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Nota di contenuto	Part I. Fundamentals of Viscous Flows -- 1. Some Features of Viscous Flows -- 2. Fundamentals of Boundary-Layer Theory -- 3. Field Equations for Flows of Newtonian Fluids -- 4. General Properties of the Equations of Motion -- 5. Exact Solutions of the Navier-Stokes Equations -- Part II. Laminar Boundary Layers -- 6 Boundary-Layer Equations in Plane Flow; Plate Boundary Layer -- 7 General Properties and Exact Solutions of the Boundary-Layer Equations for Plane Flows -- 8 Approximate Methods for Solving the Boundary-Layer Equations for Steady Plane Flows -- 9 Thermal Boundary Layers Without Coupling of the Velocity Field to the Temperature Field -- 10 Thermal Boundary Layers with Coupling of the Velocity Field to the Temperature Field -- 11. Boundary-Layer Control (Suction/Blowing) -- 12. Axisymmetric and Three-Dimensional Boundary Layers -- 13. Unsteady Boundary Layers -- 14. Extensions to the Prandtl Boundary-Layer Theory -- Part III. Laminar-Turbulent Transition -- 15. Onset of Turbulence (Stability Theory) -- Part IV. Turbulent Boundary Layers -- 16. Fundamentals of Turbulent Flows -- 17. Internal Flows -- 18. Turbulent Boundary Layers

Without Coupling of the Velocity Field to the Temperature Field -- 19. Turbulent Boundary Layers with Coupling of the Velocity Field to the Temperature Field -- 20. Axisymmetric and Three-Dimensional Turbulent Boundary Layers -- 21. Unsteady Turbulent Boundary Layers -- 22. Turbulent Free Shear Flows -- Part V. Numerical Methods in Boundary-Layer Theory -- 23. Numerical Integration of the Boundary-Layer Equations.

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Sommario/riassunto

This new edition of the near-legendary textbook by Schlichting and revised by Gersten presents a comprehensive overview of boundary-layer theory and its application to all areas of fluid mechanics, with particular emphasis on the flow past bodies (e.g. aircraft aerodynamics). The new edition features an updated reference list and over 100 additional changes throughout the book, reflecting the latest advances on the subject.

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