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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- 1 Measurement, uncertainty, conversion of units, and dimensional analysis -- 2 Vector -- 3. Kinematics of particle in one dimension -- 4 Motion in two dimensions: projectile motion -- 5 Newton's laws of motion -- 6 Uniform circular motion -- 7 Work, energy, and power -- 8 Linear momentum and collision -- 9 Rotational motion -- 10 Statics of rigid body -- 11 Oscillation and simple harmonic motion -- 12 General laws of gravity -- 13 Elastic properties -- 14 Hydrostatics -- 15 Hydrodynamics -- 16 Temperature and thermal expansion -- 17 Heat and calorimetry -- 18 Heat transfer -- 19 Gas laws and kinetic theory -- 20 Thermodynamics -- Appendix A: Introduction to wx Maxima, Appendix B: Physical constants, Appendix C: Conversion factors, Appendix D: Mathematical formulae -- References.
Sommario/riassunto	Knowledge of and skill in physics are essential foundations for studies in science and engineering. This book offers students an introduction to the basic concepts and principles of physics. It covers various topics specifically related to physical mechanics, the properties of matter, and heat. Each chapter begins with a summary of concepts, principles, definitions, and formulae to be discussed, as well as ending with problems and solutions that illustrate the specific topic. Steps are detailed to help build reasoning and understanding. There are 300 worked problems and 100 exercises in the book, as well as 306 figures

to help the reader visualize the processes being addressed. Computer calculations and solutions are carried out using wxMaxima to give insight and help build computational skills. The book is aimed at first-year undergraduate students studying introductory physics, and would also be useful for physics teachers in their instruction, particularly the exercises at the end of each chapter.
