The 16th International Congress on Insurance: Mathematics and Economics
June 28 - 30, 2012 Hong Kong

28 June 2012 Thursday

08:45 - 09:10	Opening Ceremony						
09:10 - 09:40	Photo Session						
09:40 - 10:40	**Plenary Talk - Chair: Hans U. Gerber** **(RHT)** ***On the Interplay between Distortion, Mean Value and Haezendonck- Goovaerts Risk Measures*** **Marc Goovaerts**						
10:40 - 11:00	Coffee Break						
11:10 - 17:00	Parallel Sessions						
Session (Venue)	**Session 1 (T2)**	**Session 2 (T3)**	**Session 3 (T4)**	**Session 4 (T5)**	**Session 5 (T6)**	**Session 6 (T7)**	**Session 7 (103)**
	Ruin Theory	**Mathematical Finance**	**EIA**	**Optimal Insurance**	**Risk Measure**	**Mortality**	**Applications**
Chair:	**David Dickson**	**Tak Kuen Siu**	**Eric C.K. Cheung**	**Zhongfei Li**	**Fabio Bellini**	**Georgios Pitselis**	**Choon Peng Tan**
11:10 - 11:30	David Landriault	Serena Tiong	Stefan Holder	Huayue Zhang	Ruijiang Wang	Min Ji	Lucas Jódar
11:30 - 11:50	Shuanming Li	Yang Shen	Mohamed Elsheemy	Hoi Ying Wong	Hanspeter Schmidli	Ramona Meyricke	Sujin Zheng
11:50 - 12:10	Volkmar Lautscham	Thomas Knispel	Runhuan Feng	Hui Zhao	Mohamed Talfi	Matthias Börger	Khashayar Tashtzar
12:10 - 12:30	Kristina P. Sendova	Xin Zhang	Junichi Imai	Lihong Zhang	Jonas Alm	Julien Tomas	Qiyao Luo
12:30 - 14:00	Lunch						
Session (Venue)	**Session 8 (T2)**	**Session 9 (T3)**	**Session 10 (T4)**	**Session 11 (T5)**	**Session 12 (T6)**	**Session 13 (T7)**	**Session 14 (103)**
	Loss Models	**Optimal Dividends**	**EIA**	**Optimal Insurance**	**Dependence**	**Pension & Retirement**	**Applications**
Chair:	**Jae-Kyung Woo**	**Kam C. Yuen**	**X. Sheldon Lin**	**Lihong Zhang**	**Stéphane Loisel**	**S.C. Philip Yam**	**Shuanming Li**
14:00 - 14:20	Tao Jin	Benjamin Avanzi	François Quittard-Pinon	Ping Chen	Yunjie (Winnie) Sun	Mayur Ankolekar	Lin Zhang
14:20 - 14:40	Emiliano A. Valdez	Ming Zhou	Pietro Millossovich	Zhibin Liang	Bernard Wong	Séverine Gaille	Hyuk-Sung Kwon
14:40 - 15:00	Yafang Wang	Zhuo Jin	Xiao Wei	Zhongfei Li	Marjan Qazvini	Wei Yang	Ghadir Mahdavi
15:00 - 15:20	Landy Rabehasaina	Xiaofan Peng	Sharon S. Yang	Yan Zeng	Alireza Edalati Nozadi	U.D. Kariyawasam Majuwana Gamage	Jr-Wei Huang
15:20 - 15:40	Coffee Break						
Session (Venue)	**Session 15 (T2)**	**Session 16 (T3)**	**Session 17 (T4)**	**Session 18 (T5)**	**Session 19 (T6)**	**Session 20 (T7)**	**Session 21 (103)**
	Loss Models	**Mathematical Finance**	**EIA**	**Credit Risk**	**Dependence**	**Pension & Retirement**	**Applications**
Chair:	**Emiliano A. Valdez**	**Enrico Biffis**	**Junyi Guo**	**Serena Tiong**	**Jan Dhaene**	**Wai Sum Chan**	**Lan Wu**
15:40 - 16:00	Enrique Calderín	Bertrand Tavin	Yu-Yun Yeh	Sau-lung Chan	Mario V. Wüthrich	Mayukh Gayen	Shih-Chieh Bill Chang
16:00 - 16:20	Jiandong Ren	Hao Chang	Przemyslaw Klusik	Guojing Wang	Miguel A. Sordo	Minan Huang	Alexander Bohnert
16:20 - 16:40	Jae-Kyung Woo	Sally Shen	Morten Tolver Kronborg	Arsalan Azamighaimasi	Daniël Linders	Olivier Le Courtois	Shu-Ling Chen
16:40 - 17:00	Cordelia Rudolph	Hong-Chih Huang	Karin Hirhager	Caterina Lepore	Taehan Bae	Kai Chen	Alexander Mägebier
18:30 - 21:30	Symphony of Lights Cruise with Dinner for those with tickets for June 28, 2012						

29 June 2012 Friday

09:00 - 10:00	**Plenary Talk - Chair: Hansjoerg Albrecher** (RHT) ***Stochastic Control Applications in Life Insurance*** **Mogens Steffensen**						
10:00 - 10:20	Coffee Break						
10:30 - 17:20	Parallel Sessions						
Session (Venue)	**Session 22 (T2)**	**Session 23 (T3)**	**Session 24 (T4)**	**Session 25 (T5)**	**Session 26 (T6)**	**Session 27 (T7)**	**Session 28 (103)**
	Ruin Theory	**Mathematical Finance**	**Credibility & Optimal Reinsurance**	**Risk Measure**	**Extreme Value Theory**	**Statistics**	**Insurance**
Chair:	**G. Willmot**	**Harry Zheng**	**K.C. Cheung**	**Jiandong Ren**	**Ming Zhou**	**Bernard Wong**	**Bingzheng Chen**
10:30 - 10:50	Yasutaka Shimizu	Kamille Sofie Tågholt	K.C.J. Sung	Andrés Cuberos	Azadeh Bahador	David Lee	Narat Charupat
10:50 - 11:10	Corina Constantinescu	Tak Kuen Siu	Ali Panahi Bazaz	Fabio Bellini	Thomas Opitz	M. Teimourian Sefidekhan	Michał Krzeszowiec
11:10 - 11:30	Mi Chen	Jerome Pansera	Fangda Liu	Anna-Maria Hamm	Yiqing Chen	Matthias Fahrenwaldt	Kalev Pärna
11:30 - 11:50	José Garrido	Emanuela Rosazza Gianin	S.T. Boris Choy	Fan Yang	Qihe Tang	Jochen Heberle	Heng Sun
11:50 - 12:10	Xiaowen Zhou	Tiong Wee Lim	Alexandru V. Asimit	Jae Youn Ahn	Yi Zhang	P. Hewa Katuwandeniyage	Colin M. Ramsay
12:10 - 14:00	Lunch						
Session (Venue)	**Session 29 (T2)**	**Session 30 (T3)**	**Session 31 (T4)**	**Session 32 (T5)**	**Session 33 (T6)**	**Session 34 (T7)**	**Session 35 (103)**
	Ruin Theory	**Mathematical Finance**	**Credibility & Optimal Reinsurance**	**Credit Risk**	**Statistics**	**Mortality**	**Insurance**
Chair:	**Benjamin Avanzi**	**E. Rosazza Gianin**	**S.T. Boris Choy**	**Tiong Wee Lim**	**Cary Chi-Liang Tsai**	**Hoi Ying Wong**	**Colin M. Ramsay**
14:00 - 14:20	Agnieszka I. Bergel	Shing-Fung Chung	S.C.P. Yam	Xuemiao Hao	Iqbal Owadally	Tat Wing Wong	Hongzhong Zhang
14:20 - 14:40	Christophe Dutang	Chi Seng Pun	Jianfa Cong	Harry Zheng	Shibin Song	Colin O'Hare	Andrey A. Kudryavtsev
14:40 - 15:00	Amir T. Payandeh Najafabadi	Shiu Fung Wong	Sandra Haas	Zhongyi Yuan	Arnold F. Shapiro	Yahia Salhi	Yang-Che Wu
15:00 - 15:20	S. Ramasubramanian	Li'an Qu	Georgios Pitselis	Bin Li	Choon Peng Tan	Annamaria Olivieri	Jun Gao
15:20 - 15:40	Eugenio V. Rodríguez	Weiyin Wang	Hee Seok Nam	Enrico Biffis	Jing Yao	Peng Qin	Maria Govorun
15:40 - 16:00	Coffee Break						
Session (Venue)	**Session 36 (T2)**	**Session 37 (T3)**	**Session 38 (T4)**	**Session 39 (T5)**	**Session 40 (T6)**	**Session 41 (T7)**	**Session 42 (103)**
	Ruin Theory	**Mathematical Finance**	**EIA**	**Optimal Control**	**Statistics**	**Mortality**	**Applications**
Chair:	**David Landriault**	**Xiaowen Zhou**	**Xian Zhou**	**Hanspeter Schmidli**	**Yiqing Chen**	**Arnold F. Shapiro**	**Qihe Tang**
16:00 - 16:20	Stéphane Loisel	Yung-Tsung Lee	X. Sheldon Lin	Huiling Wu	Y.B. Koh	Yinglu Deng	Muhamad Abduh
16:20 - 16:40	Yi Lu	Jingtang Ma	Jonathan Ziveyi	Jiajia Cui	Qian Chen	Wai Sum Chan	Chi-Hung Chang
16:40 - 17:00	Esterina Masiello	Craig Blackburn	Xiaoming Liu	Xudong Zeng	Meelis Käärik	Cary Chi-Liang Tsai	Ying Liu
17:00 - 17:20	Eric C.K. Cheung	Yin Lin	Ming Hui Celeste Chai	Kevin Yuen	Jiahui Li	L.F.B. Henriksen	Lin Zhao
19:00 - 22:00	Banquet						

30 June 2012 Saturday

09:00 - 10:00	Parallel Sessions			
Session (Venue)	**Session 43 (T4)**	**Session 44 (T5)**	**Session 45 (T6)**	**Session 46 (T7)**
	Applications	**Applications**	**Optimal Insurance**	**Applications**
Chair:	**Guojing Wang**	**Andrew C.Y. Ng**	**Yi Lu**	**José Garrido**
09:00 - 09:20	Ming Pu	Lan Wu	Katja Müller	Ernst Juerg Weber
09:20 - 09:40	Ke Shang	Dejun Xie	Eric D. Ofosu-Hene	M.M. Nizamuddin
09:40 - 10:00	Pierre Ribereau	Jia-min Yu	Chengguo Weng	Jing Sun
10:10 - 11:10	**Plenary Talk - Chair : W.K. Li** **(RHT)** ***Credit Portfolios, Credibility Theory, and Dynamic Empirical Bayes*** **Lai Tze Leung**			
11:10 - 11:30	Coffee Break			
11:30 - 12:30	**Plenary Talk - Chair : Elias S.W. Shiu** **(RHT)** ***Life Insurance in China*** **Shirley Shao**			
12:30 - 13:00	Closing Ceremony			
13:00 - 14:15	Lunch			
18:30 - 21:30	Symphony of Lights Cruise with Dinner for those with tickets for June 30, 2012			

13 June 2012

SCIENTIFIC PROGRAMME

SCIENTIFIC PROGRAMME – *Thursday 28 June*

Thursday 28 June : 08:45 – 09:10

Opening Ceremony **RHT**

Opening Speech – Professor Paul Tam, PVC of Research

Welcoming Speech – Professor David Dudgeon, Associate Dean of Science Faculty

Photo Session **RHT**

Thursday 28 June : 09:40 – 21:30

Plenary Talk

09:40 – 10:40 **Chair: Hans U. Gerber** **RHT**

On the Interplay between Distortion, Mean Value and Haezendonck-Goovaerts Risk Measures

Marc Goovaerts

10:40 – 11:00 *Coffee Break* **RHT**

Parallel Sessions

Session 1: **Ruin Theory – Chair: David Dickson** **T2**

11:10 – 11:30 *The Impact of a Claim-adjusted Premium Policy on the Risk of Solvency*
Eric C.K. Cheung, David Landriault and Christiane Lemieux

11:30 – 11:50 *Some Finite Time Ruin Probabilities in the Classical Risk Model with Barriers*
Shuanming Li and Yi Lu

11:50 – 12:10 *From Ruin to Bankruptcy for Compound Poisson Surplus Processes*
Volkmar Lautscham and Hansjoerg Albrecher

12:10 – 12:30 *The Gerber-Shiu Function and the Generalized Cramér-Lundberg Model with Diffusion*
David Landriault and Kristina P. Sendova

Session 2: **Mathematical Finance – Chair: Tak Kuen Siu** **T3**

11:10 – 11:30 *Pricing Inflation-Linked Hybrid Derivatives under Stochastic Interest Rates*
Serena Tiong

11:30 – 11:50 *A Stochastic Maximum Principle for Mean-Field Models with Jumps and its Application to Finance*
Yang Shen and Tak Kuen Siu

11:50 – 12:10 *Convex Capital Requirements for Large Portfolios*
Thomas Knispel and Hans Föllmer

12:10 – 12:30 *A Stochastic Maximum Principle for a Markov Regime-Switching Jump-Diffusion Model and its Application to Finance*
Xin Zhang, Robert J. Elliott and Tak Kuen Siu

Session 3: **EIA – Chair: Eric C.K. Cheung** **T4**

11:10 – 11:30 *The Value of Interest Rate Guarantees in Participating Life Insurance: Status Quo and Alternative Product Design*
Martin Eling and Stefan Holder

11:30 – 11:50 *Risks Analysis of Guaranteed Equity Bond: Economic Capital Approach*
Mohamed Elsheemy

11:50 – 12:10 *Analytical Calculation of Risk Measures for Variable Annuity Guaranteed Benefits*
Runhuan Feng and Hans W. Volkmer

12:10 – 12:30 *Hedging Guaranteed Annuity Options under Non-Gaussian Market and Interest Rate Risks*
Junichi Imai and Masanori Hatashita

Session 4: **Optimal Insurance – Chair: Zhongfei Li** **T5**

11:10 – 11:30 *Optimal Investment, Consumption and Life Insurance under Mean-Reverting Returns*
Traian A. Pirvu and Huayue Zhang

11:30 – 11:50 *Optimal Investment for Insurer with Cointegrated Assets: CRRA Utility*
Hoi Ying Wong and Mei Choi Chiu

11:50 – 12:10 *Optimal Reinsurance-investment Problem for an Insurer in an Incomplete Market*
Hui Zhao, Ximin Rong and Haiyang Sun

12:10 – 12:30 *Optimal Portfolio Selection and Retirement for an Individual with Stochastic Lifetime*
Lihong Zhang, Ting Ye and Baimin Yu

Session 5: **Risk Measure – Chair: Fabio Bellini** **T6**

11:10 – 11:30 *Fuzzy Risk Measuring Method and Its Application in Insurance*
Ruijiang Wang, Gaoming and Bingzheng Chen

11:30 – 11:50 *Risk Measures in Non-Life Insurance*
Hanspeter Schmidli

11:50 – 12:10 *Multiannual Own Solvency Capital in Non Life Insurance*
Mohamed Talfi

12:10 – 12:30 *A Simulation Model for Calculating Solvency Capital Requirements for a Non-life Insurance Company*
Jonas Alm

Session 6: **Mortality – Chair: Georgios Pitselis** **T7**

11:10 – 11:30 *Longevity Risk in Last Survivor Annuities*
Min Ji, Mary Hardy and Johnny Siu-Hang Li

11:30 – 11:50 *Aggregating Survival Models: Individual vs. Population Mortality Dynamics*
Ramona Meyricke and Michael Sherris

11:50 – 12:10 *It Takes Two: Why Mortality Trend Modelling is more than Modelling One Mortality Trend*
Matthias Börger and Jochen Russ

12:10 – 12:30 *Essays on Graduation of Mortality by Adaptive Local Kernel-weighted Log-likelihood*
Julien Tomas

Session 7: **Applications – Chair: Choon Peng Tan** **103**

11:10 – 11:30 *Mathematical Modelling of the Mortgage Default Rate in Spain*
Lucas Jódar and Elena De la Poza

11:30 – 11:50 *Profit Distribution of Life Insurance Contract and Earning Cycle of Life Insurance Company — A Research Based on Different Financial Report Standards*
Sujin Zheng and Yue Liu

11:50 – 12:10 *Fractal Analysis and its Application in Iran Financial Market*
Seyeed Mohammad Karimi, Ghadir Mahdavi and Khashayar Tashtzar

12:10 – 12:30 *Pricing and Insolvency Risk Evaluating of Embedded Options in Universal Insurance Considering Mortality Rate*
Haitao Zheng, Qiyao Luo, Ruoen Ren and Zhongfeng Qin

12:30 – 14:00 *Lunch* **Canteen (FOOD^2)**

Session 8: **Loss Models – Chair: Jae-Kyung Woo** **T2**

14:00 – 14:20 *Recursions and Fast Fourier Transforms for a New Bivariate Aggregate Loss Model*
Tao Jin and Jiandong Ren

14:20 – 14:40 *Longitudinal Modeling of Insurance Claim Counts Using Jitters*
Emiliano A. Valdez

14:40 – 15:00 *Distribution of the Number of IBNR Claims*
Yafang Wang

15:00 – 15:20 *On Two Bivariate Risk Theory Problems*
Landy Rabehasaina

Session 9: **Optimal Dividends – Chair: Kam C. Yuen** **T3**

14:00 – 14:20 *Optimal Dividends in a Perturbed Cramér-Lundberg Model with Stochastic Prospects and a Penalty at Ruin*
Benjamin Avanzi, Bernard Wong and Timothy Yip

14:20 – 14:40 *Optimal Combinational Dividend Policy*
Ming Zhou

14:40 – 15:00 *A Numerical Approach to Optimal Dividend Policies with Capital Injections and Transaction Costs*
Zhuo Jin, Hailiang Yang and George Yin

15:00 – 15:20 *Optimal Dividend and Equity Issuance Problem with Proportional and Fixed Transaction Cost*
Xiaofan Peng, Mi Chen and Junyi Guo

Session 10: **EIA – Chair: X. Sheldon Lin** **T4**

14:00 – 14:20 *Pricing Equity-Indexed Annuities in a Stochastic Interest Rates Environment*
Abdou Kelani and François Quittard-Pinon

14:20 – 14:40 *A Dynamic Programming Algorithm for the Valuation of GMWB Variable Annuities under the Heston Model*
Pietro Millossovich, Anna Rita Bacinello and Alvaro Montealegre

14:40 – 15:00 *Valuation of Flexible Premium Equity-Indexed Annuities with Partial Withdraw and Surrender*
Xiao Wei and Sha Li

15:00 – 15:20 *A Flexible Tree for Evaluating Guaranteed Minimum Withdrawal Benefits with Surrender Options under Stochastic Interest Rate Environment*
Sharon S. Yang

Session 11: **Optimal Insurance – Chair: Lihong Zhang** **T5**

14:00 – 14:20 *Optimal Proportional Reinsurance and Investment with Regime-switching for Mean-variance Insurers*
Ping Chen, Ka Chun Joseph Sung and Sheung Chi Philip Yam

14:20 – 14:40 *Optimal Reinsurance and Investment with Unobservable Claim Size and Intensity*
Zhibin Liang and Erthan Bayraktar

14:40 – 15:00 *Optimal Robust Reinsurance and Investment Strategy for an Insurer under Stochastic Volatility Model*
Zhongfei Li, Bo Yi and Yan Zeng

15:00 – 15:20 *Time-inconsistent Investment and Reinsurance Problems for Insures in a Jump Diffusion Market*
Yan Zeng, Zhongfei Li and Yongzeng Lai

Session 12: **Dependence – Chair: Stéphane Loisel** **T6**

14:00 – 14:20 *Multivariate Modeling of Automobile Insurance*
Yunjie (Winnie) Sun

14:20 – 14:40 *Capturing Non-Exchangeable Dependence in Multivariate Loss Processes with Nested Archimedean Lévy Copulas*
Benjamin Avanzi, Jamie Tao and Bernard Wong

14:40 – 15:00 *GLM Approach to Parameter Estimation of Copulas*
Amir T. Payandeh Najafabadi, Mohammad R., Farid-Rohani and Marjan Qazvini

15:00 – 15:20 *Optimal Constrained Investment and Reinsurance in Lundberg Insurance Models*
Alireza Edalati Nozadi

Session 13: **Pension and Retirement – Chair: S.C. Philip Yam** **T7**

14:00 – 14:20 *A New Credibility Factor for Setting Assumptions of Defined Benefit Pension Plans*
Mayur Ankolekar and Vishal Narang

14:20 – 14:40 *Pension Funds in Switzerland: What Can Be Learned from Academia*
Séverine Gaille

14:40 – 15:00 *Economic Capital for Defined Benefit Pension Schemes: An Application to the UK Universities Superannuation Scheme*
Wei Yang, Pradip Tapadar and Bruce T Porteous

15:00 – 15:20 *Longitudinal Analysis of Mortality Risk Factors for Actuarial Valuation*
Ushani Dias Kariyawasam Majuwana Gamage and Emiliano A. Valdez

Session 14: **Applications – Chair: Shuanming Li** **103**

14:00 – 14:20 *A Study on Underwriting Cycle of Property Insurance Industry of China*
Lin Zhang and Linjuan Tang

14:20 – 14:40 *A Study on Projecting Future Cost of Long Term Care Insurance for the Elderly in Korea*
Hyuk-Sung Kwon and Chang-Soo Lee

14:40 – 15:00 *The Determinants of Reinsurance Demand in the Iranian Insurance Market*
Ghadir Mahdavi, Seyeed Mohammad Karim and Somayeh Bassati

15:00 – 15:20 *Long Memory in Temperature: Detection, Modeling, and Application to Weather Insurance*
Jr-Wei Huang, Sharon S. Yang and Chuang-Chang Chang

15:20 – 15:40 *Coffee Break* **Open Area, G/F, MW Complex**

Session 15: **Loss Models – Chair: Emiliano A. Valdez** **T2**

15:40 – 16:00 *Developing the Collective Risk Model with the Generalized Discrete Lindley Distribution*
Enrique Calderín and Emilio Gómez-Déniz

16:00 – 16:20 *Analysis of a New Multivariate Aggregate Loss Model*
Jiandong Ren

16:20 – 16:40 *The Discounted Compound Renewal Sums under Dependency*
Jae-Kyung Woo and Eric C.K. Cheung

16:40 – 17:00 *An Approximation via Panjer's Recursion for Poisson-Mixture Models*
Cordelia Rudolph and Uwe Schmock

Session 16: **Mathematical Finance –- Chair: Enrico Biffis** **T3**

15:40 – 16:00 *Detection of Arbitrage in a Market with Multi-asset Derivatives and Known Risk-Neutral Marginals*
Bertrand Tavin

16:00 – 16:20 *Optimal Investment and Consumption Decisions under the Ho-Lee Model*
Hao Chang, Xi-min Rong, Hui Zhao and Chubing Zhang

16:20 – 16:40 *Robust Hedging in Incomplete Markets*
Sally Shen, Antoon Pelsser and Peter Schotman

16:40 – 17:00 *Comparisons of Investment Performances between Dynamic Investment Strategy and Static Investment Strategy for a Long-term Liability*
Hong-Chih Huang, Yung-Tsung Lee and Martin Halek

Session 17: **EIA – Chair: Junyi Guo** **T4**

15:40 – 16:00 *Valuation Inflation-linked Annuity Using an HJM Model*
Sharon S. Yang, Ting-Pin Wu and Yu-Yun Yeh

16:00 – 16:20 *Hedging of Equity-linked with Maximal Success Factor*
Przemyslaw Klusik

16:20 – 16:40 *Optimal Consumption, Investment and Life Insurance with Surrender Option Guarantee*
Morten Tolver Kronborg and Mogens Steffensen

16:40 – 17:00 *Adapted Dependence for Pricing Unit-linked Life Insurances*
Karin Hirhager and Uwe Schmock

Session 18: **Credit Risk – Chair: Serena Tiong** **T5**

15:40 – 16:00 *Bayesian Analysis of Structure Credit Risk Models with Micro-structure Noises and Jump Diffusion*
Sau-lung Chan, Kwok-wah Ho and Hoi Ying Wong

16:00 – 16:20 *On a Reduced Form Credit Risk Model with Common Shock and Regime Switching*
Guojing Wang and Xue Liang

16:20 – 16:40 *New Structural Approach and Default Risk; the Firm's Value will Survive Even if the Process Value, is Crossed of the Threshold Default Level*
Arsalan Azamighaimasi

16:40 – 17:00 *Dynamic Incentives with Event Risk*
Enrico Biffis and Caterina Lepore

Session 19: **Dependence – Chair: Jan Dhaene** **T6**

15:40 – 16:00 *Dependence Modeling and Claims Inflation in Multivariate Claims Run-Off Triangles*
Mario V. Wüthrich, Michael Merz and Enkelejd Hashorva

16:00 – 16:20 *Stochastic Bounds on Conditional Distributions under Positive Dependence*
Miguel A. Sordo and Alfonso Suárez-Llorens

16:20 – 16:40 *Measuring Dependence Using the Distribution of the Sum*
Daniël Linders, Jan Dhaene and Alexander Kukush

16:40 – 17:00 *Sum of Bernoulli Mixtures: Beyond Conditional Independence*
Taehan Bae and Ian Iscoe

Session 20: **Pension and Retirement – Chair: Wai Sum Chan** **T7**

15:40 – 16:00 *The Impact of Longevity Risk Component of Economic Capital on UK Annuity Portfolios*
Mayukh Gayen

16:00 – 16:20 *Does Reverse Mortgage Can Improve the Welfare of Retired People? — From the Perspective of Life Cycle*
Minan Huang and Bingzheng Chen

16:20 – 16:40 *Management of Pension Funds when Asset Returns are Driven by Lévy Processes*
Olivier Le Courtois and Francesco Menoncin

16:40 – 17:00 *A Study on the Inflation Risk of Individual Accounts of the Social Pension Fund in China*
Kai Chen and Yu Duan

Session 21: **Applications – Chair: Lan Wu** **103**

15:40 – 16:00 *Regulatory Forbearance on the Fair Premium of Ex-Ante Life Insurance Guarantee Schemes*
Shih-Chieh Bill Chang, Yang-Che Wu and Ya-Wen Hwang

16:00 – 16:20 *Asset and Liability Composition in Participating Life Insurance: The Impact on Shortfall Risk and Shareholder Value*
Alexander Bohnert, Nadine Gatzert and Peter Løchte Jørgensen

16:20 – 16:40 *Design of Peak Runoff Index Insurance in Taiwan*
Shu-Ling Chen, Jow-Ran Chang and Yu-Lieh Huang

16:40 – 17:00 *Valuation and Risk Assessment of Disability Insurance using a Discrete Time Non-homogeneous Backward Semi-Markov Reward Process*
Alexander Mägebier

18:30 – 21:30 Symphony of Lights Cruise with Dinner *for those with tickets for June 28.*

- For those with cruise tickets, assemble for transportation at **17:30** at Rayson Huang Theatre (RHT), Runme Shaw Building 黃麗松講堂，邵仁枚樓.
- For those who will not take the transportation, please arrive at Pier 9, Central at least 15 minutes early.

SCIENTIFIC PROGRAMME – *Friday 29 June*

Friday 29 June : 09:00 – 22:00

Plenary Talk

09:00 – 10:00 **Chair: Hansjoerg Albrecher** **RHT**
Stochastic Control Applications in Life Insurance
Mogens Steffensen

10:00 – 10:20 *Coffee Break* **RHT**

Parallel Sessions

Session 22: Ruin Theory – Chair: G. Willmot **T2**

10:30 – 10:50 *Ruin-related Quantities under Markov Additive Risk Models: A Matrix Operator Approach*
Yasutaka Shimizu and Runhuan Feng

10:50 – 11:10 *Risk Theory with Solvency Targets*
Corina Constantinescu, Veronique Maume-Deschamps and Ragnar Norberg

11:10 – 11:30 *Expected Discounted Dividends in a Discrete Semi-Markov Risk Model*
Mi Chen and Junyi Guo

11:30 – 11:50 *Finite Time Gerber–Shiu Function for Lévy Risk Models*
José Garrido and Xiaowen Zhou

11:50 – 12:10 *A Diffusion Risk Process with Poisson Observations*
Xiaowen Zhou

Session 23: Mathematical Finance – Chair: Harry Zheng **T3**

10:30 – 10:50 *Variance Optimal Stopping Problem on Geometric Lévy Processes*
Kamille Sofie Tågholt

10:50 – 11:10 *Functional Ito's Calculus and Dynamic Convex Risk Measures for Derivative Securities*
Tak Kuen Siu

11:10 – 11:30 *Consistent Estimation of Finite-Dimensional Markov Interest-Rate Models*
Jerome Pansera

11:30 – 11:50 *Acceptability Indexes via g-expectations: An Application to Liquidity Risk*
Emanuela Rosazza Gianin and Carlo Sgarra

11:50 – 12:10 *Pricing and Hedging Fund Protection Options with Transaction Costs*
Tiong Wee Lim

Session 24: Credibility and Optimal Reinsurance – Chair: K.C. Cheung T4

10:30 – 10:50 *A Nonzero-Sum Stochastic Differential Reinsurance Game with Mixed Regime Switching*
A. Bensoussan, K.C.J. Sung, S.C.P. Yam and S.P. Yung

10:50 – 11:10 *Proportional-Stop-Loss Reinsurance*
Ali Panahi Bazaz, and Amir T. Payandeh Najafabadi

11:10 – 11:30 *Optimal Reinsurance under Average Value-at-Risk and Wang's Premium Principle with Constraints*
Fangda Liu, K.C. Cheung, S.C.P. Yam and S.P. Yung

11:30 – 11:50 *Contaminated Transformed Beta Distribution for Loss Reserving*
S.T. Boris Choy, Jennifer S.K. Chan and Udi E Makov

11:50 – 12:10 *Optimal Risk Transfer with Multiple Reinsurers*
Alexandru V. Asimit and Alexandru M. Badescu

Session 25: Risk Measure – Chair: Jiandong Ren T5

10:30 – 10:50 *Kernel Based Estimation of the Spectral Measure*
Andrés Cuberos, Esterina Masiello and Véronique Maume-Deschamps

10:50 – 11:10 *Generalized Quantiles and Deviation Measures*
Fabio Bellini and Emanuela Rosazza Gianin

11:10 – 11:30 *Liquidity - Adjusted Risk Measures*
Anna-Maria Hamm

11:30 – 11:50 *Asymptotics for the Haezendonck-Goovaerts Risk Measure under a General Young Function*
Fan Yang and Qihe Tang

11:50 – 12:10 *On Some Properties of the Haezendonck-Goovaerts Risk Measures and Orlicz Quantiles*
Jae Youn Ahn, Ralph P. Russo and Nariankadu D. Shyamalkumar

Session 26: **Extreme Value Theory – Chair: Ming Zhou** **T6**

10:30 – 10:50 *Extreme Value Theory and Its Application in Estimation*
Azadeh Bahador, Mitra Safaeian, Mahmoud Sabzi, Ali Farhoudifazli and Nasrolah Hasanzadeh

10:50 – 11:10 *Threshold-based Extremal Inference with Angular Measures*
Thomas Opitz

11:10 – 11:30 *Precise Large Deviations of Aggregate Claims in a Time-Dependent Renewal Risk Model*
Yiqing Chen and Kam C. Yuen

11:30 – 11:50 *Versatility of Randomly Weighted Sums in Insurance, Finance and Risk Management*
Qihe Tang and Zhongyi Yuan

11:50 – 12:10 *Evaluate Multivariate VaR and CVaR for the Aggregate of Heavy-Tailed Risk Vectors by an Asymptotical Approach*
Yi Zhang and Chengguo Weng

Session 27: **Statistics – Chair: Bernard Wong** **T7**

10:30 – 10:50 *Modeling Insurance Claims via a Mixture Exponential Model Combined with Peaks-over-threshold Approach*
David Lee, Wai Keung Li and Tony Siu Tung Wong

10:50 – 11:10 *Bayesian Inference for Truncated Skew-normal Linear Mixed Effects Model in Insurance*
M. Teimourian Sefidekhan, T. Baghfalaki and M. Ganjali

11:10 – 11:30 *Sensitivity of Solutions of a Market Consistent Thiele Equation*
Matthias Fahrenwaldt

11:30 – 11:50 *Bootstrapping the Ultimate Claims of Cumulative Payments and Claims-incurred Data using Kalman-filter Theory*
Jochen Heberle

11:50 – 12:10 *Multivariate Longitudinal Data Analysis for Actuarial Applications*
Priyantha Hewa Katuwandeniyage and Emiliano A. Valdez

Session 28: **Insurance – Chair: Bingzheng Chen** **103**

10:30 – 10:50 *The Annuity Duration Puzzle*
Narat Charupat, Mark Kamstra and Moshe A. Milevsky

10:50 – 11:10 *Pricing Insurance Contracts under Cumulative Prospect Theory*
Marek Kałuszka and Michał Krzeszowiec

11:10 – 11:30	*Statistical Learning Methods in Pricing Non-Life Insurance Products* Kalev Pärna and Raul Kangro	
11:30 – 11:50	*Using Waiting Periods in Optimal Contract Designs to Control Adverse Selection in Microinsurance* Heng Sun and Colin M. Ramsay	
11:50 – 12:10	*Pricing High-Risk and Low-Risk Insurance Contracts with Incomplete Information and Expenses* Colin M. Ramsay, Victor I. Oguledo and Priya A. Pathak	
12:10 – 14:00	*Lunch*	**Canteen (FOOD²)**
Session 29:	**Ruin Theory – Chair: Benjamin Avanzi**	**T2**
14:00 – 14:20	*Notes on the Generalized Erlang(n) Risk Model* Agnieszka I. Bergel and Alfredo D. Egídio dos Reis	
14:20 – 14:40	*New Asymptotics for the Ultimate Ruin Probability* Christophe Dutang, Claude Lefèvre and Stéphane Loisel	
14:40 – 15:00	*Ruin Probability Approach to the Bonus-Malus System* Amir T. Payandeh Najafabadi and Dan Kucerovsky	
15:00 – 15:20	*A Multidimensional Ruin Problem* S. Ramasubramanian	
15:20 – 15:40	*Some Advances on the Erlang(n) Dual Risk Model* Eugenio V. Rodríguez, Rui M. R. Cardoso and Alfredo D. Egídio dos Reis	
Session 30:	**Mathematical Finance – Chair: E. Rosazza Gianin**	**T3**
14:00 – 14:20	*A Closed-Form Solution for Arithmetic Asian Options under a Mean Reverting Jump Diffusion Model* Shing-Fung Chung and Hoi-Ying Wong	
14:20 – 14:40	*CEV Asymptotics of Options with Early Exercise Feature* Chi Seng Pun and Hoi Ying Wong	
14:40 – 15:00	*On New Approach of Extracting Option Implied Volatility Surface* Shiu Fung Wong, Hoi Ying Wong and Tak Kuen Siu	
15:00 – 15:20	*Risk Preference Based Binary Call Options in Fractional Jump-Diffusion Models* Li'an Qu and Xin Zhang	
15:20 – 15:40	*FFT-network for Bivariate Levy Option Pricing* Weiyin Wang and Hoi Ying Wong	

Session 31: **Credibility and Optimal Reinsurance – Chair: S.T. Boris Choy** **T4**

14:00 – 14:20 *Risk-Minimizing Insurance Protection for Multivariate Risks*
K.C. Cheung, K.C.J. Sung, S.C.P. Yam and S.P. Yung

14:20 – 14:40 *Optimal Reinsurance under Piecewise Premium Principles*
Jianfa Cong and Ken Seng Tan

14:40 – 15:00 *The Perturbation Approach for Optimal Reinsurance Contracts*
Sandra Haas and Hansjoerg Albrecher

15:00 – 15:20 *Some New Developments in Quantile Credibility Models*
Georgios Pitselis

15:20 – 15:40 *An Extension of Proper Hedges in Partial Hedging*
Hee Seok Nam

Session 32: **Credit Risk – Chair: Tiong Wee Lim** **T5**

14:00 – 14:20 *Finite-time Survival Probability and Credit Default Swaps Pricing under Geometric Lévy Markets*
Xuemiao Hao, Xuan Li and Yasutaka Shimizu

14:20 – 14:40 *A Generic First Passage Model with Random Barrier and Information Feedback for Correlated Defaults*
Harry Zheng

14:40 – 15:00 *Conditional Tail Expectation for Portfolio Losses with Applications to Credit Risk Management*
Zhongyi Yuan and Qihe Tang

15:00 – 15:20 *Default Risk of a Time-homogeneous Diffusion Model*
Bin Li, Qihe Tang and Xiaowen Zhou

15:20 – 15:40 *Optimal Collateralization under Bilateral Default Risk*
Daniel Bauer, Enrico Biffis and Luz Rocio Sotomayor

Session 33: **Statistics – Chair: Cary Chi-Liang Tsai** **T6**

14:00 – 14:20 *ARCH Models, Bilinear Processes, and Tail Risk in Pension Plans*
Iqbal Owadally

14:20 – 14:40 *Games Analysis about Insured's Insurance Fraud under Considering Auditing Efficiency*
Shibin Song and Dan Cai

14:40 – 15:00 *Choosing Appropriate Metrics for Fuzzy Random Variables*
Arnold F. Shapiro

15:00 – 15:20 *Dirichlet Universal Portfolios of Finite Order*
Choon Peng Tan, Sin Yen Chu and Wei Xiang Lim

15:20 – 15:40 *A Note on Stein's Lemma for Multivariate Elliptical Distributions*
Jing Yao, Zinoviy Landsman and Steven Vanduffel

Session 34: Mortality – Chair: Hoi Ying Wong T7

14:00 – 14:20 *Managing Mortality Risk with Longevity Bonds when Mortality Rates are Cointegrated*
Tat Wing Wong, Mei Choi Chiu and Hoi Ying Wong

14:20 – 14:40 *Identifying Structural Breaks in Stochastic Mortality Models*
Colin O'Hare and Youwei Li

14:40 – 15:00 *Detection of Abrupt Change on Mortality Trend*
Yahia Salhi, Nicole El Karoui, Stpéhane Loisel and Christian Mazza

15:00 – 15:20 *Forecasting Mortality for Small Populations by Mixing Mortality Data*
Ales Ahcan, Darko Medved, Annamaria Olivieri and Ermanno Pitacco

15:20 – 15:40 *House Price Forecast Modeling — Implications for the Valuation of Reverse Mortgage Contracts*
Peng Qin, Bingzheng Chen and Lin Zhao

Session 35: Insurance – Chair: Colin M. Ramsay 103

14:00 – 14:20 *Stochastic Modeling and Fair Valuation of Drawdown Insurance*
Hongzhong Zhang, Tim Leung and Olympia Hadjiliadis

14:20 – 14:40 *The Dynamic of Life Insurance Reserve when the Force of Interest Depends on the Size of the Reserve*
Andrey A. Kudryavtsev and Anna A. Faizova

14:40 – 15:00 *Valuation of Mortgage Insurance under Stochastic Termination and Interest Rates*
Yang-Che Wu

15:00 – 15:20 *Potential Demand of Life Insurance and Its Regional Exploitation Degree in China: A Stochastic Frontier Analysis Method*
Jun Gao and Bingzheng Chen

15:20 – 15:40 *Valuation of Long-term Medical Contracts*
Maria Govorun, Guy Latouche and Stephane Loisel

15:40 – 16:00 *Coffee Break* **Open Area, G/F, MW Complex**

Session 36: **Ruin Theory – Chair: David Landriault** **T2**

16:00 – 16:20 *On the DeVylder and Goovaerts Conjecture about Ruin for Equalized Claims*
Stéphane Loisel, Jean-Charles Croix, Claude Lefèvre, Philippe Picard and Christian Robert

16:20 – 16:40 *On the Generalized Gerber-Shiu Function for Surplus Processes with Interest*
Yi Lu and Shuanming Li

16:40 – 17:00 *On Ruin Probability and Climate Change*
Dominik Kortschak, Esterina Masiello and Pierre Ribereau

17:00 – 17:20 *On a Periodic Dividend Barrier Strategy in the Dual Model with Continuous Monitoring of Risk*
Eric C.K. Cheung, Benjamin Avanzi, Bernard Wong and Jae-Kyung Woo

Session 37: **Mathematical Finance – Chair: Xiaowen Zhou** **T3**

16:00 – 16:20 *Optimal Asset Allocation - A Numerical Approach of Dynamic Programming Problems*
Yung-Tsung Lee and Hong-Chih Huang

16:20 – 16:40 Improvement of Least Square Monte-Carlo Methods for Pricing American-Style Options
Jingtang Ma and Dongya Deng

16:40 – 17:00 *Pricing European Options on Deferred Insurance Contracts*
Craig Blackburn, Jonathan Ziveyi and Michael Sherris

17:00 – 17:20 *A Converse Comparison Theorem for Discrete-time Finite-state BSDEs and Risk Measures Using g-expectations*
Yin Lin

Session 38: **EIA – Chair: Xian Zhou** **T4**

16:00 – 16:20 *Are Flexible Premium Variable Annuities Under-priced?*
X. Sheldon Lin and Yichun Chi

16:20 – 16:40 *Method of Lines Approach for Pricing Guaranteed Annuity Options*
Jonathan Ziveyi, Craig Blackburn and Michael Sherris

16:40 – 17:00 *A Comonotonicity-based Valuation Method for Annuity-linked Contracts*
Xiaoming Liu, Rogemar Mamon and Huan Gao

17:00 – 17:20 *Valuation of EIAs with the Threshold GARCH Model*
Ming Hui Celeste Chai, Tak Kuen Siu and Xian Zhou

Session 39: Optimal Control – Chair: Hanspeter Schmidli T5

16:00 – 16:20 *Optimal Investment and Consumption Model with State-dependent Discount Rate: a Discrete-time Model*
Huiling Wu and Yan Zeng

16:20 – 16:40 *When Do Derivatives Add Value in Asset Allocation Problems for Pension Funds?*
Jiajia Cui, Bart Oldenkamp and Michel Vellekoop

16:40 – 17:00 *Optimal Consumption and Portfolio Choice with Life Insurance under Uncertainty and Borrowing Constraints*
Xudong Zeng

17:00 – 17:20 *Optimal Asset Allocation - Risk and Information Uncertainty*
Kevin Yuen, Phillip Yam and Joseph Sung

Session 40: Statistics – Chair: Yiqing Chen T6

16:00 – 16:20 *Forecasting the Collapse of Speculative Bubbles: A Markov Regime-Switching Approach*
Y.B. Koh and H. Yang

16:20 – 16:40 *Bayesian Methods for Estimation, Inference and Forecasting of Flexible Models for Value-at-Risk and Tail Conditional Expectation*
Qian Chen

16:40 – 17:00 *Composite Models for Fitting Loss Distributions*
Meelis Käärik and Anastassia Žegulova

17:00 – 17:20 *A Discrete-time Risk Model with Integer-valued ARCH Claim-number Process*
Jiahui Li and Kam C. Yuen

Session 41: Mortality – Chair: Arnold F. Shapiro T7

16:00 – 16:20 *Incorporating Longevity Risk and Medical Information into Life Settlement Pricing*
Patrick L. Brockett, Shuo-li Chuang, Yinglu Deng and Richard D. MacMinn

16:20 – 16:40 *Time-Simultaneous Mortality Fan Charts: Construction and Applications*
Wai Sum Chan and Johnny Siu-Hang Li

16:40 – 17:00 *A Simple Linear Regression Approach to Modeling and Forecasting Morality Rates: Empirical Comparisons with Lee-Carter and CBD Models*
Cary Chi-Liang Tsai and Tzuling Lin

17:00 – 17:20 *Local Risk-minimization with Longevity Bonds*
Lars Frederik Brandt Henriksen and Thomas Møller

Session 42: Applications – Chair: Qihe Tang 103

16:00 – 16:20 *Measuring the Performance of Insurance Industry in Malaysia: Islamic vis-à-vis Conventional Insurance*
Muhamad Abduh, Mohd Azmi Omar and Raudhah Mohd Tarmizi

16:20 – 16:40 *Country Risks and Insurance Demand: Some International Evidence*
Chien-Chiang Lee, Yi-Bin Chiu and Chi-Hung Chang

16:40 – 17:00 *Asymmetric Information in Motor Insurance Market in China: Differences in Lines and Regions*
Ying Liu and Yanyan Ren

17:00 – 17:20 *Quantifying the Impact of Partial Information on Sharpe Ratio Optimization*
Lin Zhao and Lihong Zhang

19:00 – 22:00 *Banquet* at City Hall Maxim's Palace, Low Block 2/F, Central, Hong Kong
大會堂美心皇宮，低座二樓，中環
Assemble for transportation at 18:00 at Rayson Huang Theatre (RHT) .

SCIENTIFIC PROGRAMME – *Saturday 30 June*

Saturday 30 June : 09:00 – 14:15

Parallel Sessions

Session 43: Applications – Chair: Guojing Wang **T4**

09:00 – 09:20 *The Valuation of Mortgage Insurances under Information Asymmetry*
Ming Pu and Gang-Zhi Fan

09:20 – 09:40 *Ambiguity and Intellectual Resource Allocation for Insurers*
Ke Shang and Lihong Zhang

09:40 – 10:00 *Information Aggregation and Kriging Alternative in a Noisy Environment*
Pierre Ribereau and Didier Rullière

Session 44: Applications – Chair: Andrew C.Y. Ng **T5**

09:00 – 09:20 *Scenario Generating Method of Stress Testing*
Lan Wu

09:20 – 09:40 *Analytical and Numerical Characterization of Mortgage Prepayment and Refinancing Strategies*
Dejun Xie

09:40 – 10:00 *An Empirical Study on China's Growth of Property Insurance by Autoregressive Distributed Lag Model*
Jia-min Yu

Session 45: Optimal Insurance – Chair: Yi Lu **T6**

09:00 – 09:20 *Insurance Claims Fraud: Optimal Auditing Strategies in Insurance Companies*
Katja Müller, Hato Schmeiser and Joël Wagner

09:20 – 09:40 *Investment Strategy in the Absence of a Risk-free Domestic Government Bond*
Eric D. Ofosu-Hene and Paul J. Sweeting

09:40 – 10:00 *Constant Proportion Portfolio Insurance under Trading Cost: Adaptive Revision Versus Discrete Revision*
Chengguo Weng

Session 46:	**Applications – Chair: José Garrido**	**T7**
09:00 – 09:20	*How Australian Farmers Deal With Risk* Ernst Juerg Weber and Amy Khuu	
09:20 – 09:40	*An Analysis of Market Share of Private Life Insurers in India* R.K. Sinha, M.M. Nizamuddin and Ishtiaque Alam	
09:40 – 10:00	*Compulsory or Voluntary: an Assessment of Wheat Insurance Policy __ A Case Study of Henan Province in China* Ruihua Yang, Jing Sun, Xiao Chen and Zude Xian	

Plenary Talk

10:10 – 11:10	**Chair: W.K. Li** *Credit Portfolios, Credibility Theory, and Dynamic Empirical Bayes* Tze Leung Lai	**RHT**
11:10 – 11:30	*Coffee Break*	**RHT**

Plenary Talk

11:30 – 12:30	**Chair: Elias S.W. Shiu** *Life Insurance in China* Shirley Shao	**RHT**
12:30 – 13:00	Closing Ceremony	
13:00 – 14:15	*Lunch*	**Canteen (FOOD^2)**

Saturday 30 June : 18:30 – 21:30

18:30 – 21:30 Symphony of Lights Cruise with Dinner *for those with tickets for June 30.*

Participants should arrive at Pier 9, Central at least 15 minutes early.