are presented with the aim of advancing green and morphing aircraft research. The results obtained with an in-house CFD code are compared and validated with those of two NASA codes. The aerodynamical model of the UAS-S45 morphing wing as well as the structural model of a morphing winglet are presented. A new design methodology for oleo-pneumatic landing gear drop impact dynamics is presented as well as its experimental validation. The design of a nonlinear dynamic inversion (NDI)-based disturbance rejection control on a tailless aircraft is presented, including its validation using wind tunnel tests.