

Preface

This volume is a collection of papers mainly concerning *phase space analysis*, or *microlocal analysis*, and its applications to the theory of *partial differential equations* (PDEs).

A number of papers composing this volume, all written by leading experts in their respective fields, are expanded version of talks given at a meeting held in September 2011 at the *Centro Residenziale Universitario (CEUB)* of Bertinoro, on the hills surrounding Cesena, Italy.

The Bertinoro workshop was the occasion to fix the state of the art in many different aspects of phase space analysis. In fact the results collected here concern general theory of pseudodifferential operators, Hardy-type inequalities, linear and non-linear hyperbolic equations and systems, water-waves equations, Euler–Poisson and Navier–Stokes equations, Schrödinger equations and heat and parabolic equations.

We would like to seize this occasion to thank all the contributors as well as the people who took part in the workshop.

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