

## RMI Research Workshop Series

	Session 1	Session 2
<b>Speaker:</b>	<a href="#">Prof Rene Garcia</a> Université de Montréal	<a href="#">Prof Zhu Qiji</a> Western Michigan University
<b>Title:</b>	<a href="#">Bond Liquidity Premia</a>	<a href="#">Instability of Replicating Option Pricing and the Financial Crisis</a>
<b>Date / Time:</b>	6th February 2009, 3.00pm – 4.10pm	6th February 2009, 4.30pm – 5.40pm
<b>Venue:</b>	<a href="#">Block S16-04-30 Tutorial Room</a>	
<b>Chair-person:</b>	Prof Xia Yingcun, National University of Singapore	

*Light refreshments will be served during the break (4.10pm – 4.30pm)*

**Session 1: Abstract**

This paper extends an arbitrage-free term structure model to measure the value of liquidity from observed coupon bonds. Estimation produces a persistent liquidity factor driving on-the-run premia across all maturities. This factor is priced across interest rate markets and its impact is pervasive through time, even outside crisis periods. We find that an increase in the value of liquidity predicts not only lower risk premia for *both* on-the-run and off-the-run bonds but also higher risk premia on Libor loans, swap contracts and corporate bonds. Linkages between risk premia in different markets and the valuation of liquidity obtained from on-the-run premia suggest that different securities serve, in part and to varying degrees, to fulfill investors uncertain future needs for cash. To support this hypothesis, we study the economic determinants of the liquidity risk factor. We find that liquidity covaries with changes in aggregate uncertainty, as measured by the volatility implied in S&P500 options, and with changes in monetary stance, as measured by bank reserves and monetary aggregates.

**About the speaker**

After his Ph.D. in Economics from Princeton University in 1992, René Garcia joined the Université de Montréal, where he held the Hydro-Québec Chair in Risk Management and was a Research Fellow of the Bank of Canada. In 2007, he became full professor at the EDHEC Business School in Nice (France). He is the scientific director of the Centre for Interuniversity Research and Analysis on Organizations (CIRANO) and the editor of the Journal of Financial Econometrics, published by Oxford University Press. His most recent research focuses on the evaluation of asset pricing models accounting for higher moments, the analytical solution of asset pricing models, the use of simulation methods for computing optimal dynamic portfolios, the analysis of hedge fund returns, and the equilibrium modeling of the term structure of interest rates.

**Session 2: Abstract**

We will use an elementary example to show that the widely used classical idea of pricing options by a replicating portfolio corresponding to a trading strategy that is not stable. Some of the pricing mechanisms for other financial derivatives also share this instability. This, from one perspective, sheds lights on the cause of the current financial crisis. We then discuss an alternative robust option pricing and trading strategy based on information theoretical techniques and report testing results for this method on US historical market data.

**About the speaker**

Jim Zhu is a professor at Western Michigan University. He also held visiting positions at University of Montreal, Simon Fraser University, University of Victoria, Peking University and Fudan University. Jim is interested in variational analysis and its applications in finance, optimization and control systems. His research in the area of finance is largely stimulated by practical problems related to trading. He published extensively in these areas and his joint monograph with J. Borwein Techniques of Variational Analysis is highly influential. Jim is currently serving as an associate editor for the Journal of Set-Valued and Variational Analysis and he had served on the editorial board of SIAM Journal on Optimization.

