**For Favour of Posting**

# THE CHINESE UNIVERSITY OF HONG KONG

## Department of Statistics

will present a seminar entitled

## Justification of Some Folklore in Finance and Insurance

by

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on

**Tuesday, 23 March 2010**
**2:00pm – 3:00pm**

in

**Lady Shaw Building LT6**
**The Chinese University of Hong Kong**

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**Abstract:**

In modern competitive financial market, providing more tailor-made products is necessary for ensuring profit-making business. For decades, theoretical and empirical efforts from both academia and practitioners have been devoted to investigate the forms of insurance that are most popular. For example, in his works (1971, 1974), Nobel Laureate in economics and mathematician Arrow proved that any rational risk-averse customer should prefer deductible insurance policies. By contrast, in the last few dozen years, almost all empirical studies have revealed a very different story; indeed, a significant proportion of people prefer insurances with full coverage up to a certain limit. Despite many scientific attempts, there is still lack of a rigorous mathematical justification of this sociological enigma.

On the other hand, optimal insurance decision problems under behavioral framework have long been known in the actuarial community, their satisfactory solutions have to-date been missing in literature. One of the main reasons of their nearly absence in mathematics literature could be the highly non-convex and nonlinear nature of any problems formulated in this behavioral context, and this leads to the unsuitability of application of common optimization methods.

In the first part of my talk, I shall discuss about our recent work that links the mentioned "theoretical-empirical" conflict on insurance buying behavior to our solution to the mentioned behavioral optimal insurance decision problem; as a consequence, a mathematical bridge is now built between actuarial science and behavioral finance.

Besides, the trading strategy of ‘Buy-And-Hold for superior stock and Sell-At-Once for inferior stock’, as suggested by the conventional wisdom of many fundamentalists and investors, has long been prevalent in Wall Street; without much scientific justification, they normally attribute the reason of applying this strategy to sufficient market efficiency and empirical experience. In the second part of my talk, I shall provide a unified (algebraic!) principle to support this strategy from a pure mathematical standpoint. Finally, its correlation to seasonal effects in financial markets will be indicated.

All are Welcome