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Sommario/riassunto This book provides a thorough introduction to the theory of complex semisimple quantum groups, that is, Drinfeld doubles of q-deformations of compact semisimple Lie groups. The presentation is comprehensive, beginning with background information on Hopf algebras, and ending with the classification of admissible representations of the q-deformation of a complex semisimple Lie group. The main components are: - a thorough introduction to quantized universal enveloping algebras over general base fields and generic deformation parameters, including finite dimensional representation theory, the Poincaré-Birkhoff-Witt Theorem, the locally finite part, and the Harish-Chandra homomorphism, - the analytic theory of quantized complex semisimple Lie groups in terms of quantized algebras of functions and their duals, - algebraic representation theory in terms of category O, and - analytic representation theory of quantized complex semisimple groups. Given its scope, the book will be a valuable resource for both graduate students and researchers in the area of quantum groups.