

**Department of Mathematics, Statistics and
Computer Science
St. Francis Xavier University**



presents

**Time Series Analysis of Canadian Monthly
Unemployment Rates**

by

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B.Sc. Advanced Major Thesis Presentation

Friday, February 9th, 2007 @ 2:15pm in Annex 23A

Canadian unemployment rates have vastly fluctuated over the years, from such highs as in the early 1980's and 1990's, to the lows that we see today. Time series analysis is performed with the goal of fitting a model to sequentially made observations of real life phenomena and economic data. In this paper, a model is constructed that best fits the Canadian Monthly Unemployment Rate from January 1976 to April 2002, using time series analysis. Using two statistical programs, MINITAB and R, I have obtained a SARIMA (3,1,2)(1,1,0)₁₂ model, with a high p-value above 0.8. The model is then tested for its forecasting ability, which decreases as predictions are made further in time. Decreasing forecasting ability over time is consistent with all time series models that fit data with less than 100% accuracy.

Coffee and Donuts will be served before the talk in AX24A