

Foreword

“Dynamic Modelling in Economics and Finance”
in honour of Professor Carl Chiarella



This special issue of *Chaos, Solitons and Fractals* contains selected and refereed papers presented at the Third International Workshop on Dynamic Modelling in Economics and Finance (“Modelli Dinamici in Economia e Finanza” MDEF) held at the University of Urbino, Italy, 16–18 September, 2004.

There is no doubt that any scientific meeting derives its value from the scientific results presented during its formal sessions, but no less important is the atmosphere created amongst the participants as well as the opportunity for them to meet old and new friends. In that respect we are happy that the third edition of MDEF gave us the opportunity to pay tribute to an outstanding scientist, a good friend and a collaborator of many of us, Carl Chiarella, who in 2004 reached his sixtieth year of life. We shall not attempt to give here a full list of the scientific achievements of Carl Chiarella, rather we shall only mention his important contributions to various areas that fall within the focus of the Workshop, in particular, his work on the cobweb model, nonlinear models of monetary dynamics, heterogeneous agent models and financial mathematics. These have given an indication of the main streams of research and inspiration to many other scientists working in the field of nonlinear economic dynamics.

The papers which appear in this issue address various topics in different areas of nonlinear dynamical systems applied to economic and social sciences. Surveying briefly this special issue, we first mention papers devoted to the description of the wild dynamics of financial markets, both through deterministic as well as stochastic models. There is also a set of papers dealing with expectations and learning in economic systems, an issue that is currently topical in economic and social sciences. Some applications of deterministic dynamical systems to business cycles and labour markets are also presented in this issue, as well as dynamic oligopoly games and nonlinear evolutionary games for the description of social systems and sustainable exploitation of natural resources.

Such a wide spectrum of applications, as well as various mathematical methods used to analyse the corresponding models, are intended to bring together the different streams of the growing literature in this field. It is thereby our hope that this will stimulate further collaborations among researchers from different fields, through a fruitful trade-off between theoretical issues and applications. We hope furthermore that this special issue will help the reader to gain an entrée into the main topics in nonlinear dynamics applied to economics, finance and social sciences, as well as their recent advances.

We would like to express special thanks to the Editor-in-Chief, Professor M.S. El Naschie, and to Shahriar Yousefi, Associate Editor, who carefully followed through the whole editorial process. We also wish to express our gratitude to the referees for their unstinting and essential contribution. Finally, we thank all the participants of MDEF, whose efforts gave rise to a very interesting series of fruitful seminars, and who submitted to us so many interesting papers.

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