

1. Record Nr.	UNINA9910483612003321
Autore	Allahviranloo Tofigh
Titolo	Fuzzy Fractional Differential Operators and Equations : Fuzzy Fractional Differential Equations / / by Tofigh Allahviranloo
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-51272-X
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (xii, 293 pages) : illustrations
Collana	Studies in Fuzziness and Soft Computing, , 1434-9922 ; ; 397
Disciplina	510
Soggetti	Computational intelligence Automatic control Computational Intelligence Control and Systems Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Introduction -- Chapter 2: Fuzzy sets -- Chapter 3: Fuzzy fractional operators -- Chapter 4: Fuzzy fractional differential equations -- Chapter 5: Numerical solution of fuzzy fractional differential equations -- Chapter 6: Applications of fuzzy fractional differential equations.
Sommario/riassunto	This book contains new and useful materials concerning fuzzy fractional differential and integral operators and their relationship. As the title of the book suggests, the fuzzy subject matter is one of the most important tools discussed. Therefore, it begins by providing a brief but important and new description of fuzzy sets and the computational calculus they require. Fuzzy fractals and fractional operators have a broad range of applications in the engineering, medical and economic sciences. Although these operators have been addressed briefly in previous papers, this book represents the first comprehensive collection of all relevant explanations. Most of the real problems in the biological and engineering sciences involve dynamic models, which are defined by fuzzy fractional operators in the form of fuzzy fractional initial value problems. Another important goal of this book is to solve these systems and analyze their solutions both theoretically and numerically. Given the content covered, the book will

benefit all researchers and students in the mathematical and computer sciences, but also the engineering sciences.
