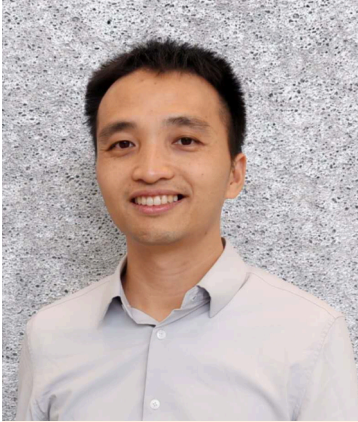


THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Department of Information Systems, Business Statistics and Operations Management
Department of Industrial Engineering & Decision Analytics
JOINT SEMINAR ANNOUNCEMENT



Optimizing Product Bundling and Pricing: From Size-Based Promotions to Single Bundle Design

by

Dr. Xiaobo LI
Assistant Professor, National University of Singapore

DATE 8 November 2024 (Friday)
TIME 10:30 am - 11:45 am
VENUE 1/F Classroom 1027, LSK Business Building

ABSTRACT

This talk explores a comprehensive approach to product bundling and pricing strategies, focusing on both practical implementations and theoretical foundations. We begin by examining customized size-based bundling promotions, addressing complexities in product costs and customer preferences through a novel model that optimizes both promotion pool selection and pricing. Next, we present an efficient convex optimization method for pricing bundles based on size, offering flexibility across various customer valuation distributions. Moving forward, we proposed a unified approach, component pricing with bundle size discounts, which include most of existing bundling mechanisms as special case. We demonstrate its capacity to outperform other mechanisms, particularly when product costs are heterogeneous. Finally, we introduce a framework for single bundle design, optimizing both the bundle and individual product prices to maximize profitability. These studies provide a unified perspective on pricing and bundling, with applications to real-world retail scenarios, offering both profit maximization and consumer welfare benefits.

BIOGRAPHY

Xiaobo Li is an assistant professor in the Department of Industrial Systems Engineering and Management at the National University of Singapore. He received his Ph.D. in Industrial Engineering from the University of Minnesota in 2018. His research mainly focuses on robust optimization, discrete choice modeling, and dynamic programming, with applications in revenue management, data-driven decision-making, and supply chain management. His team won the prestigious 2021 MSOM data-driven competition.

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