



Asia-Pacific Operations Research Center

亚太运筹中心

学术报告

题目： Mathematical Modeling of Performance Evaluation for a Synchronized Zone Order Picking System

报告人： Sydney C.K. Chu (朱进强) & Pan Li (潘莉)

The University of Hong Kong

时间： 6月25日(星期一)下午4:00

地点： 思源楼 1013 室

摘要： Order picking is the process of retrieving items from storage areas to meet customer's requirement, and is the most labor-intensive operation in warehouse. In order to operate efficiently, the order picking process needs to be delicately designed and optimally controlled. In this talk, performance of a low-level picker-to-part order picking system with synchronized zone is studied. First, an analytical model studying the performance of three routing and storage strategy combinations are introduced, followed by a simulation model to further study the impact of various design parameters and operational policies. The results obtained from the analytical models are compared and validated in simulation experiments; and they appear to provide acceptable approximation results. The simulation model in the second section has shown that the routing, storage policies, demand patterns, order, batch and zone sizes have tremendous effect on the efficiency.

报告人简介： Prof. Sydney Chu is currently a professor specializing in Operations Research at the Department of Mathematics, The University of Hong Kong. He received his bachelor and master degrees from Cornell University in Operations Research & Industrial Engineering; and his doctoral in Operations Research from Columbia University. He is also elected a Fellow of the Institute of Mathematics and its Applications (FIMA) in 2011. He has worked for research and consulting organizations both in U.S. and in Hong Kong; and has published many articles in optimization and applied Operations Research modeling in areas such as location, allocation, distribution, planning and scheduling.

Dr. Li Pan has completed her PhD study at the Department of Mathematics, The University of Hong Kong (Sep 2007-Mar 2012). In 2007, she received her bachelor degree from the Department of Applied Mathematics, Dalian University of Technology in Information and Computing Science. Her main areas of interest are Operations Research and Computations, especially on modeling applications and algorithms design for warehouse logistics and supply chain processes. She has published and presented research findings in international journals and conferences in OR and related areas.