Introduction to optimization

Component
École Nationale Supérieure d'Électrotechnique d'Électronique

In brief

Code ELP: N6EM01C

Presentation

Objectives

Learn the basics of optimization methods: decision variables, objective function, minimization of nonlinear problems, least squares problems, minimization under stress
numerical optimization approach: iterative gradient methods; least squares problems; other numerical methods such as simulated annealing; network / graph problems

Description

1. Free and constrained minimization, Lagrange multipliers, convexity
2. Application 1: Nonlinear Regression, Model Registration,
3. Application 2: Newton's method for finding equilibrium points
4. Functional optimization
5. Application: minimal surfaces

Non-contractual information.
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