

The Hong Kong Polytechnic University
Department of Logistics and Maritime Studies
Research Seminar

New Algorithm for Yard Space Allocation Problem with a Time Dimension

by

Ms WANG Tiantian
PhD Student
Department of Logistics and Maritime Studies
The Hong Kong Polytechnic University

Date: 16 December 2016 (Friday)
Time: 2:30pm-3:30pm
Venue: M103, Li Ka Shing Tower
The Hong Kong Polytechnic University

(Conducted in English)

Abstract:

Logistics optimization plays a critical role for modern companies in minimizing their costs to gain competitive advantage. In this report, we study the port yard space allocation problem with a time dimension. In port terminals, space should be allocated in yards for inbound and transit cargos. Requests for container space occur at different times during the planning period and made for different quantities and sizes of containers. In this paper, we study space allocation under these conditions. It aims to minimize the space totally used, where cargos arrive and leave at different times with different quantities of containers arranged in the yard. We first reduce the problem to a two-dimension packing problem with a time dimension. Since the problem is NP-hard, we develop a heuristic algorithm. In previous work related to this problem, several classical heuristic algorithms have been developed, but the results of them are far away from the lower bound. In this paper, we develop a new heuristic algorithm which will improve the results of the classical heuristic algorithms.

Bio:

WANG Tiantian is currently a PhD Candidate at the Department of Logistics and Maritime Studies, the Hong Kong Polytechnic University, and a PhD candidate at the School of Management, Zhejiang University. She received her Bachelor Degree (2013) from Shandong University.

Please email to irene.lam@polyu.edu.hk for enquiries.

All are welcome!