

Exercise session 5

1. Consider (P) in exercise 10.10a) on page 99 in ASKS.

a) Rewrite (P) as

$$\begin{aligned} \min \quad & \frac{1}{2}x^T Hx + c^T x + c_0 & (\text{QP=}) \\ \text{s.t.} \quad & Ax = b \end{aligned}$$

b) Solve (QP=) with the Lagrange method.

2. Determine h_1, h_2, h_3 from the following inconsistent measurements

$$\begin{aligned} h_1 &= 1236 \\ h_2 &= 1941 \\ h_3 &= 2417 \\ h_2 - h_1 &= 711 \\ h_3 - h_1 &= 1177 \\ h_3 - h_2 &= 474 \end{aligned}$$

Minimize the least-square error associated with the measurements, i.e. solve a linear least-square problem.

3. Problem 4 on the SF1811 exam 18-01-2014.