1. Record Nr. UNINA9910139814503321

Titolo	Fluid Mechanics and the Environment: Dynamical Approaches : A Collection of Research Papers Written in Commemoration of the 60th Birthday of Sidney Leibovich / / edited by John L. Lumley
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2001
ISBN	3-540-44512-9
Edizione	[1st ed. 2001.]
Descrizione fisica	1 online resource (VIII, 412 p. 47 illus., 2 illus. in color.)
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 566
Disciplina	620.1/06
Soggetti	Continuum physics Environment Oceanography Fluids Earth sciences Environmental monitoring Classical and Continuum Physics Environment, general Fluid- and Aerodynamics Earth Sciences, general Monitoring/Environmental Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Point Vortex Models and the Dynamics of Strong Vortices in the Atmosphere and Oceans -- Bubble Disconnection: Self-Similarity and Cascading Physics -- Implicit Multigrid Computation of Unsteady Flows with Applications to Aeroelasticity -- Second-Harmonic Resonance with Parametric Excitation and Damping -- Bubble and Temperature Fields in Langmuir Circulation -- Computing Periodic Orbits -- Dynamics of Layers in Geophysical Flows -- Radiative Transport in Anisotropic Media -- Vortex-Wake Pollution: A Problem in Fluid Mechanics -- Turbulent Bursts in Couette—Taylor Flow -- Surface-Wave Effects on Winds and Currents in Marine Boundary Layers -- Synchronised Behaviour in Three Coupled Faraday Disk Homopolar Dynamos --

Large-Eddy Simulation Using Projection onto Local Basis Functions -- Low-Dimensional Dynamical Model of a Turbulent Boundary Layer over a Compliant Surface: Preliminary Results -- Is High Reynolds Number Turbulence Locally Isotropic? -- Observations and Theories of Langmuir Circulation: A Story of Mixing -- Low Dimensional Models with Varying Parameters: a Model Problem and Flow Through a Diffuser with Variable Angle -- Surfactant Scavenging by Microbubble Clouds: Consequences for Capillary Wave Damping -- A Spectral Domain Decomposition Method and Its Application to the Simulation of Shear-Stratified Turbulence -- Wing Wake Vortices and Temporal Vortex Pair Instabilities -- Laboratory Measurements of the Generation of Langmuir Circulations and Surface Waves.

Sommario/riassunto

This book is a collection of papers presented at a symposium held in honor of Sidney Leibovich. Accordingly all papers deal with mathematical or computational aspects of fluid dynamics applied mostly to atmospheric or oceanographic problems. All contributions are research papers having not only specialists but also graduate students in mind.