

Preface

This volume and its two companion volumes contain the papers presented at the Sixth International Symposium on Turbulence and Shear Flow Phenomena (TSFP-6), held at the Seoul National University from June 22 to 24, 2009. The series of biennial TSFP Symposia originated in Santa Barbara, California (1999), and subsequent meetings were held in Stockholm, Sweden (2001), Sendai, Japan (2003), Williamsburg, Virginia (2005) and Munchen, Germany (2007). It may be claimed that the Symposia have established themselves as the principal global forums for reporting and disseminating recent and ongoing research on turbulence and shear-flow phenomena.

The subjects of turbulence, transition, flow instability and complex strain in laminar conditions continue to form an important field of fundamental and applied research, presenting many pressing, yet unsolved problems, which have a major impact on energy production, transportation, the environment, and the economy. These problems are addressed through the broad range of research studies contained in these three volumes. The topics covered include: Biofluidmechanics, Compressible/Aerodynamic Flows, Control and Measurement, Environmental Turbulence, Fundamentals, Fluid-structure Interactions, Free Shear Flows, Heat Transfer/Combustion, Instability/Transition, LES/DNS, LES/Hybrid/URANS, LES Applications, LES Methodology, Magnetohydrodynamic Flows, Multiphase Flows, RANS, Rotating Flows, Separated Flows, and Turbulent Boundary Layers.

Over 300 extended abstracts were received and reviewed in a rigorous two-stage process by the members of the TSFP Advisory and Papers Committees. In order to avoid more than four parallel sessions, only 177 papers could be accepted for oral presentation. A further 36 papers were accepted for presentation in a poster session. Five leading scientists have contributed invited lectures: Satoru Komori (Heat and mass transfer across the wavy sheared interface in wind-driven turbulence), Ivan Marusic (High Reynolds number effects in wall turbulence), Paolo Orlandi (Rough channels), Heinz Pitsch (Large-eddy simulation of partially premixed combustion) and Jerry Westerweel (Advanced experimental methods for turbulent shear flows).

The continued success of the TSFP Symposia is due to numerous individual contributions. We extend our sincere thanks to all participants of TSFP-6, who contributed their new scientific results, to the members of the Advisory Committee, who selected the most promising papers, and to the Local Executive Committee, whose members worked hard to ensure that TSFP-6 would be a scientifically successful as well as socially pleasant event. Finally, we gratefully acknowledge the financial support provided by KOFST (Korean Federation of Science and Technology Societies), BK21 KAIST Valufecture Institute of Science and Technology, KAIST, Seoul National University, Korean Tourism Organization, Seoul Tourism Organization, DSME, Hyundai Motor Company, Samsung Heavy Industries and NK.

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