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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part I. Analytic Number Theory, Combinatorics, and Special Sequences of Numbers and Polynomials -- The mean values of the Riemann Zeta function on the critical line (A. Ivi) -- Explicit bounds concerning non- trivial zeros of the Riemann Zeta function (M. Hassani) -- On the value- distribution of logarithmic derivatives of Dirichlet L-functions (Y. Ihara, K. Matsumoto) -- Multiple Gamma functions and their applications (J. Choi) -- On partition functions of hyperbolic three-geometry and associated Hilbert schemes (A.A. Bytsenko and E. Elizalde) -- Families of twisted Bernoulli numbers, twisted Bernoulli polynomials and their applications (Y. Simsek) -- Combinatorial interpretation of a generalized basic series (A.K. Agarwal, M. Rana) -- Identities for

reciprocal binomials (A. Sofo) -- A note on q-Stirling numbers (M. Merca) -- Part II. Analytic Inequalities and Applications -- A survey on Cauchy–Bunyakovsky–Schwarz inequality for power series (A. Ibrahim, S.S. Dragomir) -- Topics in special functions III (G.D. Anderson, M. Vuorinen, X. Zhang) -- Completely monotone functions—a digest (M. Merkle) -- New applications of superquadracity (S. Abramovich) -- Green's operator and differential forms (S. Ding, Y. Xing) -- Multidimensional discrete Hilbert-type inequalities, operators and compositions (B. Yang) -- The function  $(bx-ax)/x$ : Ratio's properties (F. Qi, Q.-M. Luo, B.-N. Guo) -- On the approximation and bounds of the Gini mean difference (P. Cerone) -- On parametric nonconvex variational inequalities (M.A. Noor) -- Part III. Approximation of Functions and Quadratures -- Simultaneous approximation for Stancu type generalization of certain summation-integral type operators (N.K. Govil, V. Gupta) -- Korovkin type approximation theorem for functions of two variables via statistical summability (M. Mursaleen, S.A. Mohiuddine) -- Reflections on the Baker–Gammel–Wills (Padé) conjecture (D.S. Lubinsky) -- Optimal quadrature formulas and interpolation splines minimizing the semi-norm in the Hilbert space  $K_2(P_2)$  (A.R. Hayotov, G.V. Milovanovi, K.M. Shadimetov) -- Numerical integration of highly oscillating functions (G.V. Milovanovi, M.P. Stani) -- Part IV. Orthogonality, Transformations and Applications -- Asymptotic reductions between the Wilson polynomials and the lower level polynomials of the Askey scheme (C. Ferreira, J.L. López, E.P. Sinusía) -- On a direct Uvarov–Chihara problem and some extensions (K. Castillo, L. Garza, F. Marcellán) -- On special cases of Boas–Buck type polynomial sequences (A.F. Loureiro, S. Yakubovich) -- Goursat's hypergeometric transformations, revisited (P.W. Karlsson) -- Convolutions product and differential and integro-differential equations (A. Kiliçman) -- Orthogonally additive-additive functional equation (C. Park) -- Part V. Special and Complex Functions and Applications -- Alternating Mathieu series, Hilbert–Einstein series and their generalized Omega functions (A. Baricz, P.L. Butzer, T.K. Pogány) -- Properties of the product of modified Bessel functions (A. Baricz, T.K. Pogány) -- Mapping properties of an integral operator involving Bessel functions (S. Porwal, D. Breaz) -- Poincaré -series for classical Schottky groups (V.V. Mityushev) -- Inclusion properties for certain classes of meromorphic multivalent functions (N.E. Cho) -- A journey from Gross-problem to Fujimoto-condition (I. Lahiri, A. Banerjee) -- Index.

## Sommario/riassunto

This book, in honor of Hari M. Srivastava, discusses essential developments in mathematical research in a variety of problems. It contains thirty-five articles, written by eminent scientists from the international mathematical community, including both research and survey works. Subjects covered include analytic number theory, combinatorics, special sequences of numbers and polynomials, analytic inequalities and applications, approximation of functions and quadratures, orthogonality, and special and complex functions. The mathematical results and open problems discussed in this book are presented in a simple and self-contained manner. The book contains an overview of old and new results, methods, and theories toward the solution of longstanding problems in a wide scientific field, as well as new results in rapidly progressing areas of research. The book will be useful for researchers and graduate students in the fields of mathematics, physics, and other computational and applied sciences.