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Nota di contenuto	Intro -- Title Page -- Copyright -- Contents -- Series Preface -- Preface -- Chapter 1 Introduction and Basic Principles -- 1.1 Introduction -- 1.2 Aerodynamics as a Subset of Fluid Dynamics -- 1.3 Dimensions and Units -- 1.4 Automobile/Vehicle Aerodynamics -- 1.5 General Features of Fluid Flow -- 1.5.1 Continuum -- 1.5.2 Laminar and Turbulent Flow -- 1.5.3 Attached and Separated Flow -- 1.6 Properties of Fluids -- 1.6.1 Density -- 1.6.2 Pressure -- 1.6.3 Temperature -- 1.6.4 Viscosity -- 1.6.5 Specific Heat -- 1.6.6 Heat Transfer Coefficient, k -- 1.6.7 Modulus of Elasticity, E -- 1.6.8 Vapor Pressure -- 1.7 Advanced Topics: Fluid Properties and the Kinetic Theory of Gases -- 1.8 Summary and Concluding Remarks -- Reference -- Problems -- Chapter 2 The Fluid Dynamic Equations -- 2.1 Introduction -- 2.2 Description of Fluid Motion -- 2.3 Choice of Coordinate System -- 2.4 Pathlines, Streak Lines, and Streamlines -- 2.5 Forces in a Fluid -- 2.6 Integral Form of the Fluid Dynamic Equations -- 2.7 Differential Form of the Fluid Dynamic Equations -- 2.8 The Material Derivative -- 2.9 Alternate Derivation of the Fluid Dynamic Equations -- 2.10 Example for an Analytic Solution: Two- Dimensional, Inviscid Incompressible, Vortex Flow -- 2.10.1 Velocity Induced by a Straight Vortex Segment -- 2.10.2 Angular Velocity, Vorticity, and Circulation -- 2.11 Summary and Concluding Remarks --

References -- Problems -- Chapter 3 One-Dimensional (Frictionless) Flow -- 3.1 Introduction -- 3.2 The Bernoulli Equation -- 3.3 Summary of One-Dimensional Tools -- 3.4 Applications of the One-Dimensional Friction-Free Flow Model -- 3.4.1 Free Jets -- 3.4.2 Examples for Using the Bernoulli Equation -- 3.4.3 Simple Models for Time-Dependent Changes in a Control Volume -- 3.5 Flow Measurements (Based on Bernoulli's Equation) -- 3.5.1 The Pitot Tube -- 3.5.2 The Venturi Tube. 3.5.3 The Orifice -- 3.5.4 Nozzles and Injectors -- 3.6 Summary and Conclusions -- 3.6.1 Concluding Remarks -- Problems -- Chapter 4 Dimensional Analysis, High Reynolds Number Flows, and Definition of Aerodynamics -- 4.1 Introduction -- 4.2 Dimensional Analysis of the Fluid Dynamic Equations -- 4.3 The Process of Simplifying the Governing Equations -- 4.4 Similarity of Flows -- 4.5 High Reynolds Number Flow and Aerodynamics -- 4.6 High Reynolds Number Flows and Turbulence -- 4.7 Summary and Conclusions -- References -- Problems -- Chapter 5 The Laminar Boundary Layer -- 5.1 Introduction -- 5.2 Two-Dimensional Laminar Boundary Layer Model - The Integral Approach -- 5.3 Solutions using the von Karman Integral Equation -- 5.4 Summary and Practical Conclusions -- 5.5 Effect of Pressure Gradient -- 5.6 Advanced Topics: The Two-Dimensional Laminar Boundary Layer Equations -- 5.6.1 Summary of the Exact Blasius Solution for the Laminar Boundary Layer -- 5.7 Concluding Remarks -- References -- Problems -- Chapter 6 High Reynolds Number Incompressible Flow Over Bodies: Automobile Aerodynamics -- 6.1 Introduction -- 6.2 The Inviscid Irrotational Flow (and Some Math) -- 6.3 Advanced Topics: A More Detailed Evaluation of the Bernoulli Equation -- 6.4 The Potential Flow Model -- 6.4.1 Methods for Solving the Potential Flow Equations -- 6.4.2 The Principle of Superposition -- 6.5 Two-Dimensional Elementary Solutions -- 6.5.1 Polynomial Solutions -- 6.5.2 Two-Dimensional Source (or Sink) -- 6.5.3 Two-Dimensional Doublet -- 6.5.4 Two-Dimensional Vortex -- 6.5.5 Advanced Topics: Solutions Based on Green's Identity -- 6.6 Superposition of a Doublet and a Free-Stream: Flow Over a Cylinder -- 6.7 Fluid Mechanic Drag -- 6.7.1 The Drag of Simple Shapes -- 6.7.2 The Drag of More Complex Shapes -- 6.8 Periodic Vortex Shedding -- 6.9 The Case for Lift. 6.9.1 A Cylinder with Circulation in a Free Stream -- 6.9.2 Two-Dimensional Flat Plate at a Small Angle of Attack (in a Free Stream) -- 6.9.3 Note About the Center of Pressure -- 6.10 Lifting Surfaces: Wings and Airfoils -- 6.10.1 The Two-Dimensional Airfoil -- 6.10.2 An Airfoil's Lift -- 6.10.3 An Airfoil's Drag -- 6.10.4 An Airfoil Stall -- 6.10.5 The Effect of Reynolds Number -- 6.10.6 Three-Dimensional Wings -- 6.11 Summary of High Reynolds Number Aerodynamics -- 6.12 Concluding Remarks -- References -- Problems -- Chapter 7 Automotive Aerodynamics: Examples -- 7.1 Introduction -- 7.2 Generic Trends (For Most Vehicles) -- 7.2.1 Ground Effect -- 7.2.2 Generic Automobile Shapes and Vortex Flows -- 7.3 Downforce and Vehicle Performance -- 7.4 How to Generate Downforce -- 7.5 Tools used for Aerodynamic Evaluations -- 7.5.1 Example for Aero Data Collection: Wind Tunnels -- 7.5.2 Wind Tunnel Wall/Floor Interference -- 7.5.3 Simulation of Moving Ground -- 7.5.4 Expected Results of CFD, Road, or Wind Tunnel Tests (and Measurement Techniques) -- 7.6 Variable (Adaptive) Aerodynamic Devices -- 7.7 Vehicle Examples -- 7.7.1 Passenger Cars -- 7.7.2 Pickup Trucks -- 7.7.3 Motorcycles -- 7.7.4 Competition Cars (Enclosed Wheel) -- 7.7.5 Open-Wheel Racecars -- 7.8 Concluding Remarks -- References -- Problems -- Chapter 8 Introduction to Computational Fluid Mechanics (CFD) -- 8.1 Introduction -- 8.2 The Finite-Difference Formulation -- 8.3

Discretization and Grid Generation -- 8.4 The Finite-Difference Equation -- 8.5 The Solution: Convergence and Stability -- 8.6 The Finite-Volume Method -- 8.7 Example: Viscous Flow Over a Cylinder -- 8.8 Potential-Flow Solvers: Panel Methods -- 8.9 Summary -- References -- Problems -- Chapter 9 Viscous Incompressible Flow: "Exact Solutions" -- 9.1 Introduction -- 9.2 The Viscous Incompressible Flow Equations (Steady State).
 9.3 Laminar Flow between Two Infinite Parallel Plates: The Couette Flow -- 9.3.1 Flow with a Moving Upper Surface -- 9.3.2 Flow between Two Infinite Parallel Plates: The Results -- 9.3.3 Flow between Two Infinite Parallel Plates - The Poiseuille Flow -- 9.3.4 The Hydrodynamic Bearing (Reynolds Lubrication Theory) -- 9.4 Flow in Circular Pipes (The Hagen-Poiseuille Flow) -- 9.5 Fully Developed Laminar Flow between Two Concentric Circular Pipes -- 9.6 Laminar Flow between Two Concentric, Rotating Circular Cylinders -- 9.7 Flow in Pipes: Darcy's Formula -- 9.8 The Reynolds Dye Experiment, Laminar/Turbulent Flow in Pipes -- 9.9 Additional Losses in Pipe Flow -- 9.10 Summary of 1D Pipe Flow -- 9.10.1 Simple Pump Model -- 9.10.2 Flow in Pipes with Noncircular Cross Sections -- 9.10.3 Examples for One-Dimensional Pipe Flow -- 9.10.4 Network of Pipes -- 9.11 Free Vortex in a Pool -- 9.12 Summary and Concluding Remarks -- Reference -- Problems -- Chapter 10 Fluid Machinery -- 10.1 Introduction -- 10.2 Work of a Continuous-Flow Machine -- 10.3 The Axial Compressor (The Mean Radius Model) -- 10.3.1 Velocity Triangles -- 10.3.2 Power and Compression Ratio Calculations -- 10.3.3 Radial Variations -- 10.3.4 Pressure Rise Limitations -- 10.3.5 Performance Envelope of Compressors and Pumps -- 10.3.6 Degree of Reaction -- 10.4 The Centrifugal Compressor (or Pump) -- 10.4.1 Torque, Power, and Pressure Rise -- 10.4.2 Impeller Geometry -- 10.4.3 The Diffuser -- 10.4.4 Concluding Remarks: Axial versus Centrifugal Design -- 10.5 Axial Turbines -- 10.5.1 Torque, Power, and Pressure Drop -- 10.5.2 Axial Turbine Geometry and Velocity Triangles -- 10.5.3 Turbine Degree of Reaction -- 10.5.4 Turbochargers (for Internal Combustion Engines) -- 10.5.5 Remarks on Exposed Tip Rotors (Wind Turbines and Propellers) -- 10.6 Concluding Remarks -- Reference -- Problems.
 Chapter 11 Elements of Heat Transfer -- 11.1 Introduction -- 11.2 Elementary Mechanisms of Heat Transfer -- 11.2.1 Conductive Heat Transfer -- 11.2.2 Convective Heat Transfer -- 11.2.3 Radiation Heat Transfer -- 11.3 Heat Conduction -- 11.3.1 Steady One-Dimensional Heat Conduction -- 11.3.2 Combined Heat Transfer -- 11.3.3 Heat Conduction in Cylinders -- 11.3.4 Cooling Fins -- 11.4 Heat Transfer by Convection -- 11.4.1 The Flat Plate Model -- 11.4.2 Formulas for Forced External Heat Convection -- 11.4.3 Formulas for Forced Internal Heat Convection -- 11.4.4 Formulas for Free (Natural) Heat Convection -- 11.5 Heat Exchangers -- 11.6 Concluding Remarks -- References -- Problems -- Chapter 12 Automobile Aero-Acoustics -- 12.1 Introduction -- 12.2 Sound as a Pressure Wave -- 12.3 Sound Loudness Scale -- 12.4 The Human Ear Perception -- 12.5 The One-Dimensional Linear Wave Equation -- 12.6 Sound Radiation, Transmission, Reflection, Absorption -- 12.6.1 Sound Wave Expansion (Radiation) -- 12.6.2 Reflections, Transmission, Absorption -- 12.6.3 Standing Wave (Resonance), Interference, and Noise Cancellations -- 12.7 Vortex Sound -- 12.8 Example: Sound from a Shear Layer -- 12.9 Buffeting -- 12.10 Experimental Examples for Sound Generation on a Typical Automobile -- 12.11 Sound and Flow Control -- 12.12 Concluding Remarks -- References -- Problems -- Appendix A: Conversion Factors -- Appendix B -- Index -- EULA.

USA The automobile is an icon of modern technology because it includes most aspects of modern engineering, and it offers an exciting approach to engineering education. Of course there are many existing books on introductory fluid/aero dynamics but the majority of these are too long, focussed on aerospace and don't adequately cover the basics. Therefore, there is room and a need for a concise, introductory textbook in this area. Automotive Aerodynamics fulfils this need and is an introductory textbook intended as a first course in the complex field of aero/fluid mechanics for engineering students. It introduces basic concepts and fluid properties, and covers fluid dynamic equations. Examples of automotive aerodynamics are included and the principles of computational fluid dynamics are introduced. This text also includes topics such as aeroacoustics and heat transfer which are important to engineering students and are closely related to the main topic of aero/fluid mechanics. This textbook contains complex mathematics, which not only serve as the foundation for future studies but also provide a road map for the present text. As the chapters evolve, focus is placed on more applicable examples, which can be solved in class using elementary algebra. The approach taken is designed to make the mathematics more approachable and easier to understand.

Key features:

- Concise textbook which provides an introduction to fluid mechanics and aerodynamics, with automotive applications
- Written by a leading author in the field who has experience working with motor sports teams in industry
- Explains basic concepts and equations before progressing to cover more advanced topics
- Covers internal and external flows for automotive applications
- Covers emerging areas of aeroacoustics and heat transfer

Automotive Aerodynamics is a must-have textbook for undergraduate and graduate students in automotive and mechanical engineering, and is also a concise reference for engineers in industry.
