

Session Detail Information

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Cluster : Contributed Paper Track -98- Supply Chain Management

Session Information : Wednesday Nov 16, 10:00 - 11:30

Title: Performance Analysis of Supply Chains Systems II

Chair: Philip Huang, Thornhill Professor, Virginia Tech, 1007 Pamplin Hall, Blacksburg 24061, United States, phhuang@vt.edu

Abstract Details

Title: The Bullwhip Effect in Decentralized Supply Chains

Presenting Author: Yanfeng Ouyang, Assistant Professor, University of Illinois at Urbana-Champaign, 1210 Newmark Civil Engineering Lab, 205 N Mathews Ave, Urbana IL 61801, United States, yfouyang@uiuc.edu

Co-Author: Carlos Daganzo, Professor, University of California at Berkeley, 416 A McLaughlin Hall, University of California at Berkeley, Berkeley CA 94720, United States, daganzo@ce.berkeley.edu

Abstract: This paper examines decentralized supply chains with general inventory replenishment policies. It presents: (i) demand-independent tests to determine if the bullwhip effect arises; (ii) exact formulae for the variance of the stage-n order stream under ergodic demand; and (iii) the variance-reduction benefits of advance demand information.

Title: Six Sigma in Supply Chain Environment

Presenting Author: Mahour Parast, Ph.D. Candidate, University of Nebraska-Lincoln, 175 NE Hall, IMSE Department, Lincoln NE 68588, United States, mmellatparast3@unl.edu

Co-Author: Erick Jones, University of Nebraska-Lincoln, 175 NE Hall, Lincoln NE, United States, ejones2@unl.edu

Abstract: The objective of this paper is to introduce and define Six Sigma concept within a supply chain environment. Six Sigma has been traditionally applied and implemented within a firm. However, with the emergence of supply chain management and inter-firm networks new definition of Six Sigma needs to be developed. The paper introduces a conceptual model for Six Sigma in a supply chain environment.

Title: New MILP Formulations for Flowshop Scheduling

Presenting Author: Suresh Pitty, Manufacturing Engineer, Singapore Petroleum Corporation, 1 Maritime Square #10-10, HarbourFront Centre, Singapore 099253, Singapore, suresh.sivanandam@spc.com.sg

Co-Author: I. A. Karimi, Associate Professor, National University of Singapore, Department of Chemical and Biomolecular Engineering, 4 Engineering Drive 4, Singapore Sg 117576, Singapore, cheiak@nus.edu.sg

Abstract: In this paper, we address the makespan minimization problem for a flowshop with No Intermediate Storage. We develop several new MILP formulations that do not exist in the literature and bring into light one of the earliest formulations in Chemical Engineering literature that had apparently missed the eyes of OR/MS researchers. We discuss the performance of 18 different MILP models with a novel ranking methodology.

Title: Holonic Supply Chain: A Simulation Study

Presenting Author: Philip Huang, Thornhill Professor, Virginia Tech, 1007 Pamplin Hall, Blacksburg 24061, United States, p Huang@vt.edu

Abstract: Intense market competition has forced business organizations to rethink their competitive strategy. This research examines a new business model, holonic supply chain, which proposes a different business structure where a supplier of major component parts can interact and cooperate with other suppliers to accomplish the common goal of meeting customer requirements in terms of quality, cost, quantity, and due date. A simulation model will be built to study the performance of this new approach.
