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	Nota di contenuto	Cover; Unmanned Aerial Vehicles; Title Page; Copyright Page; Table of Contents; Chapter 1. Aerodynamic Configurations and Dynamic Models; 1.1. Aerodynamic configurations; 1.2. Dynamic models; 1.2.1. Newton-Euler approach; 1.2.2. Euler-Lagrange approach; 1.2.3. Quaternion approach; 1.2.4. Example: dynamic model of a quad-rotor rotorcraft; 1.3. Bibliography; Chapter 2. Nested Saturation Control for Stabilizing the PVTOL Aircraft; 2.1. Introduction; 2.2. Bibliographical study; 2.3. The PVTOL aircraft model; 2.4. Control strategy; 2.4.1. Control of the vertical displacement y
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Sommario/riassunto	This book presents the basic tools required to obtain the dynamical models for aerial vehicles (in the Newtonian or Lagrangian approach). Several control laws are presented for mini-helicopters, quadrotors, mini-blimps, flapping-wing aerial vehicles, planes, etc. Finally, this book has two chapters devoted to embedded control systems and Kalman filters applied for aerial vehicles control and navigation. This book presents the state of the art in the area of UAVs. The aerodynamical models of different configurations are presented in detail as well as the control strategies which are validated i