1. Record Nr. UNINA9910299933303321

Titolo	Numerical Simulation of the Aerodynamics of High-Lift Configurations / / edited by Omar Darío López Mejia, Jaime A. Escobar Gomez
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-62136-X
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (118 pages)
Disciplina	532.0501515
Soggetti	Aerospace engineering Astronautics Fluid mechanics Fluids Computer simulation Computer science - Mathematics Aerospace Technology and Astronautics Engineering Fluid Dynamics Fluid- and Aerodynamics Simulation and Modeling Computational Science and Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Introduction -- 2. Navier-Stokes solver -- In-house solvers -- Open source solvers -- Commercial solvers -- 3.Conclusions -- 4. References.
Sommario/riassunto	This book deals with numerical simulations and computations of the turbulent flow around high-lift configurations commonly used in aircraft. It is devoted to the Computational Fluids Dynamics (CFD) method using full Navier-Stokes solvers typically used in the simulation of high-lift configuration. With the increase of computational resources in the aeronautical industry, the computation of complex flows such as the aerodynamics of high-lift configurations has become an active field not only in academic but also in industrial environments. The scope of

the book includes applications and topics of interest related to the simulation of high-lift configurations such as: lift and drag prediction, unsteady aerodynamics, low Reynolds effects, high performance computing, turbulence modelling, flow feature visualization, among others. This book gives a description of the state-of-the-art of computational models for simulation of high-lift configurations. It also shows and discusses numerical results and validation of these computational models. Finally, this book is a good reference for graduate students and researchers interested in the field of simulation of high-lift configurations.