**Report on the book:**

Hadamard-Type Fractional Differential Equations, Inclusions and Inequalities, published by CRC Press, Boca Raton, 2016

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This new book on fractional analysis, written by four experts in the field, focuses on the qualitative study of several problems involving the Hadamard derivative and integral (such as: initial value problems, boundary value problems, nonlocal boundary value problems, coupled problems, etc.) related to:

- differential equations and inclusions;
- integro-differential equations and inclusions;
- fractional integral inequalities.

The contents of the book is the following:

I. Preliminaries

II. Initial and Boundary Value Problems of Fractional Order Hadamard-Type Functional Differential Equations and Inclusions

III. Nonlocal Hadamard Fractional Boundary Value Problems

IV. Existence Results for Mixed Hadamard and Riemann-Liouville Fractional Integro-Differential Equations and Inclusions

V. Nonlocal Hadamard Fractional Integral Conditions and Nonlinear Riemann-Liouville Fractional Differential Equations and Inclusions

VI. Coupled Systems of Hadamard and Riemann-Liouville Fractional Differential Equations with Hadamard Type Integral Boundary Conditions

VII. Nonlinear Langevin Equation and Inclusions Involving Hadamard-Caputo Type Fractional Derivatives

VIII. Boundary Value Problems for Impulsive Multi-Order Hadamard Fractional Differential Equations

IX. Initial and Boundary Value Problems for Hybrid Hadamard Fractional Differential Equations and Inclusions

X. Positive Solutions for Hadamard Fractional Differential Equations on Infinite Domain

XI. Fractional Integral Inequalities via Hadamards Fractional Integral

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The study is mainly based on different fixed point theorems, such as:

a) metric fixed point theorems (Banach's contraction principle, Boyd-Wong theorem, Nadler's contraction principle)

b) topological fixed point theorems (Kakutani's theorem, Leray-Schauder alternative, Sadovski's theorem, Leggett-Williams' theorem, Guo-Krasnoselskii's theorem)

c) hybrid theorems (Krasnoselskii's theorem, Dhage's theorem),

as well as on degree theory and multi-valued analysis theory.

The book offers a comprehensive study of the above mentioned problems, based, in a consistent manner, on the recent studies of the authors, as well as on some relevant results in fractional calculus literature of the last decade.

As a conclusion, this book is a nice documented study, very useful for graduate and post-graduate students and for researcher interested in nonlinear applied analysis, in general and in fractional analysis, in particular.