Technical University of Denmark

Constrained Optimization

Course 02612

Assignment 1

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1 Introduction

this is some report

2 Assignment

2.1 Problem 1 - Quadratic Optimization

blablablablbal

2.2 Problem 2 - Equality Constrained Quadratic Optimization

blablablablbal

2.3 Problem 3 - Inequality Constrained Quadratic Programming

From page 475 in Nocedal and Wright the following system is given.

$$\begin{aligned} \min_x q(x) = (x_1 - 1)^2 + (x_2 - 2.5)^2 \\ s.t. x_1 - 2x_2 + 2 >= 0, \\ -x_1 - 2x_2 + 6 >= 0, \\ -x_1 + 2x_2 + 2 >= 0, \\ x_1 >= 0, \\ x_2 >= 0. \end{aligned} \tag{1}$$

in MatLab a contour plot of this is made and seen in figure 1.

2.4 Problem 4 - Markowitz Portfolio Optimization

blablablablbal

2.5 Problem 5 - Interior-Point Algorithm for Convex Quadratic Programming

blablablablbal

3 Conclusion

Some conclusions things

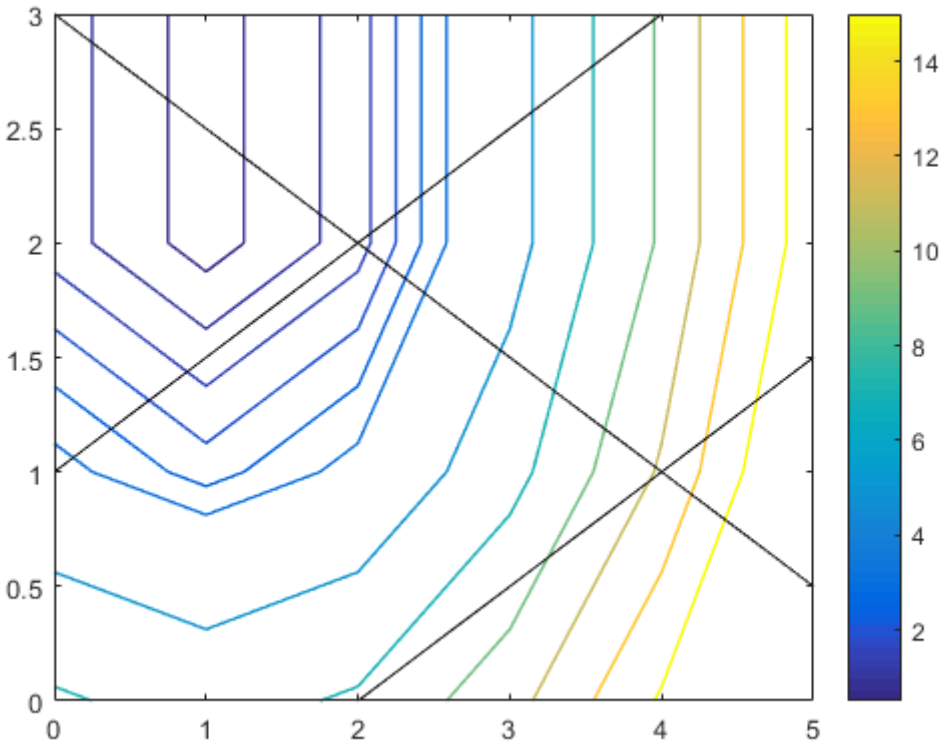

Figure 1: A contour plot of the problem.