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Titolo	Functional Numerical Methods: Applications to Abstract Fractional Calculus / / by George A. Anastassiou, Ioannis K. Argyros
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Descrizione fisica	1 online resource (X, 161 p.)
Collana	Studies in Systems, Decision and Control, , 2198-4182 ; ; 130
Disciplina	515.83
Soggetti	Computational intelligence Automatic control Artificial intelligence System theory Computational Intelligence Control and Systems Theory Artificial Intelligence Systems Theory, Control
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Explicit-Implicit methods with applications to Banach space valued functions in abstract fractional calculus -- Convergence of Iterative methods in abstract fractional calculus -- Equations for Banach space valued functions in fractional vector calculi -- Iterative methods in abstract fractional calculus -- Semi-local convergence in right abstract fractional calculus -- Algorithmic convergence in abstract g-fractional calculus -- Iterative procedures for solving equations in abstract fractional calculus -- Approximate solutions of equations in abstract g-fractional calculus -- Generating sequences for solving in abstract g-fractional calculus -- Numerical Optimization and fractional invexity.
Sommario/riassunto	This book presents applications of Newton-like and other similar methods to solve abstract functional equations involving fractional derivatives. It focuses on Banach space-valued functions of a real domain – studied for the first time in the literature. Various issues related to the modeling and analysis of fractional order systems

continue to grow in popularity, and the book provides a deeper and more formal analysis of selected issues that are relevant to many areas – including decision-making, complex processes, systems modeling and control – and deeply embedded in the fields of engineering, computer science, physics, economics, and the social and life sciences. The book offers a valuable resource for researchers and graduate students, and can also be used as a textbook for seminars on the above-mentioned subjects. All chapters are self-contained and can be read independently. Further, each chapter includes an extensive list of references.