mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Amel Bentata***, **Universitat Zurich**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Short time asymptotics for semimartingales and an application for short maturity index options in a multivariate jump-diffusion model*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Andreea Minca***, **Cornell University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*A game theoretic approach to funding liquidity modeling".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa an activity of INCTMat support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Arseniy Kukanov***, **Columbia University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Optimal order placement in limit order markets".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Bruno Dupire***, **Bloomberg - NY**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*The Proper Use of Derivatives".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa

an activity of INCTMat

support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Carole Bernard***, **University of Waterloo**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"Mean-Variance Optimal Portfolios in the Presence of a Benchmark with Applications to Fraud Detection".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing an activity of support:

impa INCTMat Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Chin-Hung Terence Ma***, **South Street Securities**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"The Quiet Change That Rocked the World".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa — an activity of: INCTMat — support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Chris Rogers***, **University of Cambridge**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: "***The joint law of the extrema, final value and signature of a stopped random walk".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Emmanuel GOBET***, **École Polytechnique**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"Fast and accurate price approximations of generalized spread options".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa | an activity of INCTMat | support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Fernando Valvano Cerezetti***, **Bm&Fbovespa**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Arbitrage in Option Trading: A Bayesian Approach for Verification*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Gyorgy Varga***, **Fce Consultoria**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Smart Investor Effect in Brazil".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:
RiO
Research in Options
Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Hamed Amini***, **Ecole Polytechnique Fédérale de Lausanne**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"Measuring Systemic Risk in OTC Markets".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa
an activity of: INCTMat
support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Johannes Ruf***, **Oxford University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Why are quadratic normal volatility models analytically tractable? (Contributed talk)".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa

an activity of INCTMat

support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Johannes Stolte***, **Imperial College London**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"BRIDGE SAMPLING OF A MIXED-EXPONENTIAL JUMP-DIFFUSION PROCESS AND ITS MAXIMUM".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa | an activity of: INCTMat | support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***John Chadam***, **University of Pittsburgh**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Optimal Prepayment of Mortgages”.***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa

an activity of INCTMat

support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:
RiO
Research in Options
Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Jose Afonso Faias***, **Universidade Católica Portuguesa**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Variance Improved Performance*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Julien Guyon***, **Bloomberg**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Stochastic Volatility's Orderly Smiles*”.**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Keita Owari***, **University of Tokyo**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Maximum Lebesgue Extension of Convex Risk Measures*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa
an activity of: INCTMat
support: Bloomberg, CNPq, CAPES, FAPERJ, PETROBRAS

mathematics & finance: RiO Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***L. Wagalath***, **Iéseg School of Management**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Fire Sales Forensics: Measuring Endogenous Risk".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa | an activity of INCTMat | support: Bloomberg CNPq CAPES FAPERJ PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Lane Hughston***, **University College London**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Signal Processing with Lévy Information*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:
RiO
Research in Options
Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Marco Avellaneda***, **Courant Institute of Mathematical Sciences**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"Some Applications of Linear Programming to Managing Liquidation Risk".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa   an activity of: INCTMat   support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Martin Schweizer***, **Swiss Federal Institute of Technology**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Circling the square -- A course around quadratic hedging and portfolio choice*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa — an activity of: INCTMat — support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Matheus Grasselli***, **Mcmaster University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Understanding financial crisis - a statistical perspective”.***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa — an activity of: INCTMat — support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance: RiO Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Michael Lipkin***, **Columbia University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Event-driven finance, boundary conditions and derivatives pricing in finance.”.***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa

an activity of INCTMat

support: Bloomberg CNPq CAPES FAPERJ PETROBRAS

mathematics & finance:
RiO
Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Nicolas Merener***, **Universidad Torcuato di Tella**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Commodity Markets: Structure, Empirics & Models*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing | an activity of | support:

impa | INCTMat | Bloomberg | CNPq | CAPES | FAPERJ | PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Paul Feehan***, **Rutgers University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Degenerate obstacle problems in mathematical finance".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, PETROBRAS

mathematics & finance:

R:O

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Roger Lee***, **University of Chicago**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Vanilla-like Options”.***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa — an activity of: INCTMat — support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Ruodu Wang***, **University of Waterloo**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*to be decided".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07^{th} to 12^{th}, 2012

CERTIFICATE

We hereby certify that, ***Ruth Kaila***, **Helsinki University of Technology**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Pricing exotic options with the implied integrated variance".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance: RiO Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Sergio Luis Franklin Júnior***, **Pontifícia Universidade Católica do Rio de Janeiro**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"The option to delay network investment decision and its impact on the cost-based prices of regulated telecommunications services".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa
an activity of: INCTMat
support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Teemu Pennanen***, **King´s College London**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Indifference pricing in illiquid markets*”.**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Thomas Kokholm***, **Aarhus University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **“*Pricing and Hedging Derivatives in Contagious Markets”.***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa

an activity of: INCTMat

support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Vinícius Viana Luiz Albani***, **IMPA - Pós-Doutorando**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: ***"Online Local Volatility Calibration".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing an activity of support:

impa INCTMat Bloomberg CNPq CAPES FAPERJ BR PETROBRAS

mathematics & finance:
RiO
Research in Options
Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Youngna Choi***, **Montclair State University**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Sovereign Credit Risk Contagion: a Dynamical Systems Approach*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa — an activity of INCTMat — support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Yuri Fahham Saporito***, **University of California Santa Barbara**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Multiscale Stochastic Volatility Model for Options on Futures*".**

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing: impa — an activity of: INCTMat — support: Bloomberg, CNPq, CAPES, FAPERJ, BR PETROBRAS

mathematics & finance:

RiO

Research in Options

Búzios, Rio de Janeiro, Brazil - December 07th to 12th, 2012

CERTIFICATE

We hereby certify that, ***Zhenyu Cui***, **University of Waterloo**, participated in the Mathematics & Finance: Research in Options, held at Hotel Atlântico, Búzios - RJ, from December 7 to 12, 2012 and presented the following work: **"*Prices and Asymptotics for Discrete Variance Swaps".***

Búzios, December 12, 2012.

Jorge Zubelli
Organizing Committee

organizing impa | an activity of INCTMat | support: Bloomberg CNPq CAPES FAPERJ BR PETROBRAS