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Turbulence and Interactions

Keynote Lectures of the TI 2006 Conference

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Foreword

The “Turbulence and Interactions 2006“ (TI2006) conference was held on the island of Porquerolles, France, May 29-June 2, 2006. The scientific sponsors of the conference were

- Association Française de Mécanique,
- CD-adapco,
- DGA
- Ecole Polytechnique Fédérale de Lausanne (EPFL),
- ERCOFTAC : European Research Community on Flow, Turbulence and Combustion,
- FLUENT,
- The French Ministry of Foreign Affairs,
- Laboratoire de Modélisation en Mécanique, Paris 6,
- ONERA.

The conference was a unique event. Never before have so many organisations concerned with turbulence works come together in one conference. As the title “Turbulence and Interactions” anticipated, the workshop was not run with parallel sessions but instead of one united gathering where people had strong interactions and discussions. Many of the 85 or so attendants were veterans of previous ERCOFTAC conferences. Some young researchers attended their very first international meeting.

The organisers were fortunate in obtaining the presence of the following invited speakers: N. Adams (TUM, Germany), C. Cambon (ECL, France), J.-P. Dussauge (Polytech Marseille, France), D.A. Gosman (Imperial College, UK), Y. Kaneda (Nagoya University, Japan), O. Simonin (IMFT, France), G. Tryggvason (WPI, USA), D. Veynante (ECP, France), F. Waleffe (University of Wisconsin, USA), Y.K. Zhou (University of California, USA).

The topics covered by the 59 papers ranged from experimental results through theory to computations. The papers of the conference went through the usual reviewing process for two special issues of international journals : Computers and Fluids, and Flow, Turbulence and Combustion.

In the present monograph, the reader will find the text of seven invited talks. The presentation of Ye Zhou has already been published in *Physics of Plasmas*, **14**, 082701, 2007 under the title “Unification and extension of the similarity

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scaling criteria and mixing transition for studying astrophysics using high energy density laboratory experiments or numerical simulations“.

The organizers of the conference would like to acknowledge the support of EPFL, Université Pierre et Marie Curie, Paris and ONERA. They express their gratitude for their colleagues of the organizing committee for their help and constant efficiency.

Lausanne, Paris
January 11, 2008

M.O. Deville
T.H. Lê
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