



Logistics Scheduling with Batching and Transportation

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Date: Wednesday, February 21st, 2007

Time: 1-2 pm

Room: Lecture Theatre 6

Abstract: We study a general two-stage scheduling problem, in which jobs of different importance are processed in the first stage on a processor and then, in the second stage, the completed jobs need to be batch delivered to various pre-specified destinations in one of a number of available transportation modes. Our objective is to minimize the sum of weighted job delivery time and total transportation cost. The problem involves not only the traditional performance measurement, such as weighted completion time, but also transportation arrangement and cost, key factors in logistics management.

We draw an overall picture of the problem complexity for various cases of problem parameters accompanied by efficient algorithms for solvable cases. On the other hand, we provide for the most general case an approximation algorithm of performance guarantee.

Bio: Bo Chen is Professor of Operational Research, Warwick Business School, University of Warwick. He received his PhD in Operational Research from Erasmus University, The Netherlands, and since then has been faculty of the University of Warwick. He was ESRC Senior Management Research Fellow (UK) during 1997-2000, Visiting Professor of Stanford University (US) in 2003, and Chair Professor of Tsinghua University (China) in 2005. He has been Fellow of the UK Operational Research Society since 2002. His research interests include scheduling theory and applications, real-time optimization, combinatorial optimization and decision analysis.