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LASER TECHNIQUES APPLIED TO FLUID MECHANICS

Selected Papers from the 9th International
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1998

Preface

This volume includes revised versions of selected papers presented at the **Ninth International Symposium on Applications of Laser Techniques to Fluid Mechanics** held at *the Calouste Gulbenkian Foundation* in Lisbon, during the period of July 13 to 16, 1998.

The papers describe *Instrumentation Developments* and results of measurements of *Turbulent Shear Flows, Aerodynamics Flows, Mixers and Rotating Flows, Combustion and Engines, and Two-Phase Flows*. The papers demonstrate the continuing and healthy interest in the development of understanding of new methodologies and implementation in terms of new instrumentation.

The prime objective of the Ninth Symposium was to provide a forum for the presentation of the most advanced research on laser techniques for flow measurements, and communicate significant results to fluid mechanics. The applications of laser techniques to scientific and engineering fluid flow research was emphasized, but contributions to the theory and practice of laser methods were also considered where they facilitate new improved fluid mechanic research. Attention was placed on laser-Doppler anemometry, particle sizing and other methods for the measurement of velocity and scalars, such as particle image velocimetry and laser induced fluorescence.

We would like to take this opportunity to express our thanks to those who contributed to the success of the conference. The assistance provided by the Advisory Committee, by assessing abstracts, was highly appreciated. The companies who participated in the exhibition of equipment are also acknowledged. In addition, thanks go to the participants who contributed actively in discussions, learned from the presentations and were essential to the success of the Symposium. And last, but not least, we are highly indebted for the financial support provided by the Sponsoring Organizations that made the Symposium possible.

Sponsoring Organizations:

European Research Office; United States Army, Navy and Air Force; Luso-American Foundation for Development, FLAD; Calouste Gulbenkian Foundation; Portuguese Science and Technology Foundation, FCT; Instituto Superior Técnico, IST.

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