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Sommario/riassunto

Without sacrificing scientific strictness, this introduction to the field guides readers through mathematical modeling, the theoretical treatment of the underlying physical laws and the construction and effective use of numerical procedures to describe the behavior of the dynamics of physical flow. The book is carefully divided into three main parts: - The design of mathematical models of physical fluid flow;- A theoretical treatment of the equations representing the model, as Navier-Stokes, Euler, and boundary layer equations, models of turbulence, in order to gain qualitative as