



Industrial & Applied Mathematics

Modelling the transshipment decision in retail networks

Professor Tom Archibald

You are invited to a

Presentation by

Prof. Tom Archibald

**Professor of Business Modelling
at**

The University of Edinburgh

Date: Friday 7 March 2008

Time: 1200—1300hrs

**Venue: Building Q1-01,
Mawson Lakes Campus**

Biography



Professor Archibald is on sabbatical from the University of Edinburgh, UK: He is visiting Julia Piantadosi to work on an IEEE Research Grant and speaking with Phil Howlett, John Boland and Jerzy Filar from the 24th February to 7th March. His research interests are operations management policies for start-up companies; parallel computing and the application of stochastic dynamic programming to reservoir operation; portfolio management; management of multi-location inventory systems; operation of networks of water reservoirs and maintenance models for roads, bridges and buildings.

Abstract

In multi-location inventory systems, transshipments are often used to improve customer service and reduce cost. Determining optimal transshipment policies for such systems involves a complex optimisation problem that is only tractable for systems with few locations. Consequently simple heuristic transshipment policies are often applied in practice. This presentation proposes approximate solution methods based on simple calibrations of individual locations for problems allowing transshipments to occur throughout the period, both in response to, and in anticipation of, stockouts. Numerical experiments show strong performance of the proposed methods compared to standard policies.

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