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Nota di contenuto	Part I Computational Fluid Dynamics -- 1. Dynamic Flow Structures In The Wake Of A Surface-Mounted Finite-Height Square Prism -- 2. The Turbulence Damping Effect On The Slug Flow Modeling -- 3. Large-Eddy Simulation Of Smooth Channel Flow With A Stochastic Wall Model -- 4. The Plunging Of Hyperpycnal Plumes On Tilted Bed By Three-Dimensional Large-Eddy Simulations -- 5. Numerical Investigation Of The Flow-Induced Noise In A Turbulent Flowinside An Hvac Duct -- 6. Simex Implementation On A Dns Code -- 7. Direct Numerical Simulation Of Bi-Disperse Particle-Laden Gravity Currents On Lock-Exchange Configuration With Different Schmidt Number -- 8. Turbulent Kinetic Energy Analysis In 2d Lid-Driven Cavity Flow At Re=100,000 -- Part II Aerodynamics -- 9. Investigation of Transient Regime in Laminar Separation Bubble Formation -- 10. Simulation Of Laminar-To-Turbulent Transitional Flow Over Airfoils -- 11. Tollmien-Schlichting Waves Artificially Inserted In Boundary Layer by Harmonic Point Source -- Part III Multi-Phase Flow -- 12. Investigation Of Turbulent Gas-Solid Flow Multi-Scale Dynamics In A Circulating Fluidized Bed Riser -- 13. Influence Of Ultrasonic Waves And Airfoil-Shaped Ring Baffles On The Gas-Solid Dispersion In A Cfb Riser -- Part IV Instrumentation and Experiments -- 14. Estimation Of The Energy Dissipation Rate In A

Stirred Tank By 2d Piv Measurements.

Sommario/riassunto

This book presents selected papers from the 12th edition of the Spring School of Transition and Turbulence which took place in 2020. The papers cover applications on a number of industrial processes, such as the automotive, aeronautics, chemicals, oil and gas, food, nanotechnology, and others. The readers find out research and applied works on the topics of aerodynamics, computational fluid dynamics, instrumentation and experiments, multi-phase flows, and theoretical and analytical modeling. .