COLLOQUIUM SPEAKER SERIES
Mathematics & Computer Sciences

Monday March 9

12:00-12:50 in room D634

John Sheriff
Assistant professor of Statistics
University of Lethbridge.

Techniques for Calibrating Derivative Security Pricing Models

Abstract
Model calibration involves the problem of identifying the stochastic process that describes the behaviour of some underlying asset based upon prices of related derivative securities. This represents a challenging and often ill-posed problem. This challenge is exacerbated as one employs more complex models of the stochastic process describing market prices in an attempt to more accurately capture observed financial market behaviour. Examples of such models include jump-diffusion processes and/or processes incorporating deterministic, or stochastic, volatility. The talk will discuss the problem of calibrating jump-diffusion and deterministic volatility models of stock price, using information contained in available option prices. Regularization and the use of evolutionary algorithms are introduced as two techniques for meeting the calibration challenge.

Everyone is welcome !