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PRÉSENTATION DE MOHAMMAD RAHIM AKHAVAN KAZEMZADEH DANS LE CADRE DE SON EXAMEN PRÉDOCTORAL

Conférencier : MOHAMMAD RAHIM AKHAVAN KAZEMZADEH, DIRO, UdeM
Titre : MULTILAYER NETWORK DESIGN
Date et heure : Le mardi 5 août 2014, à 14h
Salle : 5441, Pavillon André-Aisenstadt

Abstract

Network design is a well-known class of problems in combinatorial optimization, and has numerous applications. Multilayer network design represents a generalized case of network design that recently showed interesting applications in the fields of telecommunication and transportation. In multilayer network design, instead of a single layer network, the network consists of multiple parallel layers. A link in each layer corresponds to a chain of links (a path) in the next upper layer. To use a link at each layer, one should pay the fixed cost of the link itself and also pay the fixed cost of the corresponding links in the next upper layer. Multilayer network design is important because it integrates the optimization of multiple layers. For example, instead of designing physical network and then designing an optimized internet network over it, a multilayer network design model helps us to optimize both networks simultaneously in a single formulation. To the best of our knowledge, there is no general formulation for multilayer network design problem that covers most applications. The goals of this thesis are: 1) developing multilayer network design formulations that cover many transportation and telecommunication applications; 2) developing solution methods to solve multilayer network design formulations based on decomposition methods, and hybridizing exact and heuristic solution methods.

Le jury est composé de :

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