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2.3.2. 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 agent 2; 3.2.4. Eigenvalues and eigenvectors of the system; 3.2.5. General case; 3.2.6. The cyclic topology in the general case; 3.2.6.1. Observability; 3.2.6.2. Controllability; 3.2.7. The chain topology in the general case; 3.2.7.1. Controllability
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3.2.8. Combinations of chain and cyclic topologies; 3.2.8.1. Controllability; 3.2.8.2. Observability; 3.2.9. Simple configurations that are either non-controllable or non-observable; 3.2.9.1. Example 1; 3.2.9.2. Example 2; 3.2.9.3. Example 3; 3.2.9.4. Example 4; 3.2.9.5. Example 5; 3.3. Formation leader tracking; 3.3.1. Formation leader tracking in the general case; 3.3.2. Observer design; 3.3.3. Simulations; 3.4. Time-varying trajectory tracking; 3.5. Linear high-order multiagent consensus; 3.5.1. Trajectory-tracking control; 3.6. Conclusion; 3.7. Bibliography
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6.2. General model

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
