

**Statistics Seminar
Department of Mathematics**

Optimal Goodness-of-Fit Tests

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In this talk we consider a study of lifetime data whose units experience multiple ordered events of the same nature. These events are commonly referred to as recurrent events. A class of models used to analyze recurrent event data is presented. We propose goodness-of-fit tests for the null hypothesis that the baseline intensity function belongs to a parametric family of intensities indexed by a parameter $\boldsymbol{\theta}$. These tests are based on a general class of weighted empirical processes. The asymptotic properties of these processes are given. Goodness-of-fits are then constructed based on these processes. Optimality results with regards to local power are presented for these tests. A real data set is used to illustrate the proposed tests.

Date: Wednesday, October 22, 2008

Time: 3 PM- 4 PM

Location: Hume 331

All are invited