

# Distributed optimization and its importance

## Problem formulation

$$\begin{array}{ll} \min_x & f(x) = \sum_{i=1}^N f_i(x) \\ \text{subject to} & x \in \mathcal{X}, \\ & \mathcal{X}, f_i(x) \text{ are convex} \end{array}$$

## Multi-agents scenario

Networked system where  
neighbors cooperate to  
find the optimum

