

1. Record Nr.	UNINA9910786958503321
Autore	Shyy W (Wei)
Titolo	An introduction to flapping wing aerodynamics [[electronic resource] /] / Wei Shyy, Hikaru Aono, Chang-kwon Kang, Hao Liu
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2013
ISBN	1-139-88982-6 1-107-06589-5 1-5231-1539-4 1-107-05511-3 1-107-05853-8 1-107-05621-7 1-107-05977-1 1-139-58391-3
Descrizione fisica	1 online resource (xxi, 297 pages) : digital, PDF file(s)
Collana	Cambridge aerospace series ; ; 37
Disciplina	629.1323
Soggetti	Aerodynamics Airplanes - Wings Micro air vehicles Wings (Anatomy) Animal flight
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	An Introduction to Flapping Wing Aerodynamics -- Preface of the First Edition (Aerodynamics of Low Reynolds Number Flyers) -- Introduction -- Rigid Fixed-Wing Aerodynamics -- Rigid Flapping-Wing Aerodynamics -- Flexible Wing Aerodynamics -- Future Perspective.
Sommario/riassunto	This is an ideal book for graduate students and researchers interested in the aerodynamics, structural dynamics and flight dynamics of small birds, bats and insects, as well as of micro air vehicles (MAVs), which present some of the richest problems intersecting science and engineering. The agility and spectacular flight performance of natural flyers, thanks to their flexible, deformable wing structures, as well as to outstanding wing, tail and body coordination, is particularly significant.

To design and build MAVs with performance comparable to natural flyers, it is essential that natural flyers' combined flexible structural dynamics and aerodynamics are adequately understood. The primary focus of this book is to address the recent developments in flapping wing aerodynamics. This book extends the work presented in *Aerodynamics of Low Reynolds Number Flyers* (Shyy et al. 2008).

---