

m²ef

MATHEMATICAL METHODS
IN ECONOMICS AND FINANCE

MATHEMATICAL METHODS IN ECONOMICS AND FINANCE

Volume 7 - No. 1 - 2012

ISSN print edition: 1971-6419
ISSN online edition: 1971-3878
Volume 7 - No. 1 - 2012
Online version available at
<http://www.unive.it/m2ef/>

Covered by Mathematical Reviews

EDITOR-IN-CHIEF:
E. Canestrelli

GUEST EDITOR:
M. Corazza

MANAGING DIRECTORS:
M. Corazza, P. Ferretti

EDITORIAL BOARD:
D. Barro, M. Corazza, P. Ferretti, S. Funari, M. Nardon

ADVISORY BOARD:

A. Bacinello, Trieste (I)	A.G. Malliaris, Chicago (USA)
A. Basso, Venezia (I)	F. Mason, Venezia (I)
S. Bianchi, Cassino (I)	G. Pacelli, Ancona (I)
M. Cardin, Venezia (I)	P. Pellizzari, Venezia (I)
M. Corazza, Venezia (I)	P. Pianca, Venezia (I)
E. Di Lorenzo, Napoli (I)	M. Sibillo, Salerno (I)
A. Ellero, Venezia (I)	B. Viscolani, Padova (I)
P. Ferretti, Venezia (I)	W.T. Ziemba, Vancouver (CDN)
S. Giove, Venezia (I)	

MATHEMATICAL METHODS IN ECONOMICS AND FINANCE

Department of Economics
Ca' Foscari University of Venice
Sestiere Cannaregio n. 873, 30121 Venice, Italy

Journal webpage URL: <http://www.unive.it/m2ef/>

ISSN print edition: 1971-6419
ISSN online edition: 1971-3878

Published on February 2015
by
Department of Economics, Ca' Foscari University of Venice, Venice, Italy

Legal authorization [Autorizzazione]: Tribunale di Venezia n. 3 del 31 gennaio
2006, R.G. n. 285/06.

Editor-in-Chief [Direttore responsabile]: Elio Canestrelli.

MATHEMATICAL METHODS IN ECONOMICS AND FINANCE

Department of Economics
Ca' Foscari University of Venice
Sestiere Cannaregio n. 873, 30121 Venice, Italy

Journal webpage URL: <http://www.unive.it/m2ef/>

Mathematical Methods in Economics and Finance publishes original papers that contribute to theory, methodology and applications in the areas of mathematical economics, financial mathematics, mathematical finance, actuarial mathematics, management science and operational research.

Papers may be submitted to any member of the Editorial Board via e-mail (Diana Barro: d.barro@unive.it, Marco Corazza: corazza@unive.it, Paola Ferretti: ferretti@unive.it, Stefania Funari: funari@unive.it, Martina Nardon: mnardon@unive.it), or to the e-mail address: m2ef@unive.it.

Papers must be written in English according to the journal formatting guidelines (please download and use the template file *m2ef-Template.zip* from the journal website).

All submitted papers will be double-blindly peer reviewed by at least two anonymous referees.

Free download of published papers is available from the journal webpage.

MATHEMATICAL METHODS IN ECONOMICS AND FINANCE

Editor-in-Chief:

Elio Canestrelli

Guest Editor:

Marco Corazza

Managing Directors:

Marco Corazza

Paola Ferretti

Editorial Board:

Diana Barro

Marco Corazza

Paola Ferretti

Stefania Funari

Martina Nardon

Advisory Board:

Anna Rita Bacinello, Trieste (I) Anastasios G. Malliaris, Chicago (USA)

Antonella Basso, Venezia (I) Francesco Mason, Venezia (I)

Sergio Bianchi, Cassino (I) Graziella Pacelli, Ancona (I)

Marta Cardin, Venezia (I) Paolo Pellizzari, Venezia (I)

Marco Corazza, Venezia (I) Paolo Pianca, Venezia (I)

Emilia Di Lorenzo, Napoli (I) Marilena Sibillo, Salerno (I)

Andrea Ellero, Venezia (I) Bruno Viscolani, Padova (I)

Paola Ferretti, Venezia (I) William T. Ziemba, Vancouver (CDN)

Silvio Giove, Venezia (I)

Contents

Preface	I
<i>Marco Corazza</i>	
Convex comparison of minimal divergence martingale measures ...	1
<i>Fabio Bellini</i>	
Measuring and hedging the basis risk by Functional Demographic Models	19
<i>Mariarosaria Coppola, Valeria D'Amato, Susanna Levantesi, Massimiliano Menziatti, and Maria Russolillo</i>	
Multivariate time-space harmonic polynomials: a symbolic approach	41
<i>Elvira Di Nardo, and Immacolata Oliva</i>	
Multiple yield-curve dynamics: a parsimonious approach	57
<i>Nicola Moreni, and Andrea Pallavicini</i>	

Preface

This is the first of two special issues of *Mathematical Methods in Economics and Finance* devoted to the *International Conference MAF 2012 – Mathematical and Statistical Methods for Actuarial Sciences and Finance*.

The conference was held in Venice (Italy), from April 10 to 12, 2012, at the prestigious Cavalli Franchetti palace of the *Istituto Veneto di Scienze, Lettere ed Arti*. It was organized by the Department of Economics of the Ca' Foscari University of Venice (Italy).

The conference was the fifth in an international biennial series, which began in 2004. It was born out of a brilliant idea by colleagues – and friends – of the Department of Economics and Statistical Sciences of the University of Salerno (Italy): the insight following which the cooperation between mathematicians and statisticians working in actuarial sciences, in insurance and in finance could improve the research on these topics.

The proof of the merits of this idea is given by the wide participation to the conference. In particular:

- more than 120 accepted communications, organized in 40 parallel sessions;
- about 180 attendants, including academics, researchers and professionals;
- attendants and contributors from more than 20 countries.

This special issue collects a series of original papers freely submitted to the journal by contributors of the conference. Following the standard praxis of *Mathematical Methods in Economics and Finance*, each of these papers has been peer reviewed by at least two anonymous referees.

Guest Editor (and co-Chair of the conference):

Marco Corazza

