1. Record Nr. UNINA9910830294703321

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Titolo	I-Smooth analysis : theory and applications / / A. V. Kim
Pubbl/distr/stampa	Salem, Massachusetts : , : Scrivener Publishing, , 2015 ©2015
ISBN	1-118-99854-5 1-118-99851-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (294 p.)
Disciplina	515
Soggetti	Functional differential equations - Numerical solutions Functional analysis - Research
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	Cover; Title Page; Copyright Page; Contents; Preface; Part I Invariant derivatives of functionals and numerical methods for functional differential equations; 1 The invariant derivative of functionals; 1 Functional derivatives; 1.1 The Frechet derivative; 1.2 The Gateaux derivative; 2 Classifi cation of functionals on C[a, b]; 2.1 Regular functionals; 2.2 Singular functionals; 3 Calculation of a functional along a line; 3.1 Shift operators; 3.2 Superposition of a functional and a function; 3.3 Dini derivatives; 4 Discussion of two examples; 4.1 Derivative of a function along a curve 4.2 Derivative of a functional along a curve5 The invariant derivative; 5.1 The invariant derivative; 5.2 The invariant derivative in the class B [a, b]; 5.3 Examples; 6 Properties of the invariant derivative; 6.1 Principles of calculating invariant derivatives; 6.2 The invariant differentiability and invariant continuity; 6.3 High order invariant derivatives; 6.4 Series expansion; 7 Several variables; 7.1 Notation; 7.2 Shift operator; 7.3 Partial invariant derivative; 8 Generalized derivatives of nonlinear functionals; 8.1 Introduction; 8.2 Distributions (generalized functions) 13.1 Functional Differential Equations13.2 FDE types; 13.3 Modeling by FDE; 13.4 Phase space and FDE conditional representation; 14 Existence and uniqueness of FDE solutions; 14.1 The classic solutions;

14.2 Caratheodory solutions; 14.3 The step method for systems with discrete delays; 15 Smoothness of solutions and expansion into the Taylor series; 15.1 Density of special initial functions; 15.2 Expansion of FDE solutions into Taylor series; 16 The sewing procedure; 16.1 General case; 16.2 Sewing (modification) by polynomials; 16.3 The sewing procedure of the second order
16.4 Sewing procedure of the second order for linear delay differential equation

Sommario/riassunto

The edition introduces a new class of invariant derivatives and shows their relationships with other derivatives, such as the Sobolev generalized derivative and the generalized derivative of the distribution theory. This is a new direction in mathematics. i-Smooth analysis is the branch of functional analysis that considers the theory and applications of the invariant derivatives of functions and functionals. The important direction of i-smooth analysis is the investigation of the relation of invariant derivatives with the Sobolev generalized derivative and the generalized derivative of distribution theory. Until now, i-smooth analysis has been developed mainly to apply to the theory of functional differential equations, and the goal of this book is to present i-smooth analysis as a branch of functional analysis. The notion of the invariant derivative (i-derivative) of nonlinear functionals has been introduced in mathematics, and this in turn developed the corresponding i-smooth calculus of functionals and showed that for linear continuous functionals the invariant derivative coincides with the generalized derivative of the distribution theory. This book intends to introduce this theory to the general mathematics, engineering, and physicist communities..