

## Peggy Brinkmann

FCAS, MAAA  
Consulting Actuary



### CURRENT RESPONSIBILITY

Peggy is a consulting actuary with the Property and Casualty practice in Milliman's San Francisco office. She joined the firm in 2012.

### EXPERIENCE

Peggy's experience is primarily in applying predictive modeling to personal lines property and casualty insurance. Her expertise includes:

- Statistics and machine learning, including generalized linear models, Bayesian models, survival models, decision trees, and clustering
- Data mining processes, including data preparation, feature extraction, model building, and model evaluation
- Developing risk scores with external data sources such as credit reports, vehicle characteristics, and telematics devices

Peggy has developed a variety of predictive models for profitability, claim risk, retention, and improving efficiency in underwriting and claims processes. These models include:

- *Telematics*: Developing a telematics-based driving risk score for a large auto insurer.
- *Vehicle prediction model*: Developing a risk score based on the characteristics of vehicles, such as horsepower, weight, and Electronic Stability Control
- *Undisclosed driver pursuit*: Identifying policies most likely to have undisclosed youthful operators
- *Driver training programs*: Measuring efficacy of various programs claiming to reduce crash risk for elderly and teen drivers
- *Household retention*: Preparing a 360-degree view of customers using transactional and survey data, and identifying signals of defection risk
- *Lifetime value modeling*: Estimating the expected future economic value of a

household, including potential value of future cross-sales.

- *By-peril homeowners rating*: Exploring homeowners rating by peril and fitting multivariate rating models
- *Mortality data mining*: Mining hundreds of auto insurance variables for predictors of mortality risk
- *Medical claim fraud*: Modeling medical provider fraud using medical billing data

Prior to joining Milliman, Peggy was director of analytics and insights at the Allstate Research and Planning Center.

### PRESENTATIONS AND PUBLICATIONS

Peggy has published articles and given presentations on big data, data preparation for predictive modeling, and trends in analytics and modeling.

### PROFESSIONAL DESIGNATIONS

- Fellow, Casualty Actuarial Society
- Member, American Academy of Actuaries

### EDUCATION

- MBA, Santa Clara University
- BA, Mathematics and Education, Washington University, St. Louis, Missouri

