CONTENTS

LINEAR AND NONLINEAR MODELS OF ANISOTROPIC TURBULENCE, Claude Cambon and Julian F. Scott	1
TRANSPORT BY COHERENT BAROTROPIC VORTICES, Antonello Provenzale	55
NUCLEAR MAGNETIC RESONANCE AS A TOOL TO STUDY FLOW, Eiichi Fukushima	95
COMPUTATIONAL FLUID DYNAMICS OF WHOLE-BODY AIRCRAFT, Ramesh Agarwal	125
LIQUID AND VAPOR FLOW IN SUPERHEATED ROCK, Andrew W. Woods	171
THE FLUID MECHANICS OF NATURAL VENTILATION, P. F. Linden	201
FLOW CONTROL WITH NONCIRCULAR JETS, E. J. Gutmark and F. F. Grinstein	239
MAGNETOHYDRODYNAMICS IN MATERIALS PROCESSING, P. A. Davidson	273
NONLINEAR GRAVITY AND CAPILLARY-GRAVITY WAVES, Frédéric Dias and Christian Kharif	301
FLUID COATING ON A FIBER, David Quéré	347
PRECONDITIONING TECHNIQUES IN FLUID DYNAMICS, Eli Turkel	385
A NEW VIEW OF NONLINEAR WATER WAVES: THE HILBERT SPECTRUM, Norden E. Huang, Zheng Shen, and Steven R. Long	417
PLANETARY-ENTRY GAS DYNAMICS, Peter A. Gnoffo	459
VORTEX PARADIGM FOR ACCELERATED INHOMOGENEOUS FLOWS: VISIOMETRICS FOR THE RALEIGH-TAYLOR AND RICHTAYLER MERCHANIS FOR THE PARADICAL PROPERTY OF THE	405
RICHTMYER-MESHKOV ENVIRONMENTS, Norman J. Zabusky	495
COLLAPSE, SYMMETRY BREAKING, AND HYSTERESIS IN SWIRLING FLOWS, Vladimir Shtern and Fazle Hussain	537
DIRECT NUMERICAL SIMULATION OF FREE-SURFACE AND INTERFACIAL FLOW, Ruben Scardovelli and Stéphane Zaleski	567

viii CONTENTS (continued)

•		
IN	DEX	CC

Subject Index	
Cumulative Index of Contributing Authors, Volumes 1–31	622
Cumulative Index of Chapter Titles, Volumes 1–31	627