



The University of Chicago
Department of Statistics

MASTER'S THESIS PRESENTATION

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**Statistical Credibility Theory
and Its Applications to Actuarial Modeling**

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110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

The actuary uses observations of events that happened in the past to forecast future events or costs. Statistical credibility theory provides methods to project future experience for a subset of a population by blending the specific subset and the historical results of the population. This paper reviews the limited fluctuation method, Bayesian method, greatest accuracy method as well as shows how credibility theory can be encompassed within the theory of Generalized Linear Models. A case study was followed after overview of the theory to test the model accuracy and compare different model results.

Information about building access for persons with disabilities may be obtained in advance by calling Sandra Romero at 773.702-0541 or by email (sandra@galton.uchicago.edu).