

# 43<sup>rd</sup> Actuarial Research Conference

August 14 – 16, 2008  
University of Regina  
Regina, Saskatchewan

**Location: ED 191  
Education Building, Main Campus**

## Conference Financial Sponsors include:

- Phillips, Hager & North
- University of Regina, Conference Fund
- University of Regina, Faculty of Science
- University of Regina, Department of Mathematics and Statistics

## Other Conference Sponsors include:

- Society of Actuaries Education and Research Section Council
- American Academy of Actuaries (AAA)
- American Society of Pension Professionals and 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)

## Wednesday, August 13<sup>th</sup>

6:00-8:00 pm            Early Check-in / Registration  
                                  (Desk in hall near ED 191)  
                                  *No evening events scheduled*

## Thursday, August 14<sup>th</sup>

### Morning Session Moderator: **Larry Miller**

7:00-8:10 am            Breakfast, University Club, College West 215

7:00-8:30 am            Registration in hall near ED 191

8:15-8:25                **Larry Miller – Introductory Remarks**

8:25-8:30                **Dr. Jim Tomkins – Welcome from University of Regina**

8:30-9:30                **Introduction and Keynote Presentation by Dr. Greg Marchildon**

                                  “The Role of Research in Health System Reform”

9:30-9:55                **Chuck Fuhrer**

                                  The Effect of Benefit Plan Reimbursement Provisions on Health Care Cost

9:55-10:10              Coffee Break (in hall)

10:10-10:35             **Claymore Marshall**

                                  Risk – Neutral Valuation of a Guaranteed Minimum Income Benefit Rider Offered  
                                  in Practice

**Thursday, August 14<sup>th</sup> (continued)**

- 10:35-11:00      **Andrew Wei**  
Modelling Individual and Small Group Health Insurance
- 11:00-11:25      **Peter Douglas**  
Stochastic Treatments for Insured Long-Term Disability (LTD) Benefits under a Group Insurance Policy
- 11:25-11:55      **John Manistre**  
Implementing the Market Cost of Capital Method for Fair Value Margins
- 11:55-1:10 pm      Lunch, University Club, College West 215
- Afternoon Session Moderator: **Claire Bilodeau**
- 1:10-1:35          **Brian M. Hartman**  
Assessing Regime Uncertainty through Reversible Jump MCMC
- 1:35-2:00          **Christopher Clark**  
Improvements in Scenario Selection Methods
- 2:00-2:25          **Reg J. Kulperger**  
A Model for Corporate Credit Migration: Multi-Period Ordinal Logistic Regression and Serial Dependence
- 2:25-2:50          **Daniel Dufresne**  
On Sums of Lognormals
- 2:50-3:05          Coffee Break (in hall)
- 3:05-3:30          **Arnold F. Shapiro**  
Fuzzy Regression, Diamond Distance, and the Term Structure of Interest Rates
- 3:30-3:55          **James G. Bridgeman**  
Illustrations of a Regime-Switching Stochastic Interest Rate Model with Randomized Regimes
- 3:55-4:20          **Matthew C. Modisett**  
Change Points and Regime-Switching, Scenario Generator with Continuous Parameter Distributions for Mean and Volatility
- 4:20-4:45          **Jun Zhou**  
Generalized Linear Models in Loss Reserving
- 4:45-5:15          **Emiliano A. Valdez**  
A Multilevel Analysis of Intercompany Claim Counts
- Evening              Free time  
*No evening events scheduled*

## Friday, August 15<sup>th</sup>

### Morning Session Moderator: Michael Braunstein

- 7:00-8:10 am Breakfast, University Club, College West 215
- 8:15-9:00 **Stuart Klugman**  
Accrediting University Actuarial Program (SOA)
- 9:00-9:30 **Larry Miller**  
Future Education Model (CIA)
- 9:30-9:55 **J.G. Wade**  
Using High, Low, and Closing Data to Estimate Covariance
- 9:55-10:10 Coffee Break (in hall)
- 10:10-10:35 **Marie Claire Koissi**  
Extensions of the Lee-Carter Method and Applications to Life Insurance Mortality Models
- 10:35-11:00 **Thomas P. Edwards**  
Confidence Intervals for Mortality Estimates from Sparse Data
- 11:00-11:25 **Claire Bilodeau**  
Phased Retirement
- 11:35-11:50 **Arnold F. Shapiro**  
Post-Retirement Financial Strategies for a Defined-Contribution Plan Participant
- 11:50-1:05 pm Lunch

### Afternoon Session Moderator: Peter Douglas

- 1:05-1:30 **Jiandong Ren**  
An Approximation to the Distribution of Number of Renewals in Markov Arrival Processes
- 1:30-1:55 **Daniel Dufresne**  
Discounted Claims in a Renewal Risk Model
- 1:55-2:20 **Ya Fang Wang**  
The Distribution of Discounted Compound Renewal Sums
- 2:20-2:45 **Blane Laubis**  
Optimal Investment Allocation in a Jump Diffusion Risk Model with Investment: A Numerical Analysis of Several Examples
- 2:45-3:00 Coffee Break (in hall)
- 3:00-3:25 **Ricardas Zitakis**  
Weighted Risk Capital Allocations
- 3:25-3:50 **Chengguo Weng**  
Optimality of General Reinsurance Contracts under CTE Risk Measure
- 3:50-4:15 **Shujin Wu**  
Optimal Investment Policies and Optimal Reinsurance for an Insurer
- 4:15-4:40 **Jinsen Zhuang**  
Stochastic Life Insurance Benefits and Annuity Modelling using Kolmogorov Backward Equation

**Friday, August 14<sup>th</sup> (continued)**

The Friday evening activity includes a visit to the beautiful new RCMP (Mounties) Heritage Centre, including full museum access, reception, and banquet dinner. No speeches will be conducted during this time.

Chartered bus transportation is available to all attendees as follows:

- Bus leaves stop outside Riddell Centre, University of Regina promptly at 5:30 pm.
- Bus stops briefly for pick up in front of Travelodge Hotel on Albert Street at 5:40 pm.

**Note:** Please be on time if you wish to go by bus as it will not wait for latecomers! If you miss the bus, you are welcome to take a taxi to the RCMP Heritage Centre located at 5907 Dewdney Avenue.

The chartered bus will leave the RCMP Heritage Centre at 9:30 pm to return attendees to the Travelodge and the University of Regina.

## Saturday, August 16<sup>th</sup>

### Morning Session Moderator: Larry Miller

- 7:00-8:10 am Breakfast, University Club, College West 215
- 8:15-8:40 **Harald Dornheim**  
Robust and Efficient Methods for Credibility when Claims are Approximately Gamma-Distributed
- 8:40-9:05 **Enrique Calderin-Ojeda**  
Some Results on Uniqueness Relationship between Structure Functions and Credibility Expressions
- 9:05-9:45 **John Manistre**  
A Practical Concept of Tail Correlation
  - Winner as best paper at 2008 ERM Symposium
- 9:45-10:00 Coffee Break (in hall)
- 10:00-10:40 **John Manistre**  
Variance of the CTE Estimator
  - Winner of the Halmstad Prize, 2005
- 10:40-10:45 **Claire Bilodeau**  
Thank you and comments about the Halmstad Prize
- 10:45-11:15 **Larry Miller**  
**Tom Fuhrer**  
**Jed Frees**  
Closing Comments
- 11:15-12:30 pm Box Lunches (available in hall)
- End of Conference**

### Committee Meetings during the Conference:

Thursday **Committee on Knowledge Extension Research**  
12:00-1:00 pm

Friday **Joint CAS/SOA Ph.D. Grants Task Force**  
12:00-1:00 pm

Each meeting will be held in the Window Room within the University Club, CW 215, or in CW 307.14.3, at the choice of the Committee.