

# Séminaire du CIRRELT

## Pr. Andrea Lodi

Chaire en excellence de recherche du Canada sur la science des données pour la prise de décision en temps réel Département de mathématiques et de génie industriel Polytechnique Montréal



### ON BIG DATA, OPTIMIZATION AND LEARNING

### Abstract:

In this talk I review a couple of applications on Big Data that I personally like and I try to explain my point of view as a Mathematical Optimizer -- especially concerned with discrete (integer) decisions -- on the subject. I advocate a tight integration of Machine Learning and Mathematical Optimization (among others) to deal with the challenges of decisionmaking in Data Science. For such an integration I try to answer three questions:

- 1) what can optimization do for machine learning?
- 2) what can machine learning do for optimization?
- 3) which new applications can be solved by the combination of machine learning and optimization?

#### Note:

Andrea Lodi is a leading international researcher in mixed linear and nonlinear programming. As Canada Excellence Research Chair in Data Science for Real-Time Decision-Making at Polytechnique Montréal, he holds Canada's main chair in operations research.

**JEUDI** 

19 mai 2016 14 h 00

Local 1317 Pavillon Palasis-Prince Université Laval

Ouvert à tous

Organisateur: Leandro Coelho















