Record Nr. UNINA9910520086203321 Autore Sethi Suresh P. Titolo Optimal control theory: applications to management science and economics / / Suresh P. Sethi Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2021] ©2021 **ISBN** 9783030917456 9783030917449 Edizione [Fourth edition.] Descrizione fisica 1 online resource (520 pages): illustrations (some color) Springer texts in business and economics Collana Disciplina 629.8312 Soggetti Control theory Management - Mathematical models Operations research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1. What is Optimal Control Theory? 2. The Maximum Principle: Continuous Time 3. The Maximum Principle: Mixed Inequality Constraints 4. The Maximum Principle: Pure State and Mixed Inequality Constraints 5. Applications to Finance 6. Applications to Production and Inventory 7. Applications to Marketing 8. The Maximum Principle: Discrete Time 9. Maintenance and Replacement 10. Applications to Natural Resources 11. Applications to Economics 12. Stochastic Optimal Control 13. Differential Games Sommario/riassunto This new 4th edition offers an introduction to optimal control theory and its diverse applications in management science and economics. It introduces students to the concept of the maximum principle in continuous (as well as discrete) time by combining dynamic programming and Kuhn-Tucker theory. While some mathematical background is needed, the emphasis of the book is not on mathematical rigor, but on modeling realistic situations encountered in

business and economics.