

1. Record Nr.	UNINA9910779865503321
Titolo	Lotka-Volterra and related systems [[electronic resource]] : recent developments in population dynamics // edited by Shair Ahmad, Ivanka M. Stamova
Pubbl/distr/stampa	Berlin ; ; Boston, : De Gruyter, c2013
ISBN	3-11-026984-8
Descrizione fisica	1 online resource (244 p.)
Collana	De Gruyter series in mathematics and life sciences, , 2195-5530 ; ; v. 2
Classificazione	SK 520
Altri autori (Persone)	AhmadShair Stamovalvanka
Disciplina	577.8/8
Soggetti	Lotka-Volterra equations Population biology - Mathematical models
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 and index.
Nota di contenuto	Frontmatter -- Preface -- Contents -- Permanence, global attraction and stability / Hou, Zhanyuan -- Competitive Lotka-Volterra systems with periodic coefficients / Lisena, Benedetta -- Fixed points, periodic points and chaotic dynamics for continuous maps with applications to population dynamics / Pireddu, Marina / Zanolin, Fabio -- Index
Sommario/riassunto	In recent years, there has been a tremendous amount of research activity in the general area of population dynamics, particularly the Lotka-Volterra system, which has been a rich source of mathematical ideas from both theoretical and application points of view. In spite of the technological advances, many authors seem to be unaware of the bulk of the work that has been done in this area recently. This often leads to duplication of work and frustration to the authors as well as to the editors of various journals. This book is built out of lecture notes and consists of three chapters written by four mathematicians with overlapping expertise that cover a broad sector of the research in this area. Each chapter consists of carefully written introductory exposition, main breakthroughs, open questions and bibliographies. The chapters present recent developments on topics involving the dynamic behavior of solutions and topics such as stability theory, permanence, persistence, extinction, existence of positive solutions for the Lotka-Volterra and related systems. This fills a void in the literature, by

making available a source book of relevant information on the theory,
methods and applications of an important area of research.
