

Department of Mathematics
City University of Hong Kong

Colloquium

Organised by Prof. Tong YANG and Dr Xianpeng HU

Complete Solution to the Most General Nonlinear Filtering Problems and Its Implementation

by

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Abstract :

The famous filtering problem of estimating the state of a stochastic dynamical system from noisy observations is of central importance in engineering. The problem is reduced to solve the Duncan-Mortensen-Zakai (DMZ) equation in real time. The difficulty is that DMZ equation is a parabolic equation with coefficients in observations. This means that the DMZ equation is not available until in the application when the observation data are collected. In this lecture we shall show that this problem can be solved in real time theoretically. We present numerical algorithms for low dimensional problems implementation. Numerical simulations show the efficiency of our solutions.

Date: 3 April 2018 (Tuesday)
Time: 4:30 – 5:30pm
Venue: B6605, Blue Zone, Floor 6, Yeung Kin Man Academic Building (AC1)
City University of Hong Kong

**** All interested are welcome ****
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