

1. Record Nr.	UNINA9910583329803321
Autore	Brzdek Janusz
Titolo	Ulam stability operators / / authors, Janusz Brzdek [and three others] ; series editor, Themistocles M. Rassias
Pubbl/distr/stampa	London, England : , : Academic Press, , 2018 ©2018
ISBN	0-12-809830-9 0-12-809829-5
Descrizione fisica	1 online resource (238 pages) : illustrations
Collana	Mathematical Analysis and its Applications
Disciplina	515.75
Soggetti	Functional equations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Machine generated contents note: ; 1. Introduction to Ulam stability theory -- ; 1. Historical background -- ; 2. Stability of additive mapping -- ; 3. Approximate isometries -- ; 4. Other functional equations and inequalities in several variables -- ; 5. Stability of functional equations in a single variable -- ; 6. Iterative stability -- ; 7. Differential and integral equations -- ; 8. Superstability and hyperstability -- ; 9. Composite type equations -- ; 10. Nonstability -- References -- ; 2. Operators in normed spaces -- ; 1. Introduction -- ; 2. Ulam stability with respect to gauges -- ; 3. Closed operators -- ; 4. Some differential operators on bounded intervals -- ; 5. Stability of the linear differential operator with respect to different norms -- ; 6. Some classical operators from the approximation theory -- ; 6.1. Bernstein operators -- ; 6.2. Szasz-Mirakjan operators -- ; 6.3. Other classical operators -- ; 6.4. Integral operators -- ; 6.5. Bernstein-Schnabl operators -- References -- ; 3. Ulam stability of differential operators -- ; 1. Introduction -- ; 2. Linear differential equation of the first order -- ; 3. Linear differential equation of a higher order with constant coefficients -- ; 4. First-order linear differential operator -- ; 5. Higher-order linear differential operator -- ; 6. Partial differential equations -- ; 7. Laplace operator -- References -- ; 4. Best constant in Ulam stability -- ; 1. Introduction --

; 2. Best constant for Cauchy, Jensen, and Quadratic functional equations -- ; 3. Best constant for linear operators -- ; 3.1. Stancu operators -- ; 3.2. Kantorovich operators -- ; 3.3. An extremal property of $K(B_n)$ -- ; 4. Ulam stability of operators with respect to different norms -- References -- ; 5. Ulam stability of operators of polynomial form -- ; 1. Introduction -- ; 2. Auxiliary results -- ; 3. A general stability theorem -- ; 4. Complementary results for the second-order equations -- ; 5. Linear difference equation with constant coefficients -- ; 6. Difference equation with a matrix coefficient -- ; 7. Linear functional equations with constant coefficients -- ; 8. Linear differential equations -- ; 9. Integral equations -- References -- ; 6. Nonstability theory -- ; 1. Preliminary information -- ; 2. Possible definitions of nonstability -- ; 3. Linear difference equation of the first order -- ; 4. Linear difference equation of a higher order -- ; 5. Linear functional equation of the first order -- ; 6. Linear functional equation of a higher order -- References.
