

Statistical Seminars

Title: “A Flexible Test for longitudinal data: The case of Recurrent Events”

Speaker: Gideon KD Zamba, Department of Biostatistics, The University of Iowa

Date: 6 February 2014

Time: 12.00

Room: 607, 6th floor, Evelpidon building

Abstract

Goodness-of-fit of the distribution function governing the time to occurrence of a recurrent event is considered. We develop a chi-square type of test based on a nonparametric maximum likelihood estimator (NPMLE) of the inter-event time distribution for recurrent events. The test compares a parametric null to the NPMLE on k partitions of a calendar time over a study monitoring period. Small sample and asymptotic properties of the proposed statistic are investigated using four variants; and their performances assessed against a sequence of Pitman's alternatives. Simulation results for Exponential and Weibull lifetime models are discussed. The approach is then applied to a real-life recurrent event problem.