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Titolo	The Geometry of Ordinary Variational Equations / / by Olga Krupkova
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Collana	Lecture Notes in Mathematics, , 1617-9692 ; ; 1678
Disciplina	515
Soggetti	Mathematical analysis Geometry, Differential Global analysis (Mathematics) Manifolds (Mathematics) Mechanics, Applied Analysis Differential Geometry Global Analysis and Analysis on Manifolds Engineering Mechanics
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Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Basic geometric tools -- Lagrangean dynamics on fibered manifolds -- Variational Equations -- Hamiltonian systems -- Regular Lagrangean systems -- Singular Lagrangean systems -- Symmetries of Lagrangean systems -- Geometric intergration methods -- Lagrangean systems on ?: R×M»R.
Sommario/riassunto	The book provides a comprehensive theory of ODE which come as Euler-Lagrange equations from generally higher-order Lagrangians. Emphasis is laid on applying methods from differential geometry (fibered manifolds and their jet-prolongations) and global analysis (distributions and exterior differential systems). Lagrangian and Hamiltonian dynamics, Hamilton-Jacobi theory, etc., for any Lagrangian system of any order are presented. The key idea - to build up these theories as related with the class of equivalent Lagrangians - distinguishes this book from other texts on higher-order mechanics. The reader should be familiar with elements of differential geometry,

global analysis and the calculus of variations.