



Fixed and flapping wing aerodynamics for micro air vehicle applications /

Mueller, T. J.,
editor

American Institute of Aeronautics and Astronautics,
2000

Electronic books

Monografía

This title reports on the latest research in the area of aerodynamic efficiency of various fixed-wing, flapping wing, and rotary wing concepts. It presents the progress made by over fifty active researchers in the field

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMjYxNjQzMTM>

Título: Fixed and flapping wing aerodynamics for micro air vehicle applications edited by Thomas J. Mueller

Editorial: Reston American Institute of Aeronautics and Astronautics 2000

Descripción física: 1 online resource (xix, 586 pages) illustrations

Mención de serie: Progress in astronautics and aeronautics v. 195

Bibliografía: Includes bibliographical references at chapter ends

Contenido: An overview of micro air vehicle aerodynamics Thomas J. Mueller and James D. DeLaurier -- Part I.) Fixed wing aerodynamics Higher-order boundary layer formulation and application to low Reynolds number flows Mark Drela. -- Analysis design of airfoils for use at ultra-low Reynolds numbers Peter J. Kunz and Ilan Kroo. -- Adaptive, unstructured meshes for solving the Navier-Stokes equations for low-chord-Reynolds-number flows J. T. Mönttinen, R. R. Shortridge, B. S. Latek, H. L. Reed, and W. S. Saric. -- Wind tunnel tests of wings and rings at low Reynolds numbers E.V. Laitone. -- Effects of acoustic disturbances on low [italic]Re[close italic] aerofoil flows T. M. Grundy, G. P. Keefe, and M. V. Lowson. -- Aerodynamic characteristics of low aspect ratio wings at low Reynolds numbers Gabriel E. Torres and Thomas J. Mueller. -- Systematic airfoil design studies at low Reynolds numbers Michael S. Selig, Ashok Gopalathnam, Philippe Giguere, and Christopher A. Lyon. -- Numerical optimization and wind tunnel testing of low Reynolds number airfoils Th. Lutz, W. Würz, and S. Wagner. -- Unsteady stalling characteristics of thin airfoils at low Reynolds number Andy P. Broeren and Michael B. Bragg -- Part II.) Flapping and rotary wing aerodynamics Thrust and drag in flying birds : applications to birdlike micro air vehicles Jeremy M.V. Rayner. -- Lift and drag characteristics of rotary and flapping wings C. P. Ellington and J. R. Usherwood. -- A rational engineering analysis of the efficiency of flapping flight Kenneth C. Hall and Steven R. Hall. -- Leading-edge vortices of flapping and rotary wings at low Reynolds number Hao Liu

and Keiji Kawachi. -- On the flowfield and forces generated by a flapping rectangular wing at low Reynolds number Richard Ames, Oliver Wong, and Narayanan Komerath. -- Experimental and computational investigation of flapping wing propulsion for micro air vehicles K. D. Jones, T. C. Lund, and M. F. Platzer. -- Aerodynamic characteristics of wings at low Reynolds number Akira Azuma, Masato Okamoto, and Kunio Yasuda. -- A nonlinear aeroelastic model for the study of flapping wing flight Rambod F. Larijani and James D. DeLaurier. -- Euler solutions for a finite-span flapping wing M. F. Neef and D. Hummel. -- From soaring and flapping bird flight to innovative wing and propeller constructions Rudolf Bannasch. -- Passive aeroelastic tailoring for optimal flapping wings Kenneth D. Frampton, Michael Goldfarb, Dan Monopoli, and Dragan Cveticanin. -- Shape memory alloy actuators as locomotor muscles Othon K. Rediniotis and Dimitris C. Lagoudas -- Part III.) Micro air vehicle applications Mesoscale flight and miniature rotorcraft development Ilan Kroo and Peter Kunz. -- Development of the Black Widow micro air vehicle Joel M. Grasmeyer and Matthew T. Keennon. -- Computation of aerodynamic characteristics of a micro air vehicle Ravi Ramamurti and William Sandberg. -- Optic flow sensors for MAV navigation Geoffrey L. Barrows, Craig Neely, and Kurt T. Miller

Lengua: English

Copyright/Depósito Legal: 1164896033 1166150260 1171827642

ISBN: 9781600864469 1600864465 1600866654 9781600866654

Materia: Ornithopters Aerodynamics Drone aircraft Micro air vehicles Aerodynamics Drone aircraft Micro air vehicles Ornithopters Mechanical Engineering Engineering & Applied Sciences Aeronautics Engineering & Astronautics

Autores: Mueller, T. J., editor

Entidades: American Institute of Aeronautics and Astronautics

Enlace a formato físico adicional: Print version Mueller, Thomas J. Fixed and Flapping Wing Aerodynamics for Micro Air Vehicle Applications. Reston : American Institute of Aeronautics and Astronautics, ©2000 9781563475177

Punto acceso adicional serie-Título: Progress in astronautics and aeronautics

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es