

1. Record Nr.	UNINA9910254289803321
Autore	Agarwal Ravi
Titolo	Non-Instantaneous Impulses in Differential Equations / / by Ravi Agarwal, Snezhana Hristova, Donal O'Regan
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-66384-4
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XI, 251 p. 49 illus.)
Disciplina	515.353
Soggetti	Differential equations Differential Equations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- Introduction -- 1. Non-instantaneous Impulses in Differential Equations -- 2. Non-instantaneous Impulses in Differential Equations with Caputo fractional derivatives -- 3. Non-instantaneous Impulses on Random time in Differential Equations with Ordinary/Fractional Derivatives -- Bibliography.
Sommario/riassunto	This monograph is the first published book devoted to the theory of differential equations with non-instantaneous impulses. It aims to equip the reader with mathematical models and theory behind real life processes in physics, biology, population dynamics, ecology and pharmacokinetics. The authors examine a wide scope of differential equations with non-instantaneous impulses through three comprehensive chapters, providing an all-rounded and unique presentation on the topic, including: - Ordinary differential equations with non-instantaneous impulses (scalar and n-dimensional case) - Fractional differential equations with non-instantaneous impulses (with Caputo fractional derivatives of order $q \in (0, 1)$) - Ordinary differential equations with non-instantaneous impulses occurring at random moments (with exponential, Erlang, or Gamma distribution) Each chapter focuses on theory, proofs and examples, and contains numerous graphs to enrich the reader's understanding. Additionally, a carefully selected bibliography is included. Graduate students at various levels as well as researchers in differential equations and

related fields will find this a valuable resource of both introductory and advanced material.
