The University of Chicago
Department of Statistics
Seminars for Fourth Year PhD Students

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"Generalized Parametric Models"

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110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

A common feature of dependent continuously measured data is a marginal distribution that is not accounted for by simple models, e.g. financial time series. Generalized parametric models (GPM) are models for stochastic processes that provide complete robustness to misspecification of the marginal distribution. A GPM is obtained from a parametric family of stochastic processes by the action of a group of transformations on the state space. If the group is sufficiently rich, this framework provides a decomposition of the process into the marginal distributions on one hand and the time dependence on the other hand.

In my proposal talk I will give an account of GPMs. I will discuss my theoretical contribution to parameter estimation for GPMs, in particular a theorem on the preservation of local asymptotic normality.