**Industrial Automation – Second project**

Mathematical Programming: definition of the problem.

* Sets
  + i = 1, …, N Jobs
* Parameters
  + Processing time of the ith job
  + i weight of the ith job
  + Di due date of the ith job
  + M Big-M coefficient
* Decision variables
  + Xij =
  + Si starting time of the ith job
  + Ci completion time of the ith job
  + Tj tardiness
* Cost function
  + min
* Constraints
  + Big-M one job at a time

J1 before J3

J9 before J10

Completion time definition

Tardiness definition