

GRADUATE SEMINAR

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Change Point Analysis

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3:30P.M.

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Abstract: The point at which a process undergoes a significant shift from its usual course is known as change point. Detection of change points is useful in modelling and prediction of time series and is found in application areas such as medical condition monitoring, climate change detection, speech and image analysis, and human activity analysis. Change point detection is intended to be performed less frequently to review the performance over a more extended period of time and tries to identify times when the probability distribution of a stochastic process or time series changes. The problem concerns both detecting whether or not a change has occurred, or whether several changes might have occurred, and identifying the times of any such changes. In this seminar, I will introduce change point detection with special case - maximum likelihood estimate of a single change point in a sequence of independent and identically distributed Poisson random variables which are dependent on some covariates.