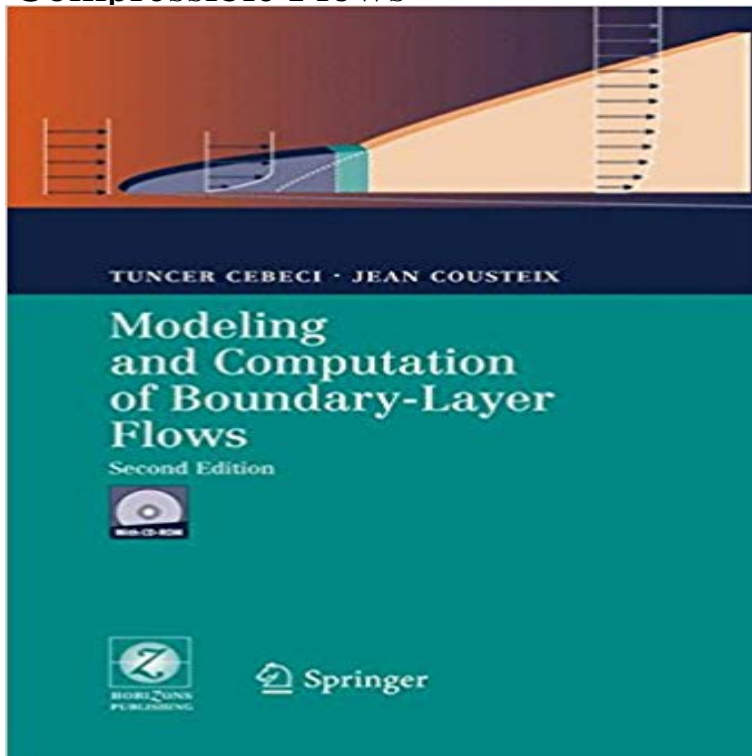# Modeling and Computation of Boundary-Layer Flows: Laminar, Turbulent and Transitional Boundary Layers in Incompressible and Compressible Flows

This second edition of the book, Modeling and Computation of Boundary-Layer Flows^ extends the topic to include compressible flows. This implies the inclusion of the energy equation and non-constant fluid properties in the continuity and momentum equations. The necessary additions are included in new chapters, leaving the first nine chapters to serve as an introduction to incompressible flows and, therefore, as a platform for the extension. This part of the book can be used for a one semester course as described below. Improvements to the incompressible flows portion of the book include the removal of listings of computer programs and their description, and their incor poration in two CD-ROMs. A listing of the topics incorporated in the CD-ROM is provided before the index. In Chapter 7 there is a more extended discussion of initial conditions for three-dimensional flows, application of the characteristic box to a model problem and discussion of flow separation in three-dimensional laminar flows. There are also changes to Chapter 8, which now includes new sections on Tollmien-Schlichting and cross-flow instabilities and on the predic tion of transition with parabolised stability equations, and Chapter 9 provides a description of the rational behind interactive boundary-layer procedures.

Modeling and Computation of Boundary-Layer Flows - Modeling and Computation of Boundary-Layer Flows: Laminar, Turbulent and Transitional Boundary Layers in Incompressible Flows by Cebeci, Tuncer **Modeling and Computation of Boundary-Layer Flows: Laminar** Krishnappan, B.G., 1984, Laboratory verification of a turbulent flow model, Journal for compressible flow and its application to shock/boundary layer interaction Calculation of

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