

Preface

This set of Proceedings contains the papers presented at the Second Symposium on Turbulence and Shear Flow Phenomena, hosted by the Royal Institute of Technology (KTH) in Stockholm in the period 27-29 June 2001. This follows the highly successful First Symposium held in Santa Barbara, California, in September 1999.

The TSFP series of symposia was conceived in 1998 as a successor to the widely acclaimed series of eleven biennial Turbulent Shear Flows (TSF) meetings. Informal discussions around that time brought to light a widespread view that the end of the TSF series left a void which needed to be filled by some form of global forum at which new ideas, findings and developments in turbulence research could be exposed and discussed. TSFP symposia aspire to fulfill this role and maintain the high standards set by the TSF symposia.

TSFP symposia follow, broadly, the well-tested TSF philosophy: a bias towards fundamentals; a balance between experimental, computational and analytical research; and the inclusion of topics which highlight progress in the exploitation of fundamental research for advancing the predictive capabilities of computational methods for complex industrially relevant flows. A new facet has been the inclusion of selected priority themes, seen as being somewhat outside the conventional framework and meriting being specially promoted or highlighted.

Pleasingly, TSFP-2 attracted a large number of abstracts - about 400. Following a rigorous two-stage review process, 192 were selected for oral presentation and a further 55 for poster presentation. The priority themes at TSFP-2 are Transition, Turbulence Control and Turbulence in Fabrication and Processing, and a keynote paper by Gustav Amberg provides a review of recent progress in the last area. A further five keynote lectures by Jean-Paul Bonnet, Thomas Gatski, Parviz Moin, Stephen Pope and Olivier Simonin deal, respectively, with major aspects of structural features of turbulence, turbulence modelling, turbulence simulation, combustion and multi-phase flow.

As is the case with all large conferences, an enormous amount of effort has gone into the organisational preparation of TSFP-2, and many expressions of thanks are due to many individuals and organisations - far more than can be mentioned here. The Organising Committee are especially grateful to the local organisers - with Arne Johansson and Erik Lindborg shouldering the Lion's share of the load, to the 60-strong Advisory Committee, for reviewing the hundreds of abstracts submitted, and, of course, to the sponsors without whose generous financial contribution it would not have been possible to invite dozens of young researchers and post-graduate students to attend TSFP-2.

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