Foreword

May 2008

On 15th April 2007, the birthday of the great mathematician and scientist Leonhard Euler (1707-1783) recurred for the 300th time. Among the multitude of Euler's fundamental contributions to mathematics and its applications are his discoveries in hydrodynamics which allowed him to formulate the "Euler equations" as the equations of motion for water waves. Hydrodynamics is also a research area in which Hamiltonian methods proved to be very successful (e.g. in the context of integrable models for water water waves/soliton theory) and 2005 was the bicentennial for the great mathematician and physicist William Rowan Hamilton (born August 4, 1805). This historical context led the Hamilton Mathematics Institute, Trinity College Dublin, Ireland, to organize starting with 2007 a year-long program in water waves, facilitating thus several research visits of mathematicians active in this area. The present collection of papers is a good reflection of the scientific activity related to this program, the majority of the contributions being provided by researchers who participated to this program and the remaining part representing directions in the recent development of the theory of water waves that were among the scientific topics discussed on the occasion of the program. All papers gathered in this issue are refereed contributions.

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