

Preface

The workshop “Dynamics and Structure of vortices” was held in the Cloître des Pénitents in Rouen, France on the 27th and 28th April, 1999.

Our understanding of the structure and dynamics of vortices has improved considerably during the last few years, mainly thanks to progress in turbulence research, where these structures have been shown to play an important role. The aim of this French workshop was to gather theoreticians, computational researchers and experimentalists to illuminate various aspects of this subject. We wanted on the one hand to present the state of art, and on the other hand to collect the most recent contributions on the structure and dynamics of vortices.

This volume presents 22 articles corresponding to seminars and presentations given during this workshop. The first three articles correspond to general presentations: A. Babiano presents the two-dimensional aspects of vortices; S. Huberson and O. Daube give a review on numerical methods applied to vortical flow; and M. Rossi presents theories of vortex instability.

The following 19 papers correspond to presentations given by the participants on their research subjects related to experimental, numerical or theoretical aspects of vortices. Many of these studies are tied to related fields, such as turbulence, aerodynamics, wakes, geophysics, mixing, particles dynamics ...

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