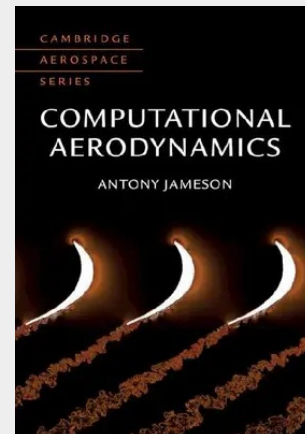


Computational Aerodynamics

Computational aerodynamics is a relatively new field in engineering that investigates aircraft flow fields via the simulation of fluid motion and sophisticated numerical algorithms. This book provides an excellent reference to the subject for a wide audience, from graduate students to experienced researchers and professionals in the aerospace engineering field. Opening with the essential elements of computational aerodynamics, the relevant mathematical methods of fluid flow and numerical methods for partial differential equations are presented. Stability theory and shock capturing schemes, and viscous flow and time integration methods are then comprehensively outlined. The final chapters treat more advanced material, including energy stability for nonlinear problems, and higher order methods for unstructured and structured meshes. Presenting over 150 illustrations, including representative calculations on unstructured meshes in color. This book is a rich source of information that will be of interest and importance in this pioneering field.

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