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Nota di contenuto	Preface -- Part I Personal Contributions -- The Worlds of George Andrews, a Daughter's Take -- My Association and Collaboration with George Andrews -- Ramanujan, His Lost Notebook, Its Importance -- Part II Photographs -- George Andrews: "Combinatorial Analysis 80" Picture Book -- Part III Articles -- Dissections of Strange q-Series -- Dyson's "Favorite" Identity and Chebyshev Polynomials of the Third and Fourth Kind -- A q-Translation Approach to Liu's Calculus -- Combinations of Ranks and Cranks of Partitions Moduli 6, 9 and 12 and Their Comparison with the Partition Function -- Combinatorial Proofs of Two Euler-Type Identities Due to Andrews -- Noncommutative Catalan Numbers -- Elementary Polynomial Identities Involving q-Trinomial Coefficients -- A Partial Theta Function Borwein Conjecture -- A Note on Andrews' Partitions with Parts Separated by Parity -- A Bijective Proof of a False Theta Function Identity from Ramanujan's Lost Notebook -- Quasipolynomials and Maximal Coefficients of Gaussian Polynomials -- Finding Modular Functions for Ramanujan-Type Identities -- Partitions into Distinct Parts Modulo Powers of 5 -- The A2 Rogers–Ramanujan Identities Revisited -- Properties of Multivariate b-Ary Stern Polynomials -- A Simple Proof of a Congruence for a Series Involving the Little q-Jacobi Polynomials -- D.H. Lehmer's Tridiagonal Determinant: An �tude in (Andrews-Inspired) Experimental Mathematics -- Gaussian Binomial Coefficients with Negative Arguments -- A Lecture Hall Theorem for m-Falling Partitions -- New

Fifth and Seventh Order Mock Theta Function Identities -- On Pattern-Avoiding Fishburn Permutations -- A q -Analogue for Euler's $(6) = 6/945$ -- A Variant of IdentityFinder and Some New Identities of Rogers–Ramanujan–MacMahon Type -- Andrews–Gordon Type Series for Kanade–Russell Conjectures -- A Generalization of Schröter's Formula -- A Truncated Theta Identity of Gauss and Overpartitions into Odd Parts -- Combinatory Classes of Compositions with Higher Order Conjugation -- Marking and Shifting a Part in Partitions -- On Witten's Extremal Partition Functions -- A Proof of the Weierstraß Gap Theorem not Using the Riemann–Roch Formula -- Richaud–Degert Real Quadratic Fields and Maass Waveforms -- Sequentially Congruent Partitions and Related Bijections -- Singular Overpartitions and Partitions with Prescribed Hook Differences -- The Combinatorics of MacMahon's Partial Fractions -- Twin Composites, Strange Continued Fractions, and a Transformation that Euler Missed (Twice) -- On the Andrews–Yee Identities Associated with Mock Theta Functions -- Congruences for q -Binomial Coefficients -- The Final Problem: A Series Identity from the Lost Notebook -- A Family of Identities That Yields a Wide Variety of Partition Theorem.

Sommario/riassunto

This book presents a printed testimony for the fact that George Andrews, one of the world's leading experts in partitions and q -series for the last several decades, has passed the milestone age of 80. To honor George Andrews on this occasion, the conference "Combinatory Analysis 2018" was organized at the Pennsylvania State University from June 21 to 24, 2018. This volume comprises the original articles from the Special Issue "Combinatory Analysis 2018 – In Honor of George Andrews' 80th Birthday" resulting from the conference and published in *Annals of Combinatorics*. In addition to the 37 articles of the Andrews 80 Special Issue, the book includes two new papers. These research contributions explore new grounds and present new achievements, research trends, and problems in the area. The volume is complemented by three special personal contributions: "The Worlds of George Andrews, a daughter's take" by Amy Alznauer, "My association and collaboration with George Andrews" by Krishna Alladi, and "Ramanujan, his Lost Notebook, its importance" by Bruce Berndt. Another aspect which gives this Andrews volume a truly unique character is the "Photos" collection. In addition to pictures taken at "Combinatory Analysis 2018", the editors selected a variety of photos, many of them not available elsewhere: "Andrews in Austria", "Andrews in China", "Andrews in Florida", "Andrews in Illinois", and "Andrews in India". This volume will be of interest to researchers, PhD students, and interested practitioners working in the area of Combinatory Analysis, q -Series, and related fields.
