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Descrizione fisica	1 online resource (423 pages)
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Soggetti	Physics Differential equations Mathematical physics Mechanics Mechanics, Applied Mathematical Methods in Physics Ordinary Differential Equations Mathematical Applications in the Physical Sciences Theoretical and Applied Mechanics
Lingua di pubblicazione	Inglese
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Nota di contenuto	Preface -- Differential Operator -- Some Definitions -- Linear Ordinary Differential Equations with Known Constant Coefficients (linODECC) -- Linear Ordinary Differential Equations with Known Variable Coefficients (linODEVC) -- Special Types of Differential Equations -- Special Situations -- OM -- RLC -- FROBSOL -- NUMSOL -- Answers to Problems from Various Chapters.
Sommario/riassunto	This textbook describes rules and procedures for the use of Differential Operators (DO) in Ordinary Differential Equations (ODE). The book provides a detailed theoretical and numerical description of ODE. It presents a large variety of ODE and the chosen groups are used to solve a host of physical problems. Solving these problems is of interest primarily to students of science, such as physics, engineering, biology and chemistry. Scientists are greatly assisted by using the DO obeying several simple algebraic rules. The book describes these rules and, to

help the reader, the vocabulary and the definitions used throughout the text are provided. A thorough description of the relatively straightforward methodology for solving ODE is given. The book provides solutions to a large number of associated problems. ODE that are integrable, or those that have one of the two variables missing in any explicit form are also treated with solved problems. The physics and applicable mathematics are explained and many associated problems are analyzed and solved in detail. Numerical solutions are analyzed and the level of exactness obtained under various approximations is discussed in detail. .