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We hereby certify that, ***Adriano Joaquim de Oliveira Cruz***, Universidade Federal do Rio de Janeiro, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Alberto Adrego Pinto**, **Universidade do Porto**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Alessandro Paulo de Oliveira, IMECC**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Ana Beatriz Vieira de Mattos, Bm&Fbovespa**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Andre Marcos Dias Campos**, Uae University, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Antonio Augusto Cardoso Correia**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Ariel Levy, Universidade Federal Fluminense**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Arsam Aryandoust, Rhine-Westphalian Technical Highschool Aachen**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Bruno Dupire, Bloomberg - NY**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Carlos Vázquez**, **Universidade da Coruña**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Carole Bernard, University of Waterloo**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Cassius Marcellus do Carmo Figueiredo**, Instituto Infnet, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Chris Rogers, University of Cambridge**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Claudia Sagastizábal***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Claudio Cardoso Flores***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Cristopher Daniel Pih***, **Uae University**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Daniel Karp Vasquez***, **Universidade Federal Fluminense**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **David Meier, Brunel University London**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Diego Andres de Barros Lima Barbosa**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Diogo Luiz Duarte**, Uae University, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Eduardo Nogueira de Igreja***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Fernando A L Aiube**, **Universidade do Estado do Rio de Janeiro**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Francesca Munia Machado**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Gabriel di Stasio Correa***, **Pontifícia Universidade Católica do Rio de Janeiro**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Gabriel Leite Baptista da Silva***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Gang Liu**, **École Polytechnique**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Helder Alan Rojas Molina**, Instituto de Matemática e Estatística, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Henrique Hamaguchi, USP - Instituto de Física**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **João Renato Leripio Gomes, Universidade Federal Fluminense**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Jonas Knopman**, **Universidade Federal do Rio de Janeiro**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Jorge P. Zubelli**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Jose Afonso Faias, Universidade Católica Portuguesa**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Joseph Tapia, Universidad Nacional Mayor de San Marcos**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Juan Carlos Arismendi Zambrano**, **Universidade de Brasilia**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Juan Pablo Luna**, Programa de Engenharia de Produção, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Lakshitha Wagalath**, **léseg School of Management**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Lane Hughston, Brunel University London**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Leandro Dognini**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Leonardo Caiado Volpini**, Universidade Estácio de Sá, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Lucas Farias Lima**, **Pontifícia Universidade Católica do Rio de Janeiro**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Marco Avellaneda, Courant Institute of Mathematical Sciences**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Marco Fritelli**, **Unicersitá Degli Studi di Milano**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Matheus Grasselli, McMaster University**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Matheus Pimentel Rodrigues***, **Escola de Economia de São Paulo**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Matjaž Omladič**, Institute of Mathematics, Physics and Mechanics - Ljubljana, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Mauricio Junca**, **Universidad de Los Andes-Colombia**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Max Oliveira de Souza**, **Universidade Federal Fluminense**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Melba Luz Torres Ortiz**, Instituto de Matemática e Estatística, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Milene Andressa Mondek**, Pontifícia Universidade Católica do Rio de Janeiro, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Nicole El Karoui**, **École Polytechnique**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Rafael Moura Azevedo**, **Universidade Federal de Pernambuco**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Raphael Douady**, **Université Paris I - Sorbonne**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Renan Renie Gevisiez Reimermendt, Fundação Getúlio Vargas**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Renata Carvalho Villar da Silva**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Ryan Donnelly**, **Ecole Polytechnique Fédérale de Lausanne**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Sebastian Jaimungal, University of Toronto**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Sergio Alvares Rodrigues de Souza Maffra***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Sergio Luis Franklin Junior***, **Massachusetts Institute of Technology**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Stefano Pagliarani**, **École Polytechnique**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Teemu Pennanen, King's College London**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Tereza Cristina Amorelli Coelho**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Thales de Paula, Uae University**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Uwe Schmock, Vienna University of Technology**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Vinícius Hessel Benedito de Sousa***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Wellington Luis de Oliveira**, Universidade do Estado do Rio de Janeiro, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Xu Yang***, **IMPA - Pós-Doutorando**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Yuri Fahham Saporito, Fundação Getúlio Vargas**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, ***Yuri Resende Fonseca***, Instituto Militar de Engenharia, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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We hereby certify that, **Yurie Yassunaga, Bm&Fbovespa**, participated in the Mathematics & Finance: Research in Options 2015, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from November 27 to December 3, 2015.

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