## CONTENTS

### Preface

### I. Combustion

#### Overview
- Effects of non-unity Lewis numbers in diffusion flames. A. Liñan, P. Orlandi, R. Verzicco and F. J. Higuera
- Effect of chemical heat release in a temporally evolving mixing layer. F. J. Higuera and R. D. Moser
- Triple flame structure and diffusion flame stabilization. D. Veynante, L. Vervisch, T. Poinset, A. Linan and G. Ruetsch
- Turbulent transport in premixed flames. C. J. Rutland and R. S. Cant
- The coupling between flame surface dynamics and species mass conservation in premixed turbulent combustion. A. Trouve, D. Veynante, K. N. C. Bray and T. Mantel
- Pdf modeling for premixed turbulent combustion based on the properties of iso-concentration surfaces. L. Vervisch, W. Kollmann, K. N. C. Bray, and T. Mantel
- Passive turbulent flamelet propagation. Wm. T. Ashurst, G. R. Ruetsch and T. S. Lund
- Simulation of a turbulent flame in a channel. G. Bruneaux, K. Akselvoll, T. Poinset and J. H. Ferziger

#### II. Fundamentals

#### Overview
- Pressure and higher-order spectra for homogeneous isotropic turbulence. D. I. Pullin and R. S. Rogallo
- Statistics of pressure and pressure gradient in homogeneous isotropic turbulence. T. Gotoh and R. S. Rogallo
- The decay of axisymmetric homogeneous turbulence. J. R. Chasnov
- Vortex ring instability and its sound R. Verzicco and K. Shariff.
- Instability of streamwise vortices in plane channel flows. K. Coughlin, J. Jimenez and R. D. Moser
Numerical investigation of supersonic turbulent boundary layers with high wall temperature. Y. Guo and N. A. Adams

III. Modeling & LES

Overview
A Lagrangian dynamic subgrid-scale model of turbulence. C. Meneveau, T. S. Lund and W. Cabot

Effects of turbulence compressibility and unsteadiness in compression corner flow. A. Brankovic and O. Zeman

Role of pressure diffusion in non-homogeneous shear flows. A. O. Demuren, S. K. Lele and P. Durbin

Modeling near wall effects in second moment closures by elliptic relaxation. D. Laurence and P. Durbin

Modeling the two-point correlation of the vector stream function. M. Oberlack, M. M. Rogers and W. C. Reynolds

IV. Rotation

Overview
Homogeneous turbulence subjected to mean flow with elliptic streamlines. G. A. Blaisdell and K. Shariff

On the transition towards slow manifold in shallow-water and 3D Euler equations in a rotating frame. A. Mahalov

On the asymptotic similarity of rotating homogeneous turbulence. K. D. Squires, J. R. Chasnov, and N. N. Mansour

Anisotropic structure of homogeneous turbulence subjected to uniform rotation. C. Cambon, N. N. Mansour, and K. D. Squires

Single point modeling of rotating turbulent flows. A. H. Hadid, N. N. Mansour and O. Zeman