

Fachbereich Mathematik und Informatik
Freie Universität Berlin
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Nonlinear Optimization

<http://www.zib.de/weiser/NichtlineareOptimierung/>
Homework 7

Due: Friday, June 12, 2020

Assignment 1 (4 points):

Let $U \subseteq X$ be a subspace. Show that

$$\dim U^\circ = \dim X - \dim U .$$

Assignment 2 (4 points):

Compute all KKT points for

$$\begin{array}{ll} \min & x^2 + y^2 \\ \text{s.t.} & y - \alpha x^2 + 1 = 0 , \end{array}$$

with $\alpha > 0$. Examine which of them are minimizers.