

Department of Mathematics & Statistics

GRADUATE STUDENT SEMINAR

Speaker: Supranee Lisawadi

Title: *Parameter Estimation by the Method of Moments for the Two-Sided Birnbaum-Saunders Distribution*

Date: Thursday, November 29, 2007

Time: 2.30 pm

Location: College West 307.20

Abstract: Life-time Birnbaum-Saunders distribution is commonly used in practical applications of the reliability theory for products with failure due to a development of fatigue cracks. In this talk we consider a rectangular metal block which is fixed from two sides. A periodic loading is applied to its middle part and this leads to a development of a fatigue crack. Assume that at the beginning the length of the crack was $x_0 = 0$, and after each loading we measure the crack length and obtain a sequence of nondecreasing number x_1, x_2, \dots . First, we are interested in the prediction of the crack length after n -th loading. After, we are interested in finding a distribution of the time when the blocks breaks down. The method of moments is considered and the expected simulation results for small, moderate and large sample sizes will be performed.

Supervisor: A Volodin