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Nota di contenuto	Front Cover; Engineering Turbulence Modelling and Experiments 6; Copyright Page; Contents; Preface; Part 1: Invited Lectures; Chapter 1. Rapid techniques for measuring and modeling turbulent flows in complex geometries; Chapter 2. Large-Eddy-Simulation of complex flows using the immersed boundary method; Chapter 3. Transition modelling for general purpose CFD codes; Chapter 4. Possibilities and limitations of computer simulations of industrial turbulent multiphase flows; Part 2: Turbulence Modelling; Chapter 5. (v2/k) - f Turbulence Model and its application to forced and natural convection Chapter 6. Calibrating the length scale equation with an explicit algebraic Reynolds stress constitutive relationChapter 7. Near-wall modification of an explicit algebraic Reynolds stress model using elliptic blending; Chapter 8. Assessment of turbulence models for predicting the interaction region in a wall jet by reference to LES solution and budgets; Chapter 9. Eddy collision models for turbulence; Chapter 10. A stress-strain lag eddy viscosity model for unsteady mean flow; Chapter 11. Turbulence modelling of statistically periodic flows:

the case of the synthetic jet

Chapter 12. Behaviour of turbulence models near a turbulent / non-turbulent interface revisited
Chapter 13. Behaviour of nonlinear two-equation turbulence models at the free-stream edges of turbulent flows;
Chapter 14. Extending an analytical wall-function for turbulent flows over rough walls;
Chapter 15. Bifurcation of second moment closures in rotating stratified flow;
Chapter 16. Turbulence Model for wall-bounded flow with arbitrary rotating axes;
Chapter 17. Application of a new algebraic structure-based model to rotating turbulent flows
Chapter 18. k-e modeling of turbulence in porous media based on a two-scale analysis
Part 3: Direct and Large-Eddy Simulations;
Chapter 19. Effect of a 2-D rough wall on the anisotropy of a turbulent channel flow;
Chapter 20. Direct numerical simulation of rotating turbulent flows through concentric annuli;
Chapter 21. Numerical simulation of compressible mixing layers;
Chapter 22. LES in a U-bend pipe meshed by polyhedral cells;
Chapter 23. Large eddy simulation of impinging jets in a confined flow;
Chapter 24. LES study of turbulent boundary layer over a smooth and a rough 2D hill model
Chapter 25. Flow features in a fully developed ribbed duct flow as a result of LES
Chapter 26. Coherent structures and mass exchange processes in channel flow with spanwise obstructions;
Chapter 27. Large Eddy Simulation of natural convection boundary layer on a vertical cylinder;
Chapter 28. Development of the subgrid-scale models in large eddy simulation for the finite difference schemes;
Chapter 29. Assessment of the digital filter approach for generating large eddy simulation inlet conditions;
Part 4: Hybrid LES/RANS Simulations
Chapter 30. Hybrid LES-RANS : Computation of the flow around a three-dimensional hill

Sommario/riassunto

Proceedings of the world renowned ERCOFTAC (International Symposium on Engineering Turbulence Modelling and Measurements). The proceedings include papers dealing with the following areas of turbulence:

- Eddy-viscosity and second-order RANS models
- Direct and large-eddy simulations and deductions for conventional modelling
- Measurement and visualization techniques, experimental studies
- Turbulence control
- Transition and effects of curvature, rotation and buoyancy on turbulence
- Aero-acoustics
- Heat and mass transfer and chemically reacting flows
- Compr
