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Titolo	Complex Analysis and Dynamics in One Variable with Applications / / by Luis T. Magalhães
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Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (XXXII, 714 p. 228 illus., 59 illus. in color.)
Disciplina	515.9
Soggetti	Functions of complex variables Dynamics Potential theory (Mathematics) Functions of a Complex Variable Dynamical Systems Potential Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Complex plane -- Functions -- Derivative -- Integral -- Analyticity -- Uni cation of holomorphy cauchy theorem and analyticity -- Global cauchy theorem -- Meromorphic functions -- Harmonic functions -- Conformal regions -- Analytic continuation and riemann surfaces -- Uniformization of riemann surfaces -- Complex dynamics.
Sommario/riassunto	This textbook has been designed to support the initial study of Complex Analysis, progressing to Complex Dynamics. It focuses on the fundamental aspects of one-variable complex functions, covering the geometric theory and dynamics of iterations of rational mappings. Following the standard material, the book delves into an extensive range of advanced topics, encompassing the requirements for a one- year graduate-level course or a preliminary exam. In this work, the reader will discover three distinctive characteristics: it simplifies and unifies ideas and concepts that might appear disparate or complicated in real analysis; it contributes to the development of other areas in mathematics; and it showcases relevance for applications in Science and Engineering, with many exercises. Historical notes throughout the text help to contextualize the theory. With its flexible structure, this

textbook provides a solid foundation for a first course in Complex Analysis and for a second more advanced course, establishing a robust basis for subsequent studies.
