CoE-MaSS weekly seminar series

THE DST-NRF CENTRE OF EXCELLENCE IN MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS) WOULD LIKE TO PRESENT A RESEARCH SEMINAR BY

Prof Kar Wong

(Hong Kong Polytechnic University)

"A Closed-Loop Supply Chain Network Problem Involving Competition Among Firms for New Products and Their Flow Routings"

Friday, 28 August 2015
10h30-11h30

Broadcast live from:
Videoconferencing Facility, 1st Floor
Mathematical Sciences Building, Wits West Campus

How to connect to this seminar remotely:
You can connect remotely via Vidyo to this research seminar by clicking on this link:
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You must please join in the virtual venue (called "CAM Seminar Room" on Vidyo) strictly between **10h00-10h15**. No latecomers will be added.

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Once the seminar commences, please mute your own microphone so that there is no feedback from your side into the virtual room. During the Q&A slot you can then unmute your microphone if you have a question to ask the speaker.

Title:
A Closed-Loop Supply Chain Network Problem Involving Competition Among Firms for New Products and Their Flow Routings

Subject:
Game Theory; Nash Equilibrium

Presenter:
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Abstract:
We shall develop an equilibrium model of a closed-loop supply chain (CLSC) network involving competition among firms for new products and their flow routings. Then we shall set the Nash equilibrium conditions, whereby we maximize every firm's profit by determining the optimal production quantities of new products as well as their optimal flow routings in both the forward and reverse logistics. A necessary and sufficient condition for the Nash equilibrium is established. This Nash equilibrium can be solved by the variational inequality method. A numerical example is solved to demonstrate the exact meaning of Nash equilibrium of our model.