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Séminaire conjoint CIRRELT- CRI2GS. Joint Seminar

Amir M. Fathollahi-Fard
Université du Québec à Montréal



The Scheduled Service Network Redesign Problem

Abstract: Natural disasters, including earthquakes, floods, hurricanes, and landslides, have profound impacts on transportation service networks, particularly disrupting rail and road transportation modes. Such events often result in the destruction of critical infrastructure, such as terminals and their connections through bridges, tunnels, and rails, leading to prolonged service interruptions. To address these challenges in transportation service networks, this paper introduces an innovative extension of the classical Scheduled Service Network Design (SSND) problem, referred to as the Scheduled Service Network Redesign (SSNR) problem. The SSNR problem optimizes post-disaster networks by selecting demands and assigning them to available services, maximizing total profit. Comprehensive computational experiments using 30 test instances and sensitivity analyses are conducted to evaluate the effectiveness of the SSNR problem. The results offer actionable managerial insights for enhancing the resilience of transportation service networks against natural disasters.

Bio: Amir is a Postdoctoral Researcher at the Université de Québec à Montréal, Montreal, Canada, and an Adjunct Professor at Macau University of Science and Technology, Taipa, Macau. Dr. Fathollahi-Fard earned his PhD from École de Technologie Supérieure, University of Quebec, Montreal, Canada. His research interests include supply chain management, sustainable logistics, network design, scheduling, and operations management. With over 100 publications in respected journals such as Computers & Operations Research, Annals of Operations Research, International Journal of Production Research, and others, Amir was recognized as one of the top 1% of highly cited scholars in 2024, according to the Web of Science database.

Mercredi / Wednesday

22 janvier 2025, 10 h 30
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Université de Montréal
Pavillon André-Aisenstadt
Salle / Room 5441

Ouvert à tous / Open to all

Responsable / Organizer

Teodor Gabriel Crainic

