

Preface

The chapters in this volume of the Springer Proceedings in Mathematics and Statistics entitled “Actuarial Sciences and Quantitative Finance: ICASQF2016, Cartagena, Colombia, June 2016” are from selected papers presented at the Second International Congress on Actuarial Science and Quantitative Finance, which took place in Cartagena from June 15 to 18, 2016. The conference was organized jointly by the Universidad Nacional de Colombia, Universidad de Cartagena, Universidad del Rosario, Universidad Externado de Colombia, Universidad de los Andes, ENSIIE/Université Evry Val d’Essonne, and ADDACTIS Latina. It also received support from Universidad Industrial de Santander, Ambassade de France en Colombie, and ICETEX. The conference took place in the Claustro de San Agustín and Casa Museo Arte y Cultura la Presentación in the walled city of Cartagena.

This congress was the second edition of a series of events to be organized every other year, with the objective of becoming a reference in actuarial science and quantitative finance in Colombia, the Andean region (Peru, Colombia, Venezuela, Ecuador, and Bolivia), and the Caribbean. The congress had participation from researchers, students, and practitioners from different parts of the world. This second edition helped enhance the relations between the academic and industrial actuarial and financial communities in North America, Europe, and other regions of the world.

The emphasis of the event was equally distributed between actuarial sciences and quantitative finance and covered a variety of topics such as Statistical Techniques in Finance and Actuarial Science, Portfolio Management, Derivative Valuation, Risk Theory, Life and Pension Insurance Mathematics, Non-life Insurance Mathematics, and Economics of Insurance.

The event consisted of plenary sessions with invited speakers in the areas of actuarial science and quantitative finance, oral sessions of contributed talks on these topics, as well as short courses taught by some of the invited speakers and poster sessions. The list of invited speakers reflects the broad variety of topics: Nicole El Karoui (Self-Exciting Process in Finance and Insurance for Credit Risk and Longevity Risk Modeling in Heterogeneous Portfolios), Julien Guyon

(Path-Dependent Volatility), Christian Hipp (Stochastic Control for Insurance: New Problems and Methods), Jean Jacod (Estimation of Volatility in Presence of High Activity Jumps and Noise), Glenn Meyers (Aggressive Backtesting of Stochastic Loss Reserve Models—Where It Leads Us), Michael Sherris (To Borrow or Insure? Long-Term Care Costs and the Impact of Housing), Qihe Tang (Mitigating Extreme Risks Through Securitization), and Fernando Zapatero (Riding the Bubble with Convex Incentives). Topics for short courses included the following: The New Post-crisis Landscape of Derivatives and Fixed Income Activity Under Regulatory Constraints on Credit Risk, Liquidity Risk, and Counterparty Risk (Nicole El Karoui); Stochastic Control for Insurers: What Can We Learn from Finance, and What Are the Differences? (Christian Hipp); High-Frequency Statistics in Finance (Jean Jacod); and Using Bayesian MCMC Models for Stochastic Loss Reserving (Glenn Meyers).

Additionally, researchers and students presented oral contributions and posters. There were 30 contributed oral presentations, 26 invited oral contributions, and ten poster presentations. We received 85 contributions and 34 invited contributions. The selection process was the result of careful deliberations, and 54 oral contributed presentations of the 85 submissions and 20 posters were accepted. Authors came from different corners of the world and countries of origin including Australia, Brazil, Canada, Chile, Colombia, Egypt, France, Germany, Italy, Jamaica, Mexico, Spain, Switzerland, the United Kingdom, Uruguay, and the United States. The number of contributions along with the total number of 279 registered participants shows the steady growth of the congress and its consolidation as the main event of the area in the Andean region and the Caribbean.

The congress put the emphasis on enhancing relations between industry and academia providing a day to address problems arising from the financial and insurance industries. As a matter of fact, topics and speakers themselves came from these sectors. The congress provided practitioners a platform to present and discuss with academics and students different approaches in addressing problems arising from the industries in the region.

The current proceedings are based on invitations to selected oral contributions and selected contributions presented by the invited speakers. All contributions were subject to an additional review process. The spectrum of the eight papers published here reflects the diverse nature of the presentations: there are five papers on actuarial sciences and three papers on quantitative finance.

Special thanks go to the members of the organizing committee, which included Javier Aparicio (Colombia, ADDACTIS Latina), Prof. Sergio Andrés Cabrales (Colombia, Universidad de los Andes), Prof. Carlos Alberto Castro (Colombia, Universidad del Rosario), Prof. Margaret Johanna Garzón (Colombia, Universidad Nacional de Colombia, Bogotá), Prof. Sandra Gutiérrez (Colombia, Universidad de Cartagena), Prof. Jaime A. Londoño (Colombia, Universidad Nacional de Colombia, Bogotá), Prof. Sergio Pulido (France, ENSIE/Université Evry Val d'Essonne), Prof. Javier Sandoval (Colombia, Universidad Externado de Colombia),

and Prof. Arunachalam Viswanathan (Colombia, Universidad Nacional de Colombia, Bogotá). Finally, we would like to thank all the conference participants who made this event a great success.

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Evry Cedex, France
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Jaime A. Londoño
José Garrido
Monique Jeanblanc

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Londoño, J.A.; Garrido, J.; Jeanblanc, M. (Eds.)

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