Preface

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The XVII International Conference on “Waves and Stability in Continuous Media” has been organized in honor of Professor Salvatore Rionero in occasion of his 80th birthday.

Born in Nola on January 1st 1933, Professor Salvatore Rionero has been Full Professor of Mathematical Physics at the Faculty of Sciences of the University of Naples Federico II, Director of the PhD School in Mathematics, Vice President of the Board of Directors of INDAM and, for many years, President of the Scientific Council of the Italian Group of Mathematical Physics (GNFM). Author of more than 180 original scientific works, including papers and books, Professor Rionero is an active member of many prestigious academies. At present he is Emeritus Professor, Editor in Chief of the International “Journal Ricerche di Matematica” and National Member of the Accademia dei Lincei.

His main research interest concerns the nonlinear stability theory of PDEs solutions, where he still keeps giving fundamental contributions with original results. In particular, recently, among many other relevant results concerning the behaviors of nonlinear dynamical

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Professor Salvatore Rionero

systems, he has introduced a new approach (the so-called Auxiliary System Method) for L^2 nonlinear energy stability of clear and porous fluids of n -components. The method allows to obtain absence of subcritical instabilities so that a principle useful to linearize the system holds, as well.

His long and continuous scientific activity has awarded to him a great national and international renown. In 2002 he has received the Honorary Degree of Doctor in Science of the National University of Ireland at Galway and recently, in February 2014, he has been awarded the gold medal as Member Emeritus of the Academy of Physical and Mathematical Sciences of Naples.

His efforts, devoted to promote the research in the field of Mathematical Physics, were completely successful: in particular it is worth mentioning the foundation of the Summer School of Mathematical Physics in Ravello (directed since its foundation in 1976) and the promotion in 1979 of the well known series of international conference “Waves and Stability in Continuous Media” (WASCOM). In these two events well-known mathematicians, from all over the world, were invited to give lectures so that many young researchers took great benefits in their participation.

All these contributions clearly indicate the very high level of the scientist, his care in scientific and teaching activities, his curiosity and enthusiasm in the scientific research as well as his rare human qualities like great equilibrium, capability of work, and generosity.

This volume, dedicated to Professor Rionero, contains selected talks given during the WASCOM conference held in Levico on June 2013.

The Editors