



## Department of Mathematics and Statistics

### COLLOQUIUM

Tuesday, February 25, 2014

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Dept. of Economics

## Stochastic Dominance via Quantile Regression with Applications to Investigate Arbitrage Opportunity and Market Efficiency

Abstract: Tests for stochastic dominance constructed by translating the inference problem of stochastic dominance into parameter restrictions in quantile regressions are proposed. They are variants of the one-sided Kolmogorov-Smirnov statistic with a limiting distribution of the standard Brownian bridge. Simulation results show their superior size and power. They are applied to the NASDAQ 100 and S&P 500 indices to investigate dominance relationship before and after major turning points. Results show no arbitrage opportunity between the bear and bull markets. Our results infer that markets are inefficient and risk averters are better off investing in the bull rather than the bear market.

4:00 – 5:00 pm

Adel Mathematics Bldg., Room 164

(refreshments at 3:45)

ACGT Seminar:

Tuesday, February 25, 11:20 – 12:20 pm, AMB 221. Speaker: Michael Falk (NAU),  
Title: The poset of pairs in a Coxeter group, and the Charney-Davis conjecture.

Applied Math Seminar (AMS)

Thursday, February 27, 12:45 – 1:35 pm, AMB 224 Speaker: Shafiu Jibrin (NAU),  
Title: Finding Analytic Center for Linear Constraints Using Infeasible Newton's Method

Friday Afternoon Undergraduate Mathematics Seminar (FAMUS):

Friday, February 28, 3:00 – 4:00 pm, AMB 164  
Speakers: TBA, Title: TBA, Faculty guest: TBA