

MSCS MESS

Department of Mathematics, Statistics, and Computer Science
St. Olaf College, Northfield, MN 55057
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Colloquium After Quiet Week

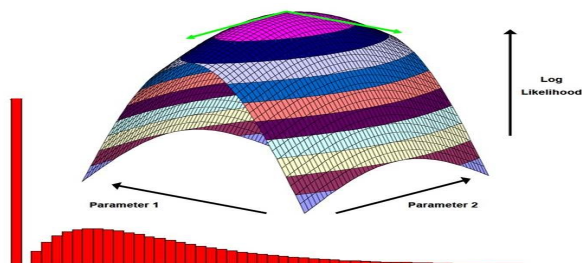
Predictive Modeling & Insurance 101: How Generalized Linear Models Transformed the Insurance Industry

Who: Nathan Hubbell & Chris Westermeyer

Where: RNS 310

When: Monday, Oct. 30th | 3:30 p.m.

About the talk: The use of predictive modeling and advanced analytics in insurance has grown significantly in recent years. One type of regression modeling widely used in insurance is generalized linear models (GLMs), a generalization of simple linear models. In our talk, we'll discuss the mathematics and usage of GLMs in insurance, as well as approaches used to help avoid modeling pitfalls such as overfitting, which occurs when a model does not correctly capture the underlying relationship between the predictors and response variable. The presenters for this talk are Nathan Hubbell and Zach Westermeyer. They both graduated from St. Olaf and currently work in actuarial roles at Travelers Insurance.



Interim Opportunity

**Mathematics Practicum (Math 390),
Interim 2018**

This is an exciting interim course that gives you the chance to work on real life problems in cooperation with local companies and nonprofit organizations. The entire course is an intense group project, working on a math/stats related problem for the sponsoring organization. Split into three teams of five, each team will work on a different problem. The faculty leaders, Jill Dietz and Paul Roback, will assist, meeting with each group on a daily basis, but will not be actively engaged in the research. Dietz and Roback will help each group develop a professional level final presentation, but the group members will deliver the presentation to client personnel. The course is intended for junior and senior mathematics majors and enrollment is limited to 15. Applications are due Wednesday Oct 25 and are available at <https://goo.gl/forms/YQDyl6bVvhPKyJnD2>.

Are you Smart & Slightly Insane?

The *Marketing Architects* firm in Minneapolis is offering two paid analyst intern positions for the summer of 2018. Qualifications include Math, Stat, or Econ major, analytical problem solver, hard worker, insatiable curiosity, and impeccable organization. If this sounds like you, the deadline for applications is Oct. 22, so don't wait! You can find the application on the St. Olaf Handshake platform.

Sustainable Data Science

The *WindLogics* firm in St. Paul is looking for data-science, machine learning, and software interns for the summer of 2018. This is an exciting opportunity to get hands on experience in applied mathematics and computer science. Qualifications include familiarity with statistical/computer programming languages, analytical experience, and excellent communication skills. Applications can be found at <https://career4.successfactors.com/sfcareer/>, search WindLogics, Requisition ID: 12072.

History in Context

On October 24, 1713, Gottfried Leibniz, in a letter to Johann Bernoulli, observed that an alternating series whose terms monotonically decrease to zero in absolute value is convergent.

On October 26, 1849, Georg Frobenius was born in Berlin-Charlottenburg, Prussia. He would develop representation and character theory for groups.

Weekly Theorem

Tiger Theorem–

Popular tigers are asexual.

Proof. Assume Fred is a popular tiger. Then Fred must be an in-tiger. Since in-tegers do not form a group under multiplication, Fred cannot reproduce with other in-tigers. However, 1 in-tiger can generate an entire group of in-tigers by self-addition. Therefore, if Fred is a popular tiger, Fred must be asexual as claimed. ■

MathClub Game Night!!!

Thursday October 26th, 7-9:30 in the RMS 6th Floor Lounge. Come one, come all, to a night of fun, food, and frivolity on. Allegedly, our counterparts from Carleton will be in attendance. So come meet new people, have some laughs, but seriously, don't lose a board game to anyone from Carleton.

To submit an article or event for publication in the mess, email nevilleq@stolaf.edu; to receive the Mess digitally each Friday, email habero1@stolaf.edu; visit <http://wp.stolaf.edu/mssc/mssc-mess/> for a digital archive of previous MSCS Mess issues.

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