Konvexe Optimierung

5. Übungsserie

Aufgabe 33

$$h_{\delta}(x,y) = \sum_{i} \delta^{2} \left(\sqrt{1 + \left(\frac{\xi_{i}x_{0} + x_{1} - \eta_{i}}{\delta}\right)^{2}} - 1 \right)$$

$$= \sum_{i} \delta^{2} \left(\sqrt{1 + \frac{\xi_{i}^{2}x_{0}^{2} + 2\xi_{i}x_{0}x_{1} - \xi_{i}x_{0}\eta_{i} + x_{1}^{2} - x_{1}\eta_{i} - \xi_{i}x_{0}\eta_{i} - \eta_{i}x_{1} + \eta_{i}^{2}}{\delta^{2}} - 1 \right)$$