Record Nr. UNINA9910780928903321 Analysis and control of nonlinear systems with stationary sets **Titolo** [[electronic resource]]: time-domain and frequency-domain methods / / Jinzhi Wang ... [et al.] Hackensack, N.J., : World Scientific, c2009 Pubbl/distr/stampa **ISBN** 1-282-44145-0 9786612441455 981-281-471-X Descrizione fisica 1 online resource (334 p.) Altri autori (Persone) WangJinzhi Disciplina 515 Soggetti Nonlinear control theory Set theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 295-308) and index. Nota di contenuto Preface; Contents; Notation and Symbols; 1. Linear Systems and Linear Matrix Inequalities; 2. LMI Approach to H1 Control; 3. Analysis and Control of Positive Real Systems; 4. Absolute Stability and Dichotomy of Lur'e Systems; 5. Pendulum-like Feedback Systems; 6. Controller Design for a Class of Pendulum-like Systems; 7. Controller Designs for Systems with Input Nonlinearities; 8. Analysis and Control for Uncertain Feedback Nonlinear Systems: 9. Control of Periodic Oscillations in Nonlinear Systems; 10. Interconnected Systems; 11. Chua's Circuit; Bibliography; Index Sommario/riassunto This book presents the analysis as well as methods based on the global properties of systems with stationary sets in a unified time-domain and frequency-domain framework. The focus is on multi-input and multioutput systems, compared to previous publications which considered only single-input and single-output systems. The control methods presented in this book will be valuable for research on nonlinear systems with stationary sets.