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Autore	Li Liangliang
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Altri autori (Persone)	HuangYu ChenGoong
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Nota di contenuto	Simple Interval Maps and Their Iterations -- Total Variations of Iterates of Maps -- Ordering among Periods: The Sharkovski Theorem -- Bifurcation Theorems for Maps -- Homoclinicity. Lyapunoff Exponents -- Symbolic Dynamics, Conjugacy and Shift Invariant Sets -- The Smale Horseshoe -- Fractals -- Rapid Fluctuations of Chaotic Maps on RN -- Infinite-dimensional Systems Induced by Continuous-Time Difference Equations.
Sommario/riassunto	This book was developed from lecture notes for an introductory graduate course and provides an essential introduction to chaotic maps in finite-dimensional spaces. Furthermore, the authors show how to apply this theory to infinite-dimensional systems corresponding to

partial differential equations to study chaotic vibration of the wave equation subject to various types of nonlinear boundary conditions. The book provides background on chaos as a highly interesting nonlinear phenomenon and explains why it is one of the most important scientific findings of the past three decades. In addition, the book covers key topics including one-dimensional dynamical systems, bifurcations, general topological, symbolic dynamical systems, and fractals. The authors also show a class of infinite-dimensional nonlinear dynamical systems, which are reducible to interval maps, plus rapid fluctuations of chaotic maps. This second edition includes updated and expanded chapters as well as additional problems. In addition, this book: • Provides an overview of chaos in a comprehensive way and contains applications to partial differential equations • Includes numerous problems allowing readers to practice and apply the presented concepts • Focuses on presenting the material in a concise, easily readable way that is suitable for a beginning textbook About the Authors Liangliang Li, Ph.D., is an Associate Professor at Sun Yat-Sen University. Yu Huang, Ph.D., is an Associate Professor at Sun Yat-Sen University. Goong Chen, Ph.D., is a Professor of Mathematics at Texas A&M University in Qatar at Doha, Qatar.