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Nota di contenuto	From the Content: Part I: Kinematics -- Kinematics of a Particle -- Movement of a Particle at the Moving Basis -- Polar Coordinates in the Plane, Cylindrical and Spherical Coordinates in Space -- Part II: Newton' s Laws -- Inertial Frame.- Newton's Second Law -- Brief Classification of Forces in Mechanics -- Conservation of Momentum for the Systems of Particles -- Linear Momentum -- Problem of Two Bodies -- Work of the Force and Conservative Forces -- Energy Conservation -- Particle in the Potential Force Field -- Conservation of Mechanical Energy in Closed Systems -- Kinetic Energy in Different Frames -- Movement in Potential Field, Oscillations -- Movement in a Fixed One-Dimensional Potential -- Harmonic Oscillator -- Dynamics of Rotational Movements -- Torque and Moment of Inertia -- Angular Momentum of a System of Particles -- Conservation of Angular Momentum -- Central Forces and Kepler's Laws -- Kepler's Laws -- The Precession of Perihelion of a Planet with Nearly Circular Orbit -- Basic Hydrodynamics.
Sommario/riassunto	One could make the claim that all branches of physics are basically generalizations of classical mechanics. It is also often the first course

which is taught to physics students. The approach of this book is to construct an intermediate discipline between general courses of physics and analytical mechanics, using more sophisticated mathematical tools. The aim of this book is to prepare a self-consistent and compact text that is very useful for teachers as well as for independent study.