

1. Record Nr.	UNINA9910299965703321
Autore	Reich Simeon
Titolo	Genericity in nonlinear analysis // Simeon Reich, Alexander J. Zaslavski
Pubbl/distr/stampa	New York : , : Springer, , 2014
ISBN	1-4614-9533-4
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (xiii, 520 pages)
Collana	Developments in Mathematics, , 1389-2177 ; ; 34
Disciplina	515.7248
Soggetti	Nonlinear functional analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN: 1389-2177." "ISSN: 2197-795X (electronic)."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- 1. Introduction -- 2. Fixed Point Results and Convergence of Powers of Operators -- 3. Contractive Mappings -- 4. Dynamical Systems with Convex Lyapunov Functions -- 5. Relatively Nonexpansive Operators with Respect to Bregman Distances.- 6. Infinite Products -- 7. Best Approximation -- 8. Descent Methods -- 9. Set-Valued Mappings -- 10. Minimal Configurations in the Aubry–Mather Theory -- References -- Index.
Sommario/riassunto	This book presents an extensive collection of state-of-the-art results and references in nonlinear functional analysis demonstrating how the generic approach proves to be very useful in solving many interesting and important problems. Nonlinear analysis plays an ever-increasing role in theoretical and applied mathematics, as well as in many other areas of science such as engineering, statistics, computer science, economics, finance, and medicine. The text may be used as supplementary material for graduate courses in nonlinear functional analysis, optimization theory and approximation theory, and is a treasure trove for instructors, researchers, and practitioners in mathematics and in the mathematical sciences. Each chapter is self-contained; proofs are solid and carefully communicated. Genericity in Nonlinear Analysis is the first book to systematically present the generic approach to nonlinear analysis. Topics presented include convergence analysis of powers and infinite products via the Baire Category Theorem, fixed point theory of both single- and set-valued

mappings, best approximation problems, discrete and continuous descent methods for minimization in a general Banach space, and the structure of minimal energy configurations with rational numbers in the Aubry–Mather theory.
