



**Séminaire étudiant conjoint
CIRRELT*/GERAD/MORSC
Joint Students Seminar**

Feyza Sahinyazan

Ph.D., McGill University

Vedat Verter et/and Marie-Ève Rancourt



PRICE-FLEXIBLE TRANSPORTATION CONTRACTS FOR AID DELIVERY IN DEVELOPING COUNTRIES

ABSTRACT: East Africa is a home of many food deficit countries, even the imported food commodities fail to close this gap. For this reason, many organizations, mainly United Nation's World Food Program (WFP) deliver food aid for the last couple of decades. Millions of people rely solely on food aid. However, distributing food in the most rural areas of Africa comes with many challenges. In order to deal with them, WFP cooperates with third party transporters, instead of building its own fleet. As a result, WFP needs to collect bids and sign numerous contracts and manage them in every six months. Since these contracts are non-binding, in the sense that no penalties can be applied to non-responsive transporters; WFP experiences significant disruptions of commodity flow on their supply chain. In this paper, we aim to understand and analyze the main logistics obstacles that the transporters face, as their bids are determined by these factors. In addition, we develop a new contract design that is inspired by the notion of barrier-options, which incentivize the transporters to provide more reliable service. While doing so, we keep the focus on the ease of implementation to provide a solution that can be accepted and pursued by all stakeholders.

Note: Feyza Guliz Sahinyazan is a PhD candidate in Desautels Faculty of Management of McGill University. She is under the department of Operations Management, with a minor in Epidemiology. She holds a bachelor's and master's degree in Industrial Engineering. On her thesis, under the supervision of Prof. Vedat Verter and Prof. Marie-Ève Rancourt, she is focusing on operational challenges that humanitarian organizations face in their supply chains. Currently, they are collaborating with United Nation's World Food Programme. While attacking these problems, she uses a wide range of methodologies including real options theory, econometrics, bi-level programming, and simulation. She is a student member of CIRRELT, Canadian Operations Research Society, Production and Operations Management Society and Institute for Operations Research and the Management Sciences.

VENDREDI / FRIDAY

9 décembre 2016, 12h

December 9th, 2016, 12:00

Salle / Room 5441

Pavillon André-Aisenstadt

Université de Montréal

Pizza et boissons gazeuses fournies

Pizza and soft drinks offered

Réservé aux membres étudiants

For students members only

Maximum : 25 personnes

Inscription obligatoire au plus tard le 8 décembre / Registration required no later than December 8th

<https://symposia.cirrelt.ca/Seminaire-Etudiant/fr/register>

*** Étudiants du CIRRELT intéressés à présenter / CIRRELT students interested in presenting : Mehdi.Mahnam@cirrelt.ca**

