

1. Record Nr.	UNINA9910257415803321
Titolo	Turbulence Modeling and Vortex Dynamics [[electronic resource]] : Proceedings of a Workshop Held at Istanbul, Turkey, 2–6 September 1996 / / edited by Olus Boratav, Alp Eden, Ayse Erzan
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1997
ISBN	3-540-69119-7
Edizione	[1st ed. 1997.]
Descrizione fisica	1 online resource (XII, 248 p. 80 illus.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 491
Disciplina	532/.0527/015195
Soggetti	Physics Fluids Thermodynamics Observations, Astronomical Astronomy—Observations Astrophysics Mathematical Methods in Physics Numerical and Computational Physics, Simulation Fluid- and Aerodynamics Astronomy, Observations and Techniques Astrophysics and Astroparticles
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Hydrodynamic turbulence: a 19th century problem with a challenge for the 21st century -- Exponents of bulk heat transfer in convective turbulence -- Hierarchical structures and scalings in turbulence -- Intermittency of passive scalars in delta-correlated flow: Introduction to recent work -- A minimal model for intermittency of passive scalars -- Generalized scaling in turbulent flows -- About the interaction between vorticity and stretching in coherent structures -- Pressure and intermittency in the inertial range of turbulence -- Time-periodic statistical solutions of the Navier-Stokes equations -- Local exact controllability for the 2-D Navier-Stokes equations with the Navier slip boundary conditions -- Nonexistence of global solutions to nonlinear

wave equations -- Applications of direct numerical simulation to complex turbulent flows -- Computational aspects of three-dimensional Vortex Element Methods: Applications with vortex rings -- Boundary-layer turbulence modeling and vorticity dynamics: I. A kangaroo-process mixing model of boundary-layer turbulence -- Boundary-layer turbulence modeling and vorticity dynamics: II. Towards a theory of turbulent shear flow?.

Sommario/riassunto

This volume collects contributions to the workshop on "Turbulence Modeling and Vortex Dynamics, Istanbul", where engineers, physicists, and mathematicians discussed the statistical description of turbulence. They cover practical aspects as well as rigorous mathematics. This book will be a source of reference for many years for those working in this most fascinating field of scientific modeling.
