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| Autore | Wang Danwei |
| Titolo | Satellite Formation Flying : Relative Dynamics, Formation Design, Fuel Optimal Maneuvers and Formation Maintenance // by Danwei Wang, Baolin Wu, Eng Kee Poh |
| Pubbl/distr/stampa | Singapore : , : Springer Singapore : , : Imprint : Springer, , 2017 |
| Edizione | [1st ed. 2017.] |
| Descrizione fisica | 1 online resource (X, 205 p. 95 illus., 69 illus. in color.) |
| Collana | Intelligent Systems, Control and Automation: Science and Engineering, , 2213-8986 ; ; 87 |
| Disciplina | 629.434 |
| Soggetti | Control engineering Robotics Mechatronics Calculus of variations Aerospace engineering Astronautics Fluids Control, Robotics, Mechatronics Calculus of Variations and Optimal Control; Optimization Aerospace Technology and Astronautics Fluid- and Aerodynamics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | Introduction -- Dynamic Models of Satellite Relative Motion around an Oblate Earth -- Passive and Periodic Satellite Formation Design around an Oblate Earth -- Nonlinear Optimization of Low-Thrust Trajectory for Satellite Formation -- Optimal Control for Satellite Formation Keeping -- Decentralized Control for Attitude Synchronization under Undirected Communication Topology -- Decentralized Control for Attitude Synchronization under directed Communication Topology. |
| Sommario/riassunto | This book systematically describes the concepts and principles for multi-satellite relative motion, passive and near passive formation designs, trajectory planning and control for fuel optimal formation |

maneuvers, and formation flying maintenance control design. As such, it provides a sound foundation for researchers and engineers in this field to develop further theories and pursue their implementations. Though satellite formation flying is widely considered to be a major advance in space technology, there are few systematic treatments of the topic in the literature. Addressing that gap, the book offers a valuable resource for academics, researchers, postgraduate students and practitioners in the field of satellite science and engineering.
