Consiglio Nazionale delle Ricerche Istituto di Matematica Applicata e Tecnologie Informatiche Unità di Milano

# Cimati

Via Corti 12, 20133 Milano

## SEMINAR ANNOUNCEMENT

## Prof. Andrea Lodi

- Department of Mathematical and Industrial Engineering, Polytechnique Montréal, Canada
- Canada Excellence Research Chair in Data Science for Real-Time Decision-Making

## ON BIG DATA, OPTIMIZATION AND LEARNING



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 decision-making 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?





### Monday

February 5, 2018

11:00 - 13:00

#### ORGANISERS

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