



The University of Chicago  
Department of Statistics

## PhD Dissertation Proposal Presentation

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### Semiparametric Exponential Tilt Regression Models

**WEDNESDAY, November 11, 2009, at 12:00 PM**  
**110 Eckhart Hall, 5734 S. University Avenue**

#### **ABSTRACT**

Generalized linear models (McCullagh & Nelder, 1989) will be revisited from a novel yet general framework known as *exponential tilt regression models*, introduced in Rathouz & Gao (2009). In particular, a semiparametric version of the exponential tilt model will be presented as a generalization of generalized linear models, and some interesting properties of the model will be discussed.

A spectrum of related work will be also reviewed, including empirical likelihood and estimating equations (Qin & Lawless, 1994), empirical likelihood and generalized linear models (Kolaczyk, 1994), Hermite expansions in semiparametric models (Gallant & Nychka, 1987) and asymptotics in increasing parameter spaces (Portnoy, 1984). The talk will then focus on the similarities and differences between the semiparametric exponential tilt model and such previous works. Finally, some perceived challenges regarding estimation and inferences based on the model will be discussed. Any ideas or suggestions will be most welcome.