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Autore	Petrera Matteo
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Sommario/riassunto	Long description: These Lecture Notes provide an introduction to the theory of finite-dimensional dynamical systems. The first part presents the main classical results about continuous time dynamical systems with a finite number of degrees of freedom. Among the topics covered are: initial value problems, geometrical methods in the theory of ordinary differential equations, stability theory, aspects of local bifurcation theory. The second part is devoted to the Lagrangian and Hamiltonian formulation of finite-dimensional dynamical systems, both on Euclidean spaces and smooth manifolds. The main topics are: variational formulation of Newtonian mechanics, canonical Hamiltonian mechanics, theory of canonical transformations, introduction to mechanics on Poisson and symplectic manifolds. The material is presented in a way that is at once intuitive, systematic and mathematically rigorous. The theoretical part is supplemented with many concrete examples and exercises.