

## PREFACE

### RECENT ADVANCES ON FUNCTIONAL DIFFERENTIAL EQUATIONS, PARTIALLY DIFFERENTIAL EQUATIONS, FRACTIONAL DIFFERENTIAL AND FRACTIONAL INTEGRO-DIFFERENTIAL EQUATIONS: QUALITATIVE THEORY AND ANALYSES

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In the relevant literature, functional differential equations, integral and integro-differential equations, partially differential equations, fractional calculus, fractional differential, fractional integro-differential equations and qualitative theory of these equations have been broken into the field of mathematical analysis, both at the theoretical level and at the level of its applications. In fact, the qualitative theory of functional differential equations, the theory of fractional calculus, the qualitative theory of fractional differential and fractional integro-differential equations, partially differential equations and their numerical simulations are important mathematical analysis tools in real world problems. Qualitative theory of these equations can be applied in numerous scientific fields such as fluid mechanics, viscoelasticity, physics, biology, chemistry, medicine, population dynamics, dynamical systems, signal processing, entropy theory, and so on. Today, qualitative theory of the mentioned equations have become a focus of international academic research, and a lot of researchers have adopted them in their new studies. This Special Issue aims to be a platform to disseminate the recent advances on the qualitative theory of some equations just mentioned. This special issue contains a collection of works of mathematicians actively working in the fields of ordinary differential equations, functional differential equations, partially differential equations, fractional calculus, fractional differential equations, etc. The content of this special issue includes some works related to the ordinary differential equations, fractional calculus as well as partial differential equations and some others

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