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Nota di contenuto	Front matter -- List of Participants -- Table of contents -- Preface -- Double-diffusive processes in stellar astrophysics -- Thermo-compositional adiabatic and diabatic convection -- Fully compressible time implicit hydrodynamics simulations for stellar interiors -- Thermal Convection in Stars and in Their Atmosphere -- Turbulence in stably stratified radiative zone -- An extremely short course on stellar rotation and magnetism -- Stellar magnetism: bridging dynamos and winds -- Multi-dimensional asteroseismology -- Multi-dimensional physics of core-collapse supernovae -- References
Sommario/riassunto	When one has to deal with fluid flows, magnetic fields or heat transfer in stars, one faces the partial differential equations that govern these processes. These phenomena are naturally multi-dimensional and their study requires new and sophisticated models. This volume gathers the lecture notes which summarize the essence of the lectures and conferences given by world experts in the field of multi-dimensional modelling of stars, during the 2018 Evry Schatzman School held in Roscoff, France. It gives the present status of our understanding of several processes that occur in stars, like thermal convection, double-diffusive convection, dynamo effect or baroclinic flows. Every subject is discussed under the light of the most recent results of nowadays research and is made accessible to all newcomers, either students or researchers who wish to join the field.