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Autore	Luo Albert C. J.
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Disciplina	003
Soggetti	Dynamics Nonlinear theories System theory Multibody systems Vibration Mechanics, Applied Algebra, Universal Engineering mathematics Engineering - Data processing Applied Dynamical Systems Complex Systems Multibody Systems and Mechanical Vibrations General Algebraic Systems Mathematical and Computational Engineering Applications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Preface -- Crossing-linear and Self-quadratic Product Systems -- Double-saddles and switching dynamics -- Vertically Paralleled Saddle-source and Saddle-sink -- Horizontally Paralleled Saddle-source and Saddle-sink -- Simple Equilibrium Networks and Switching Dynamics.
Sommario/riassunto	This book, the tenth of 15 related monographs, discusses product-cubic nonlinear systems with two crossing-linear and self-quadratic products vector fields and the dynamic behaviors and singularity are presented through the first integral manifolds. The equilibrium and flow singularity and bifurcations discussed in this volume are for the

appearing and switching bifurcations. The double-saddle equilibria described are the appearing bifurcations for saddle source and saddle-sink, and for a network of saddles, sink and source. The infinite-equilibria for the switching bifurcations are also presented, specifically: · Inflection-saddle infinite-equilibria, · Hyperbolic (hyperbolic-secant)-sink and source infinite-equilibria · Up-down and down-up saddle infinite-equilibria, · Inflection-source (sink) infinite-equilibria. Develops a theory of nonlinear dynamics and singularity of crossing-linear and self-quadratic product dynamical systems; Shows hybrid networks of singular/simple equilibria and hyperbolic flows in two same structure product-cubic systems; Presents network switching bifurcations through infinite-equilibria of inflection-saddles hyperbolic-sink and source.
