



Séminaire-Webinaire conjoint avec / Joint Seminar-Webinar with  
Chaire en Planification des systèmes intelligents de logistique et de transport /  
Chair on Intelligent Logistics and Transportation Systems Planning



Wenjing Guo, ESG UQAM

Operational Planning for Many-to-One-to-Many Freight Transportation

Joint the seminar in person : [To register](#) OR by Zoom: <https://uqam.zoom.us/j/81010396955>

Abstract: We investigate the operational planning of a many-to-one-to-many (MIM) freight transportation system in which an intelligent decision support platform aims to provide optimal decisions on acceptance or postponement of time-dependent shipment requests received from shippers and service offers received from carriers, decisions on shipment-to-service assignments, as well as shipment itineraries and service schedules for accepted requests and offers, respectively. Each service is made up of a sequence of segments that allow shipments to be loaded and unloaded at intermediate stops. The platform consolidates shipments in space and time, combining service segments and transfers into shipment itineraries. The platform receives requests and offers continuously over time, and decisions need to be made within limited time windows. We propose two models to formulate the optimization problem at each decision time: a myopic model that does not consider future events, and a look-ahead model that integrates forecasted requests and offers into the decision process. We also introduce a rolling horizon framework to evaluate model behaviour and develop an adaptive large neighborhood search meta-heuristic to address the models. Moreover, we discuss the results of numerical experiments and conclude with future research challenges.

Bio: Wenjing Guo is Postdoc at UQAM and CIRRELT and Assistant Professor at Wuhan University of Technology, Wuhan, China.

JEUDI / THURSDAY

25 novembre 2021, 9h30  
November 25th, 2021, 9:30

Pavillon André-Aisenstadt  
Room to be confirmed

Ouvert à tous / Open to all

Responsable / Organizer

Teodor Gabriel Crainic