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Collana	Springer Optimization and Its Applications, , 1931-6828 ; ; 111
Disciplina	515.8
Soggetti	Calculus of variations Operator theory Special functions Global analysis (Mathematics) Manifolds (Mathematics) Computer mathematics Calculus of Variations and Optimal Control; Optimization Operator Theory Special Functions Global Analysis and Analysis on Manifolds Computational Mathematics and Numerical Analysis
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.
Nota di contenuto	A brief history of the Favard operator and its variants -- Bivariate extension of linear positive operators -- Positive Green’s Functions for Boundary Value Problems with Conformable Derivatives -- The retraction-displacement condition in the theory of fixed point equation with a convergent iterative algorithm -- An adaptive finite element method for solving a free boundary problem with periodic boundary conditions in lubrication theory -- Evolution solutions of equilibrium problems - a computational approach -- Cantor, Banach and Baire theorems in generalized metric spaces -- A Survey of Perturbed Ostrowski Type Inequalities -- Hyers-Ulam-Rassias stability of the generalized Wilson’s functional equation -- Approximation under

Exponential Growth Conditions by Szász and Baskakov Type Operators in the Complex Plane -- On the asymptotic behavior of sequences of positive linear approximation operators -- Approximation of functions by additive and by quadratic mappings -- Bernstein Type Inequalities concerning Growth of Polynomials -- Approximation for generalization of Baskakov-Durrmeyer operators -- A Tour on p (x)-Laplacian Problems When p = -- An umbral calculus approach to Bernoulli-Padé polynomials -- Hadamard Matrices: Insights into their growth factor and determinant computations -- Localized summability kernels for Jacobi expansions -- Quadrature rules with multiple nodes -- A - summability of sequences of linear conservative operators -- Simultaneous Weighted Approximation with Multivariate Baskakov-Schurer Operators -- Approximation of Discontinuous Functions by q-Bernstein Polynomials -- Nests, and their Role in the Orderability Problem -- Resolvent Operators for Some Classes of Integro-Differential Equations -- Component Matrices of a Square Matrix and their Properties -- Solutions of Some Types of Differential Equations and of Their Associated Physical Problems by Means of Inverse Differential Operators -- A modified pointwise estimate on simultaneous approximation by Bernstein polynomials -- Structural Fixed Point Results in Metric Spaces -- Models of Fuzzy Linear Regression: An Application in Engineering -- Properties of Functions of generalized bounded variations.

Sommario/riassunto

Designed for graduate students, researchers, and engineers in mathematics, optimization, and economics, this self-contained volume presents theory, methods, and applications in mathematical analysis and approximation theory. Specific topics include: approximation of functions by linear positive operators with applications to computer aided geometric design, numerical analysis, optimization theory, and solutions of differential equations. Recent and significant developments in approximation theory, special functions and q-calculus along with their applications to mathematics, engineering, and social sciences are discussed and analyzed. Each chapter enriches the understanding of current research problems and theories in pure and applied research.