1. Record Nr. UNINA990008962260403321

| | |
|---|---|
| Titolo | Few-body systems : (Online) |
| Pubbl/distr/stampa | Wien, : Springer |
| ISSN | 1432-5411 |
| Disciplina | 530 |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Periodico |

2. Record Nr. UNINA9910492146703321

| | |
|---|---|
| Autore | Georgiev Svetlin |
| Titolo | Fuzzy Dynamic Equations, Dynamic Inclusions, and Optimal Control Problems on Time Scales / / by Svetlin G. Georgiev |
| Pubbl/distr/stampa | Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021 |
| ISBN | 3-030-76132-0 |
| Edizione | [1st ed. 2021.] |
| Descrizione fisica | 1 online resource (882 pages) |
| Collana | Mathematics and Statistics Series |
| Disciplina | 531.11 |
| Soggetti | Mathematical analysis<br>Difference equations<br>Functional equations<br>Dynamical systems<br>Multibody systems<br>Vibration<br>Mechanics, Applied<br>Measure theory<br>Analysis<br>Difference and Functional Equations<br>Dynamical Systems<br>Multibody Systems and Mechanical Vibrations<br>Measure and Integration |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |

| | |
|---|---|
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | 1. Calculus of Fuzzy Functions -- 2. First Order Fuzzy Dynamic Equations -- 3. Second Order Fuzzy Dynamic Equations -- 4. Functional Fuzzy Dynamic Equations -- 5. Impulsive Fuzzy Dynamic Equations -- 6. The Lebesgue Integration. Lp Spaces. Sobolev spaces -- 7. First Order Dynamic Inclusions -- 8. Second Order Dynamic Inclusions -- 9. Boundary Value Problems for First Order Impulsive Dynamic Inclusions -- 10. Controllability, Bang-Bang Principle -- 11. Linear Time-Optimal Control -- 12. The Pontryagin Maximum Principle -- 13. Dynamic Programming -- 14. Weak Solutions and Optimal Control Problems for Some Classes Linear First Order Dynamic Systems -- 15. Nonlinear Dynamic Equations and Optimal Control Problems -- 16 Nonlinear Integro-Dynamic Equations and Optimal Control Problems -- Appendix: Fuzzy Sets -- Appendix: Set-Valued Maps -- Appendix: Alaoglu's Theorem. Krein-Milman Theorem -- Appendix: Mazur's Theorem -- Index. |
| Sommario/riassunto | The theory of dynamic equations has many interesting applications in control theory, mathematical economics, mathematical biology, engineering and technology. In some cases, there exists uncertainty, ambiguity, or vague factors in such problems, and fuzzy theory and interval analysis are powerful tools for modeling these equations on time scales. The aim of this book is to present a systematic account of recent developments; describe the current state of the useful theory; show the essential unity achieved in the theory fuzzy dynamic equations, dynamic inclusions and optimal control problems on time scales; and initiate several new extensions to other types of fuzzy dynamic systems and dynamic inclusions. The material is presented in a highly readable, mathematically solid format. Many practical problems are illustrated, displaying a wide variety of solution techniques. The book is primarily intended for senior undergraduate students and beginning graduate students of engineering and science courses. Students in mathematical and physical sciences will find many sections of direct relevance. |