



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

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**THE BENDERS DECOMPOSITION METHOD APPLIED TO  
STOCHASTIC NETWORK DESIGN PROBLEMS**

**ABSTRACT:** Benders decomposition algorithm was first proposed by Jacobus F. Benders in 1962. This method quickly became one of the most popular techniques for solving large-scale linear and mixed-integer programming problems. It aims to exploit the special structures residing in mathematical programming problems when a subset of the variables is temporarily fixed. Abounded applications of this method can be found in problems with integer and continuous variables, stochastic programs with recourse, integrated planning problems and so on.

In this presentation, we aim to briefly talk about the major drawbacks of this method and review some of the strategies proposed to boost its performance. We then present some numerical results of our proposed Benders decomposition method for the well-known multi-commodity capacitated network design problem with stochastic demands and discuss possible research directions.

**VENDREDI / FRIDAY  
17 février 2017, 12h  
February 17<sup>th</sup>, 2017, 12:00**

**Salle / Room 5441  
Pavillon André-Aisenstadt  
Université de Montréal**

**Pizza et boissons gazeuses fournies  
Pizza and soft drinks offered**

**Réservé aux étudiants  
For students only**

**Maximum : 25 participants**

**Inscription obligatoire au plus tard le 16 février / Registration required no later than February 16<sup>th</sup>**

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

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



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