

1. Record Nr.	UNINA9910483541103321
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Titolo	Lyapunov Inequalities and Applications / / by Ravi P. Agarwal, Martin Bohner, Abdullah Özbekler
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-69029-6
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (xiii, 607 pages)
Collana	Mathematics and Statistics Series
Disciplina	003.75
Soggetti	Mathematical analysis Differential equations Difference equations Functional equations Analysis Differential Equations Difference and Functional Equations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Lyapunov-Type Inequalities for Second-Order Linear Differential Equations -- Lyapunov-Type Inequalities for Higher-Order Linear Differential Equations -- Lyapunov-Type Inequalities for Half-Linear Differential Equations -- Lyapunov-Type Inequalities for Nonlinear Differential Systems -- Lyapunov-Type Inequalities for Fractional Differential Equations -- Lyapunov-Type Inequalities for Partial Differential Equations -- Lyapunov-Type Inequalities for Difference Equations -- Lyapunov-Type Inequalities for Dynamic Equations on Time Scales -- References -- Index.
Sommario/riassunto	This book provides an extensive survey on Lyapunov-type inequalities. It summarizes and puts order into a vast literature available on the subject, and sketches recent developments in this topic. In an elegant and didactic way, this work presents the concepts underlying Lyapunov-type inequalities, covering how they developed and what kind of problems they address. This survey starts by introducing basic applications of Lyapunov's inequalities. It then advances towards even-

order, odd-order, and higher-order boundary value problems; Lyapunov and Hartman-type inequalities; systems of linear, nonlinear, and quasi-linear differential equations; recent developments in Lyapunov-type inequalities; partial differential equations; linear difference equations; and Lyapunov-type inequalities for linear, half-linear, and nonlinear dynamic equations on time scales, as well as linear Hamiltonian dynamic systems. Senior undergraduate students and graduate students of mathematics, engineering, and science will benefit most from this book, as well as researchers in the areas of ordinary differential equations, partial differential equations, difference equations, and dynamic equations. Some background in calculus, ordinary and partial differential equations, and difference equations is recommended for full enjoyment of the content.
