

1. Record Nr.	UNINA9910299762103321
Autore	Straughan Brian
Titolo	Convection with Local Thermal Non-Equilibrium and Microfluidic Effects // by Brian Straughan
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-13530-9
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (318 p.)
Collana	Advances in Mechanics and Mathematics, , 1571-8689 ; ; 32
Disciplina	620.11296
Soggetti	Partial differential equations Mathematical physics Fluid mechanics Computer mathematics Partial Differential Equations Theoretical, Mathematical and Computational Physics Engineering Fluid Dynamics Computational Science and Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
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 Producing 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.
