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Nota di contenuto	Cover; Half-title; Title; Copyright; Contents; Preface; 1 Historical Background; 2 Plate Tectonics; 3 Structure and Composition of the Mantle; 4 Mantle Temperatures and Thermodynamic Properties; 5 Viscosity of the Mantle; 6 Basic Equations; 7 Linear Stability; 8 Approximate Solutions; 9 Calculations of Convection in Two Dimensions; 10 Numerical Models of Three-dimensional Convection; 11 Hot Spots and Mantle Plumes; 12 Chemical Geodynamics; 13 Thermal History of the Earth; 14 Convection in the Interiors of Solid Planets and Moons; 15 Nature of Convection in the Mantle; References Appendix: Table of Variables Author Index; Subject Index
Sommario/riassunto	Mantle Convection in the Earth and Planets is a comprehensive synthesis of all aspects of mantle convection within the Earth, the terrestrial planets, the Moon, and the Galilean satellites of Jupiter. The book includes up-to-date discussions of the latest research developments that have revolutionized our understanding of the Earth

and the planets. It is suitable as a text for graduate courses in geophysics and planetary physics, and as a supplementary reference for use at the undergraduate level. It is also an invaluable review for researchers in the broad fields of the Earth and planetary sciences including seismologists, tectonophysicists, geodesists, mineral physicists, volcanologists, geochemists, geologists, mineralogists, petrologists, paleomagnetists, planetary geologists, and meteoriticists. The book features a comprehensive index, an extensive reference list, numerous illustrations (many in color) and major questions that focus the discussion and suggest avenues of future research.
