

AI505
Optimization

First-Order Methods

Marco Chiarandini

Department of Mathematics & Computer Science
University of Southern Denmark

Outline

Descent direction methods

How to select the descent direction?

- first-order methods that rely on gradient
- ...

descent direction d is the direction of steepest descent. Following the direction of steepest descent is guaranteed to lead to improvement, provided that the objective function is smooth, the step size is sufficiently small,