

1. Record Nr.	UNINA9910300253003321
Autore	Rachnková Irena
Titolo	State-Dependent Impulses : Boundary Value Problems on Compact Interval / / by Irena Rachnková, Jan Tomeek
Pubbl/distr/stampa	Paris : , : Atlantis Press : , : Imprint : Atlantis Press, , 2015
ISBN	94-6239-127-0
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (194 p.)
Collana	Atlantis Briefs in Differential Equations, , 2405-6413 ; ; 6
Disciplina	510
Soggetti	Differential equations Differential Equations
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	Introduction -- Second Order Problem with Nonlinear Boundary Conditions -- Dirichlet Problem with Time Singularities -- Dirichlet Problem with Space Singularities -- Systems of Differential Equations and Higher-Order Differential Equations with General Linear Boundary Conditions -- Dirichlet Problem with One Impulse Condition -- Dirichlet Problem via Lower and Upper Functions -- Sturm-Liouville Problem -- Higher Order Equation with General Linear Boundary Conditions -- First Order System with Linear Boundary Conditions.
Sommario/riassunto	This book offers the reader a new approach to the solvability of boundary value problems with state-dependent impulses and provides recently obtained existence results for state dependent impulsive problems with general linear boundary conditions. It covers fixed-time impulsive boundary value problems both regular and singular and deals with higher order differential equations or with systems that are subject to general linear boundary conditions. We treat state-dependent impulsive boundary value problems, including a new approach giving effective conditions for the solvability of the Dirichlet problem with one state-dependent impulse condition and we show that the depicted approach can be extended to problems with a finite number of state-dependent impulses. We investigate the Sturm–Liouville boundary value problem for a more general right-hand side of a differential equation. Finally, we offer generalizations to higher order differential equations or differential systems subject to general linear boundary conditions.

