1. Record Nr. UNINA9910788400603321

Autore	Li Changpin
Titolo	Numerical methods for fractional calculus / / Changpin Li, Department of Mathematics, Shanghai University, China; Fanhai Zeng, Department of Mathematics, Shanghai University, China
Pubbl/distr/stampa	Boca Raton : , : CRC Press, , [2015] ©2015
ISBN	0-429-07563-4
Descrizione fisica	1 online resource (299 p.)
Collana	Chapman & Hall/CRC Numerical Analysis and Scientific Computing Series ; ; v.24
Disciplina	515.83
Soggetti	Fractional integrals Fractional calculus Numerical analysis Calculus Applied Mathematics Engineering & Applied Sciences Mathematics Physical Sciences & Mathematics
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 (pages 265-277) and index.
Nota di contenuto	Front Cover; Contents; Foreword; Preface; List of Figures; List of Tables; 1. Introduction to Fractional Calculus; 2. Numerical Methods for Fractional Integral and Derivatives; 3. Numerical Methods for Fractional Ordinary Differential Equations; 4. Finite Difference Methods for Fractional Partial Differential Equations; 5. Galerkin Finite Element Methods for Fractional Partial Differential Equations; Bibliography
Sommario/riassunto	Numerical Methods for Fractional Calculus presents numerical methods for fractional integrals and fractional derivatives, finite difference methods for fractional ordinary differential equations (FODEs) and fractional partial differential equations (FPDEs), and finite element methods for FPDEs.The book introduces the basic definitions and properties of fractional integrals and derivatives before covering numerical methods for fractional integrals and derivatives. It then

discusses finite difference methods for both FODEs and FPDEs, including the Euler and linear multistep methods. The final ch