



DEPARTMENT OF APPLIED MATHEMATICS

應 用 數 學 系

**The Hong Kong Polytechnic University  
Department of Applied Mathematics**

**Colloquium**

**Conditional Davis Pricing**

by

**Prof. Kasper Larsen**

**Department of Mathematical Sciences, Carnegie Mellon University, U.S.A.**

**Abstract**

We introduce the notion of a conditional Davis price and study its properties. Our ultimate goal is to use utility theory to price non-replicable contingent claims in the case when the investor's portfolio already contains a non-replicable component. We show that even in the simplest of settings - such as Samuelson's model - conditional Davis prices are typically not unique and form a non-trivial subinterval of the set of all no-arbitrage prices. Our main result characterizes this set and provides simple conditions under which its two endpoints can be effectively computed. We illustrate the theory with several examples. Joint work with Mete Soner (ETH) and Gordan Zitkovic (UT Austin)

**Biography**

Prof. Kasper Larsen got his Ph.D. in Mathematics from the University of Southern Denmark in 2004. He joined the Department of Mathematical Sciences in Carnegie Mellon University as the visiting Assistant Professor in 2004 and then the Assistant Professor in 2007. He is the Associate Professor in the same department since 2013. Prof. Larsen will join the Department of Mathematics at Rutgers University in Fall 2017. He is a well-known expert in utility maximization, market equilibrium in incomplete markets, stability analysis for financial models.

**Date : 18 April, 2017 (Tuesday)**

**Time : 11:00a.m. – 12:00noon**

**Venue : Y416, The Hong Kong Polytechnic University**

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