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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Shape-Preserving Approximation By Real Univariate Polynomials -- Shape-Preserving Approximation by Real Multivariate Polynomials -- Shape-Preserving Approximation by Complex Univariate Polynomials -- Shape-Preserving Approximation by Complex Multivariate Polynomials -- Appendix : Some Related Topics.
Sommario/riassunto	This monograph presents the first comprehensive treatment in book form of shape-preserving approximation by real or complex polynomials in one or several variables. Such approximation methods are useful in many problems that arise in science and engineering and require an optimal mathematical representation of physical reality. The main topics are structured in four chapters, followed by an appendix: shape-preserving approximation and interpolation of real functions of one real variable by real polynomials; shape-preserving approximation of real functions of several real variables by multivariate real polynomials; shape-preserving approximation of analytic functions of one complex variable by complex polynomials in the unit disk; and shape-preserving approximation of analytic functions of several complex variables on the unit ball or the unit polydisk by polynomials

of several complex variables. The appendix treats related results of non-polynomial and non-spline approximations preserving shape including those by complexified operators with applications to complex partial differential equations. Shape-Preserving Approximation by Real and Complex Polynomials contains many open problems at the end of each chapter to stimulate future research along with a rich and updated bibliography surveying the vast literature. The text will be useful to graduate students and researchers interested in approximation theory, mathematical analysis, numerical analysis, computer aided geometric design, robotics, data fitting, chemistry, fluid mechanics, and engineering.
