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Anthony Brabazon, Michael O'Neill,
and Dietmar Maringer (Eds.)

Natural Computing in Computational Finance

Volume 4

Springer

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To Maria
Tony

To Gráinne, Aoife and Michael
Michael

To Klaus
Dietmar

Preface

The field of Natural Computing has been the focus of a substantial research effort in recent decades. One particular strand of this research concerns the development of computational algorithms using metaphorical inspiration from systems and phenomena that occur in the natural world. These natural computing algorithms have proven to be successful problem solvers across domains as diverse as finance, management science, bioinformatics, marketing, engineering and architecture, to name but a few. This edited volume brings together a series of chapters which illustrate the application of a range of cutting-edge natural computing and agent-based methodologies in computational finance and economics. While describing cutting edge applications, the chapters are written so that they are accessible to a wide audience. Hence, they should be of interest to academics, students and practitioners in the fields of computational finance and economics.

The inspiration for this book was due in part to the success of EvoFIN 2010, the 4th European Workshop on Evolutionary Computation in Finance and Economics. EvoFIN 2010 took place in conjunction with Evo* 2010 in Istanbul, Turkey (7-9 April 2010). Evo* is an annual collection of European conferences and workshops broadly focused on Evolutionary Computation. It is the largest European event dedicated to this growing field of research. A number of the chapters presented in this book are extended versions of papers presented at EvoFIN 2010 and these have undergone the same rigorous, peer-reviewed, selection process as the other chapters. This book follows on from previous volumes in this series, namely, **Natural Computing in Computational Finance Volumes I, II and III**.

We would like to thank all the authors for their high-quality contributions and the reviewers who generously gave of their time to peer-review all submissions. We would also like to thank Dr. Thomas Ditzinger of Springer-Verlag and Professor Janusz Kacprzyk, editor of this book series, for their encouragement of, and their support during, the preparation of this book. Finally, Anthony Brabazon and Michael O'Neill would like to acknowledge the support of their research activities provided by Science Foundation Ireland (Grant number 08/SRC/FM1389).

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Anthony Brabazon
Michael O'Neill
Dietmar Maringer

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