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Nota di bibliografia	Includes bibliographical references (pages [199]-206) and index.
Nota di contenuto	Symplectic Manifolds -- Symplectic Forms -- Symplectic Form on the Cotangent Bundle -- Symplectomorphisms -- Lagrangian Submanifolds -- Generating Functions -- Recurrence -- Local Forms -- Preparation for the Local Theory -- Moser Theorems -- Darboux-Moser-Weinstein Theory -- Weinstein Tubular Neighborhood Theorem -- Contact Manifolds -- Contact Forms -- Contact Dynamics -- Compatible Almost Complex Structures -- Almost Complex Structures -- Compatible Triples -- Dolbeault Theory -- Kähler Manifolds -- Complex Manifolds -- Kähler Forms -- Compact Kähler Manifolds -- Hamiltonian Mechanics -- Hamiltonian Vector Fields -- Variational Principles -- Legendre Transform -- Moment Maps -- Actions -- Hamiltonian Actions -- Symplectic Reduction -- The Marsden-Weinstein-Meyer Theorem -- Reduction -- Moment Maps Revisited -- Moment Map in Gauge Theory -- Existence and Uniqueness of Moment Maps -- Convexity -- Symplectic Toric Manifolds -- Classification of Symplectic Toric Manifolds -- Delzant Construction -- Duistermaat-Heckman Theorems.
Sommario/riassunto	The goal of these notes is to provide a fast introduction to symplectic geometry for graduate students with some knowledge of differential geometry, de Rham theory and classical Lie groups. This text addresses

symplectomorphisms, local forms, contact manifolds, compatible almost complex structures, Kaehler manifolds, hamiltonian mechanics, moment maps, symplectic reduction and symplectic toric manifolds. It contains guided problems, called homework, designed to complement the exposition or extend the reader's understanding. There are by now excellent references on symplectic geometry, a subset of which is in the bibliography of this book. However, the most efficient introduction to a subject is often a short elementary treatment, and these notes attempt to serve that purpose. This text provides a taste of areas of current research and will prepare the reader to explore recent papers and extensive books on symplectic geometry where the pace is much faster. For this reprint numerous corrections and clarifications have been made, and the layout has been improved.
