Record Nr. UNINA9910462095803321 Autore Andreev Victor K. Titolo Mathematical models of convection [[electronic resource] /] / by Victor K. Andreev ... [et al.] Berlin; ; Boston, : De Gruyter, 2012 Pubbl/distr/stampa **ISBN** 9786613940179 1-283-62772-8 Descrizione fisica 1 online resource (436 p.) Collana De Gruyter Studies in Mathematical Physics; ; 5 Altri autori (Persone) AndreevV. K (Viktor Konstantinovich) Disciplina 536/.250151 Soggetti Heat - Convection - Mathematical models Thermodynamics - Mathematical models Electronic books. 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 Front matter -- Preface -- List of contributing authors -- Contents --Chapter 1. Equations of fluid motion -- Chapter 2. Conditions on the interface between fluids and on solid walls -- Chapter 3. Models of convection of an isothermally incompressible fluid -- Chapter 4. Hierarchy of convection models in closed volumes -- Chapter 5. Invariant submodels of microconvection equations -- Chapter 6. Group properties of equations of thermodiffusion motion -- Chapter 7. Stability of equilibrium states in the Oberbeck-Boussinesa model --Chapter 8. Small perturbations and stability of plane layers in the microconvection model -- Chapter 9. Numerical simulation of convective flows under microgravity conditions -- Chapter 10. Convective flows in tubes and layers -- Bibliography -- Index Sommario/riassunto Phenomena of convection are abundant in nature as well as in industry. This volume addresses the subject of convection from the point of view of both, theory and application. While the first three chapters provide a

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