Joint Webinar CIRRELT, MobilOpt and Canada research chair in integrated logistics

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A DECOMPOSITION APPROACH TO A MULTI-COMMODITY TWO-ECHELON DISTRIBUTION PROBLEM

Abstract: In this talk, we present a complex distribution problem in a two-echelon supply chain where three sets of stakeholders are involved: suppliers, distribution centers, and customers. Multiple commodities are collected from the suppliers and delivered to the customers through distribution centers for consolidation purposes. The problem is named the Multi-Commodity two-echelon Distribution Problem (MC2DP). We develop a solution approach based on the decomposition in two subproblems, associated with the collection and delivery phases, respectively, and the subproblems' sequential solution. The computational results compared both on randomly generated instances and a case study for the collection and delivery of fresh food products (fruits and vegetables) through a short and local supply chain using a set of distribution centres located in the French department of Isère show the impact of the instance characteristics on the solution approaches and strategies.

About the speaker: Since September 2019, Claudia Archetti is Associate Professor in Operations Research at ESSEC Business School in Paris. She was previously Associate Professor at the University of Brescia. She teaches courses for undergraduate, master and PhD students in OR and logistics. The main areas of the scientific activity are: models and algorithms for vehicle routing problems; mixed integer mathematical programming models for the minimization of the sum of inventory and transportation costs in logistic networks; exact and heuristic algorithms for supply-chain management; reoptimization of combinatorial optimization problems. Claudia Archetti has carried out the scientific activity in collaboration with Italian and foreign colleagues and published joint papers with some of the best researchers at the international level. She is author of more than 70 papers in international journals. She was Area Editor of Computers and Operations Research. She is Associate Editor of Omega, Transportation Science, Networks, TOP and EURO Journal of Computational Optimization and member of the Editorial Board of European Journal of Operational Research. Claudia Archetti is VIP3 of EURO, the Association of European Operational Research Societies, in charge of publications and communication.

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Meeting ID: 873 6872 8779 Passcode: 519113

MERCREDI / WEDNESDAY

24 février / February 24th

10h00

Ouvert à tous
Open to all

Responsables / Organizers

Maryam Darvish - Leandro Coelho

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