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   Soggetti   Differential equations
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                       Mathematics - Data processing
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   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   Introduction -- Thermal Convection with LTNE -- Rotating Convection with LTNE -- Double Diffusive Convection with LTNE -- Vertical Porous Convection with LTNE -- Penetrative Convection -- LTNE and Multi-layers -- Other Convection/Microfluidic Scenarios -- Convection with Slip Boundary Conditions -- Convection in a Porous Layer with Solid Partitions -- Convection with Produting Baffles -- Anisotropic Inertia Effect -- Bidispersive Porous Media -- Resonance in Thermal Convection -- Thermal Convection in Nanofluids -- References.

   Sommario/riassunto This book is one of the first devoted to an account of theories of thermal convection which involve local thermal non-equilibrium effects, including a concentration on microfluidic effects. The text introduces convection with local thermal non-equilibrium effects in extraordinary detail, making it easy for readers newer to the subject area to understand. This book is unique in the fact that it addresses a large number of convection theories and provides many new results which

are not available elsewhere. This book will be useful to researchers from engineering, fluid mechanics, and applied mathematics, particularly those interested in microfluidics and porous media.