BRIEF DESCRIPTIONS OF RECORED SESSIONS LISTED ON ICAS PROFESSIONAL EDUCATION PAGE

NOTE: All of the sessions below had an average participant evaluation of 3.9 (on a 5 - point scale) or higher.

2017 Ratemaking and Product Management Seminar

DSPA-1: Bayesian Analysis of Big Data
This paper develops an efficient Markov chain Monte Carlo algorithm using distributed computing on a cluster of computers.

DSPA-2: Easy Tree-sy: Everyday Applications for Decision Trees
This session will cover the background/theory behind decision trees, their benefits and drawbacks, a demonstration of fitting decision trees with free software, and example applications of decision trees for data exploration, GLM residual analysis, and underwriting analysis.

2016 Ratemaking and Product Management Seminar

PM-BG-1: Comparing Machine Learning and Conventional Statistical Techniques in Claims Models
In the session, the panelists will discuss a few machine learning methods (gradient boosting, random forests, neural network, LASSO, Elastic Net, etc.) and compare them with conventional regression methods (GLM, generalized mixed models, etc.) in the context of claims triage models.

PM-BG-3: Combining Models and Ensembles
This session will discuss various ways of combining models and situations in which they might be useful, and will also introduce the basic ideas and approaches of Ensembles.

PM-LM-1: GLM - I
Targeted at those who have modest experience with statistics or modeling, the session will start with a brief review of traditional linear models, particularly regression, which has been taught and widely applied for decades. The session will emphasize intuition and insight in addition to mathematical calculations. Illustrations will be presented using actual insurance data.

PM-LM-2: GLM - II
The discussion will cover topics such as overall modeling strategy, selecting an appropriate error structure and link function, simplifying the GLM (i.e., excluding variables, grouping levels, and fitting curves), complicating the GLM (i.e., adding interactions), and validating the final model. The session will also include a discussion on diagnostics that help test the selections made.

PM-LM-3: GLM - III – The Matrix Reloaded
This session will consider new techniques and refinements to the basic GLM which can add material value to the modeling process. It will specifically consider amendments which address some of the purported failings of GLMs in comparison to emerging methods such as machine learning techniques.

2015 Casualty Loss Reserve Seminar

VR-3: GLM's and Bayesian Models
The session will briefly describe the GLM modeling framework and walk the audience through a simple example of how this is employed specifically within the reserving context. The session will also cover Bayesian stochastic models, highlighting the evolution from the analytical implied ranges from the GLM model to simulated ones that employ likelihood functions calculated from the GLM model.

2015 Ratemaking and Product Management Seminar

PM-BG-5 Dr. Frankenstein Created the GLM – What Could Go Wrong?
During this session, empirical studies on real experience data are presented for two problems: GLMs are no more successful at distinguishing signal from noise, and the stopping problem, when have we put enough variables in. Finally, the experimental approach is also set out, allowing practitioners to satisfy themselves by replicating the results on their own books. This session will also cover ensembles, and what's next in Analytics.

PM-BG-2 GLM Ratemaking Innovations from the University of Wisconsin
Professors Jed Frees and Peng Shi of the University of Wisconsin will speak about recent research using real data that have applications to predictive modeling of property-casualty insurance.

PM-BG-6 Penalized Regression
In this presentation we will give an overview of techniques, such as penalized regression, Ridge regression, LASSO and Elastic Net, and their use in actuarial science.

PM-BG-1 Crowdsourcing Models – The Kaggle Challenge
We'll tell the story of the Kaggle competition from the angle of the modelers. How do they work with a dataset that has been "anonymized"? What types of strategies work for the modelers – and how do ensemble models and coalition building come into it? How is the standings board calculated and updated? What are the possible implications for the way that companies will develop predictive models in the future? And what kind of domain knowledge will be most useful in tomorrow's analytic world?

2014 Ratemaking and Product Management Seminar

PM-4 Critical Issues in Predictive Modeling - Real World Challenges and Decisions
This presentation will show examples of specific challenges and pitfalls building predictive underwriting models and discuss how actuaries, underwriters, and modelers can engage each other in cooperative ways through predictive analytic endeavors to ensure solid underwriting model construction and usage that results in better holistic differentiation, selection, and pricing of risks.

PM-10 The Impact of Data Variance on Model Consistency
In this session, the influence of data variance on GLMs is examined. Additionally, we compare GLM and ensemble methods, motivated by the machine learning research, and contrast their performance. As will be seen, data variance has significant implications for model builders.

PM-13 Comparison of Linear and Logistic Regression for Insurance Segmentation Models
In this presentation, we show that for segmentation model or scoring model, the segmentation result is not sensitive to the underlying distribution assumption. Using historical claims data from a couple of Insurance companies, we will show that the segmentation obtained from both methods would be very similar.

PM-12 And the Winner is…? How to Pick a Better Model
In this session we will explore, in significant detail, three often-overlooked components of the modeling process: measuring goodness-of-fit, assessing lift, and internally validating a predictive model.