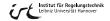
## Casadi - Important commands 1



- import casadi.\*
   This command is necessary at the beginning of your script. Imports the Casadi toolbox.
- opti = casadi.Opti()
   Creates a new optimization problem called 'opti'.
- opti.solver('ipopt')
   Chooses the ipopt solver for the optimization problem.
- x = opti.variable(m,n)
   Declares 'x' as a matrix decision variable of size m × n.
- p = opti.parameter(m,n) and opti.set\_value(p,value) Declares 'p' as a parameter of size  $m \times n$  and sets p = value.



## Casadi - Important commands 2



- opti.subject\_to(...)
  Adds constraints to the optimization problem. You may declare
  element-wise (in)equalities for vectors, nonlinear constraints and multiple
  constraints at once. Each command adds another constraint to the
  optimization problem and does not replace old ones.
- opti.minimize(...)
   Declares the objective / cost function.
- opti.set\_initial(x,value)
   Provides an initial guess for the optimization variable 'x'.
- sol = opti.solve()
  Solves the optimization problem.
- x\_solution = sol.value(x)
   Retrieves the solution of the optimization problem.

