

Contents

Singular Perturbation Theory: A Viscous Flow out of Göttingen <i>Robert E. O'Malley Jr.</i>	1
Dynamics of Winds and Currents Coupled to Surface Waves <i>Peter P. Sullivan and James C. McWilliams</i>	19
Fluvial Sedimentary Patterns <i>G. Seminara</i>	43
Shear Bands in Matter with Granularity <i>Peter Schall and Martin van Hecke</i>	67
Slip on Superhydrophobic Surfaces <i>Jonathan P. Rothstein</i>	89
Turbulent Dispersed Multiphase Flow <i>S. Balachandar and John K. Eaton</i>	111
Turbidity Currents and Their Deposits <i>Eckart Meiburg and Ben Kneller</i>	135
Measurement of the Velocity Gradient Tensor in Turbulent Flows <i>James M. Wallace and Petar V. Vukoslavčević</i>	157
Friction Drag Reduction of External Flows with Bubble and Gas Injection <i>Steven L. Ceccio</i>	183
Wave–Vortex Interactions in Fluids and Superfluids <i>Oliver Bühler</i>	205
Laminar, Transitional, and Turbulent Flows in Rotor-Stator Cavities <i>Brian Launder, Sébastien Poncet, and Eric Serre</i>	229
Scale-Dependent Models for Atmospheric Flows <i>Rupert Klein</i>	249
Spike-Type Compressor Stall Inception, Detection, and Control <i>C.S. Tan, I. Day, S. Morris, and A. Wadia</i>	275

Airflow and Particle Transport in the Human Respiratory System <i>C. Kleinstreuer and Z. Zhang</i>	301
Small-Scale Properties of Turbulent Rayleigh-Bénard Convection <i>Detlef Lohse and Ke-Qing Xia</i>	335
Fluid Dynamics of Urban Atmospheres in Complex Terrain <i>H.J.S. Fernando</i>	365
Turbulent Plumes in Nature <i>Andrew W. Woods</i>	391
Fluid Mechanics of Microrheology <i>Todd M. Squires and Thomas G. Mason</i>	413
Lattice-Boltzmann Method for Complex Flows <i>Cyrus K. Aidun and Jonathan R. Clausen</i>	439
Wavelet Methods in Computational Fluid Dynamics <i>Kai Schneider and Oleg V. Vasilyev</i>	473
Dielectric Barrier Discharge Plasma Actuators for Flow Control <i>Thomas C. Corke, C. Lon Enloe, and Stephen P. Wilkinson</i>	505
Applications of Holography in Fluid Mechanics and Particle Dynamics <i>Joseph Katz and Jian Sheng</i>	531
Recent Advances in Micro-Particle Image Velocimetry <i>Steven T. Wereley and Carl D. Meinhart</i>	557

Indexes

Cumulative Index of Contributing Authors, Volumes 1–42	577
Cumulative Index of Chapter Titles, Volumes 1–42	585

Errata