1. Record Nr. UNINA9910483129903321

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Titolo	Finite Time and Cooperative Control of Flight Vehicles [[electronic resource] /] / by Yuanqing Xia, Jinhui Zhang, Kunfeng Lu, Ning Zhou
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-1373-3
Descrizione fisica	1 online resource (xxvi, 400 pages) : illustrations
Collana	Advances in Industrial Control, , 1430-9491
Disciplina	629.1326
Soggetti	Systems theory Astronautics Control and Systems Theory Systems Theory, Control Aerospace Technology and Astronautics Complex Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preliminaries -- Overview of Recent Research in Finite-time and Cooperative Control of Flight Vehicles -- Finite-time Attitude Stabilization for Rigid Spacecraft -- Adaptive Attitude Tracking Control for Rigid Spacecraft with Finite-time Convergence -- Adaptive Finite-time Attitude Stabilization for Rigid Spacecraft with Actuator Faults and Saturation Constraints -- Finite-time Fault Tolerant Attitude Tracking Control for Rigid Spacecraft with Actuator Saturation -- Finite-time Attitude Control for Rigid Spacecraft Based on Adaptive Super-twisting Algorithm -- Finite-time Tracking Control of Rigid Spacecraft under Actuator Saturations and Faults -- Controller Design for Rigid Spacecraft Attitude Tracking with Actuator Saturation Finite-time Intercept-angle Guidance -- Attitude Control of Multiple Rigid Bodies with Uncertainties and Disturbances -- Finite-time Attitude Control of Multiple Rigid Spacecraft Using Terminal Sliding Mode -- Decentralized Finite-time Attitude Synchronization and Tracking Control for Rigid Spacecraft -- Attitude Synchronization of Rigid Spacecraft with Inertia Uncertainties and Environmental Disturbances -- Distributed Cooperative Control Design for Finite-time Attitude Synchronization of

Rigid Spacecraft -- Distributed Fault-tolerant Control Design for Spacecraft Finite-time Attitude Synchronization -- Coordination Control Design for Formation Reconfiguration of Multiple Spacecraft -- Finite-time Formation Reconfiguration of Multiple Spacecraft with Collision Avoidance Problems -- Coordination Control of Multiple Euler-lagrange Systems for Escorting Mission.

Sommario/riassunto

This book focuses on the finite-time control of attitude stabilization, attitude tracking for individual spacecraft, and finite-time control of attitude synchronization. It discusses formation reconfiguration for multiple spacecraft in complex networks, and provides a new fast nonsingular terminal sliding mode surface (FNTSMS). Further, it presents newly designed controllers and several control laws to enhance the performance of spacecraft systems and meet related demands, such as strong disturbance rejection and high-precision control. As such, the book establishes a fundamental framework for these topics, while also highlighting the importance of integrated analysis. It is a useful resource for all researchers and students who are interested in this field, as well as engineers whose work involves designing flight vehicles.