1.
Record Nr.	UNINA9910827582003321
Titolo	Flight formation control / / edited by Jose A. Guerrero, Rogelio Lozano
Pubbl/distr/stampa	London, : ISTE Ltd. Hoboken, N.J., : John Wiley & Sons, 2012
ISBN	1-118-38719-8 1-299-18849-4 1-118-56325-5 1-118-56322-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (342 p.)
Collana	ISTE
Altri autori (Persone)	GuerreroJose A <1977-> (Jose Alfredo) LozanoR <1954-> (Rogelio)
Disciplina	629.132/6
Soggetti	Airplanes - Control systems Airplanes - Automatic control Drone aircraft - Control systems Drone aircraft - Automatic control Stability of airplanes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Flight Formation Control; Title Page; Copyright Page; Table of Contents; Chapter 1. Introduction; 1.1. Motivation; 1.2. Historical background; 1.2.1. Aviation history; 1.2.2. Evolution of UAVs; 1.2.3. UAV classification; 1.3. Flight control; 1.4. Flight formation control; 1.4.1. Multiple-input and multiple-output; 1.4.2. Leader/follower; 1.4.3. Virtual structure; 1.4.4. Behavior-based control; 1.4.5. Passivity-based control; 1.5. Outline of the book; 1.6. Bibliography; Chapter 2. Theoretical Preliminaries; 2.1. Passivity; 2.2. Graph theory; 2.3. Robustness problems 2.3.1. Representation of the parametric uncertainty2.3.2. Families of polynomials; 2.4. Bibliography; Chapter 3. Multiagent Coordination Strategies; 3.1. Introduction; 3.2. Controllability and observability of interconnections; 3.2.1. Cyclic topology; 3.2.2. Chain topology: input and output on agent 1; 3.2.3. Chain topology: input and output on

Sommario/riassunto	In the last decade the development and control of Unmanned Aerial Vehicles (UAVs) has attracted a lot of interest. Both researchers and companies have a growing interest in improving this type of vehicle given their many civilian and military applications.This book presents the state of the art in the area of UAV Flight Formation. The coordination and robust consensus approaches are presented in detail as well as formation flight control strategies which are validated in experimental platforms. It aims at helping students and academics alike to better understand what coordination and