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Nota di contenuto	Introduction and governing equations -- Properties of turbulence -- Direct numerical simulation -- Large Eddy simulation -- RANS models -- Turbulence in natural and mixed convection -- Transient turbulence -- Transition to turbulence -- Conclusions.
Sommario/riassunto	The book provides the theoretical fundamentals on turbulence and a complete overview of turbulence models, from the simplest to the most advanced ones including Direct and Large Eddy Simulation. It mainly focuses on problems of modeling and computation, and provides information regarding the theory of dynamical systems and their bifurcations. It also examines turbulence aspects which are not treated in most existing books on this subject, such as turbulence in free and mixed convection, transient turbulence and transition to turbulence. The book adopts the tensor notation, which is the most appropriate to deal with intrinsically tensor quantities such as stresses and strain rates, and for those who are not familiar with it an Appendix on tensor algebra and tensor notation are provided.