# The Hong Kong Polytechnic University
# Department of Applied Mathematics

# Colloquium

## Replication under Price Impact and Martingale Representation Property

### by

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## Abstract

We consider a financial model where the prices of risky assets are quoted by a representative market maker who takes into account an exogenous demand on stocks. We show that in this model every contingent claim can be replicated with an arbitrary accuracy with respect to $\mathcal{L}_\infty$-norm. The proof is based on the result of independent interest, which shows that the family of equivalent probability measures that allow for the Martingale Representation Property is dense in $\mathcal{L}_\infty$-norm. The presentation is based on joint papers with Sergio Pulido.

**Date :   27 November, 2017 (Monday)**
**Time :   11:00a.m. – 12:00noon**
**Venue : TU801, The Hong Kong Polytechnic University**


**\* \* \*    ALL ARE WELCOME    \* \* \***