42nd Actuarial Research Conference
August 9th-11th, 2007
Robert Morris University, Moon, PA
Program 8-6-2007

Location: Sewall Conference Center

Conference Sponsors include:

Highmark, Inc. - Lead Sponsor
- **HM Insurance Group**
- **Enscoe Long**
- Society of Actuaries Education and Research Section Council
- American Academy of Actuaries (AAA)
- American Society of Pension Professionals & Actuaries (ASPPA)
- Canadian Institute of Actuaries (CIA)
- Casualty Actuarial Society (CAS)
- Colegio Nacional de Actuarios, A.C. (CONAC)
- Conference of Consulting Actuaries (CCA)
- The Actuarial Foundation (TAF)
- Robert Morris University

Wednesday, August 8th

6:00-8:00 pm	Early Check-in/Registration

Thursday, August 9th

7:30-9:00 am	Registration
8:00-9:00	Continental Breakfast
9:00-9:10	**Len Asimow - Introductory Remarks**
9:10-9:20	**Winston Erevelles - Welcome from RMU**
9:20-9:30	**Bill Cashion - Chief Actuary, Highmark Inc.**
9:30-10:00	**Harry Panjer & Rick Gorvett** Communicating Actuarial Research Results
10:00-10:30	**John Shepherd** Knowledge or skills … or both?
10:30-11:00	Coffee Break

Thursday, August 9th Continued

11:00-12:30	Finance Session - Chair: **Claire Bilodeau**	Statistics and Risk Session - Chair: **Elias Shiu**
11:00-11:30	**Chao Qiu** On the Application of Wilkie's Models to TSX Price Index	
11:30-12:00	**James G. Bridgeman** Moments of a Regime-Switching Stochastic Interest Rate Model with Randomized Regimes	**Vytaras Brazauskas** A nonparametric test for comparing the riskiness of portfolios
12:00-12:30	**Ruilin Tian, Samuel Cox, Yijia Lin, and Luis Zuluaga** Portfolio Risk Management with CVaR-like constraints	
12:30-2:00	Lunch	
2:00-3:30	Finance Session - Chair: **Claire Bilodeau**	Statistics and Risk Session - Chair: **Elias Shiu**
2:00-2:30	**Patrice Gaillardetz** Valuation of Equity-Linked Insurance Using Risk Measures	**Runhuan Feng** Generalized Gerber-Shiu Function in Piecewise-deterministic Markov Processes
2:30-3:00	**Taehan Bae & Reg J. Kulperger** Competing Risks Model for Corporate Exit Analysis : Discrete Hazard Model and Extension with Stochastic Frailties	**Samuel Cox, Yijia Lin, Ruilin Tian, and Luis F. Zuluaga** Bounds for Ruin Probabilities and Value at Risk
3:00-3:30		**Carole Bernard & An Chen** On the regulator-insurer interaction in a structural model.
3:30-4:00	Coffee Break	
4:00-5:00	Finance - Chair: **Claire Bilodeau**	Statistics and Risk Session - Chair: **Elias Shiu**
4:00-4:30	**Min Yang** Economic Capital and Regulation of Banks and Insurers	**Siu Hang Li, Mary Hardy, and Ken Seng Tan** On Pricing and Hedging the No-Negative-Equity-Guarantee in Equity Release Mechanisms
4:30-5:00	**Claymore Marshall & David Saunder** An approach to valuing guaranteed minimum income benefit riders	**Ana Maria Mera** Analysis of a Threshold Strategy in the Discrete-time Sparre Andersen Model
6:00-7:30 pm	Reception Sponsored by Robert Morris University	

Friday, August 10th

7:30-8:30 am	Continental Breakfast	
8:30-10:30	Options & Pricing Session/Pensions - Chair: **Curtis Huntington**	Statistics and Risk Session/Health - Chair: **Tom Edwalds**
8:30-9:00	**Hua Chen & Samuel Cox** An option-based operational risk management on pandemics	**Tom Herzog** Metrics For Matches, Mismatches and Non-Matches
9:00-9:30	**Daniel Dufresne, Jose Garrido, and Manuel Morales** Fourier inversion formulas in option pricing and insurance	**Ming Zhou & Jun Cai** A risk model when premium rate depends on claim size
9:30-10:00	**Dian Zhu** New Iterative Calculation of American-style Derivatives -- a lower approximation of the Snell envelope	**Vincent Kane** Claims Prediction Model and the Simulation of Health Savings Account (HSA) Performance
10:00-10:30	**Andrew Lang** Fixing Social Secuirty and Medical Care	**Paul Johnson** Mitigating the Impact of Endogeneity in Healthcare Data via Multilevel Models
10:30-11:00	Coffee Break	
11:00-12:30	Pensions - Chair: **Curtis Huntington**	Health/Bayesian and Probability Models - Chair: **Tom Edwald**s
11:00-11:30	**Semira Puskar & Claire Bilodeau** Is a Final Salary DB Plan that Much Better than a DC Plan?	**Renbao Chen & Ping Wang** Modelling the Cumulative Cases from SARS
11:30-12:00	**Daniel Dufresne** Stochastic Life Annuities	**Michael Ekhaus** Modeling treatment costs associated with a multi-stage pandemic
12:00-12:30	**Angeles Yañez & Tapen Sinha** Disability Causes and their Effect in the Mortality of Disabled Annuitants in Mexico	**Margie Rosenberg** A Bayesian Two-Part Predictive Model for Health Care Costs Using Individual-level Data
12:30-1:30	Lunch	

Friday, August 10th Continued

1:30-2:30		Pensions - Chair: **Curtis Huntington**	Bayesian and Probability Models - Chair: **Tom Edwalds**
	1:30-2:00	**Tapen Sinha** Salary Profiles of Affiliates of Pension Funds	**Arnold Shapiro** Fuzzy Random Variables
	2:00-2:30	**Kai Chen & Mary Hardy** The Cost Control on a DB underpin hybrid pension plan	**Yessica Perez-Camarillo** Comparison of a simple Bayesian Reserving Model with traditional Methods

2:30-4:00	Panel Discussion on Applied Research - Chair: **Ian Duncan** **Panel:** **Jeremy Gold - Pensions** **Jim Toole - Health** **Steven Craighead - Investments/Life Insurance** **Tom Edwalds - Reinsurance** **Jeff Beckley - Life Insurance** Cofee and snack will be provided during panel discussion
5:00-5:30 pm	Buses Leave for Banquet on Gateway Clipper
6:30-7:00	Board Gateway Clipper
7:00-10:00	Gateway Clipper Dinner Cruise **Keynote Speaker: John Shepherd**
10:20	Buses leave for Hotels and Robert Morris University

Saturday, August 11th

7:30-8:30 am	Continental Breakfast	
8:30-10:30	Pensions/Mortality - Chair: **John Shepherd**	Life Insurance/Bayesian and Probability Models - Chair: **Rick Gorvett**
8:30-9:00	**Ana Veronica Perez Villasana & Tapen Sinha** Death of an Annuity Market Foretold	**Hua Chen & Samuel Cox** Modeling mortality with jumps: transitory effects and pricing implication to mortality securitization
9:00-9:30	**Diana K. Chisholm** Negative Effects of the GIS Clawback and Possible Solutions	**Shamita Dutta Gupta** Quantitative Risk Measures of Individual Life Settlement Purchases
9:30-10:00	**Steven Craighead & Tom Edwalds** Mortality Modelling using Projection Pursuit Regression	**Ken Seng Tan & Chengguo Weng** Enhancing Insurer value using Reinsurance and Value-at-Risk Criterion
10:00-10:30	**Min Ji** Implementation of Markov approach to Joint Life Mortality	**Yefu Kou** Fuzzy clustering study on the structure of insurance policies
10:30-11:00	Coffee Break	
11:00-1:00	Education - Chair: **John Shepherd**	General Session - Chair: **Ming Zhou**
11:00-11:30	**Vincent Goulet** Using Actuar in Teaching: Case Studies	**Xuemiao Hao & Qihe Tang** Subexponential Tail of Discounted Aggregate Claims
11:30-12:00	**Rick Gorvett** Stochastic Modeling - a Research Experience for Undergraduates	**Zhen Huang & Lijia Guo** Possibilistic Modeling for Loss Distribution and Premium Calculation
12:00-12:30	Boxed Lunches will be provided	

Special Committees and Task Forces

Thursday 12:00-2:00 PM and 7:00-8:30 PM : Halmstad Prize Committee

Thursday 5:00-6:00 PM: Committee on Knowledge Extension Research

Friday 7:00-8:30 AM: Education and Research Council Meeting

Friday 4:00-4:45 PM: Joint CAS/SOA PhD Grants Task Force