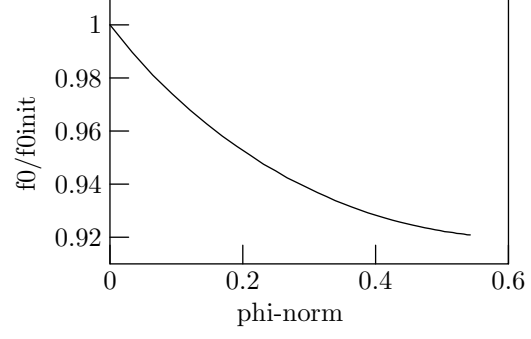
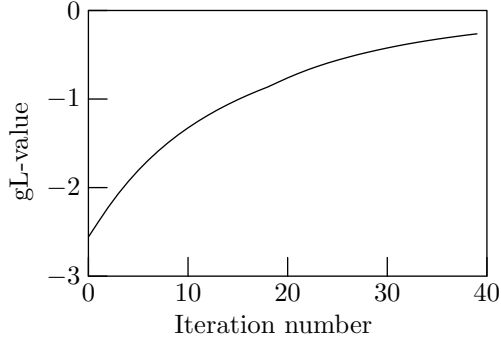


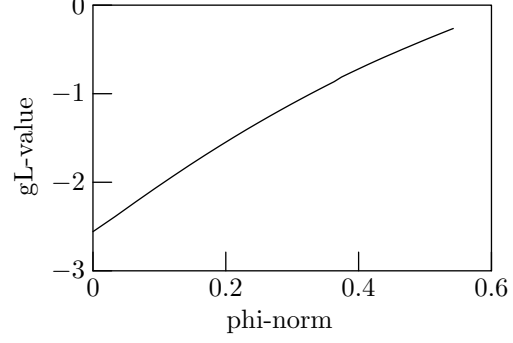
(a) Cost functions



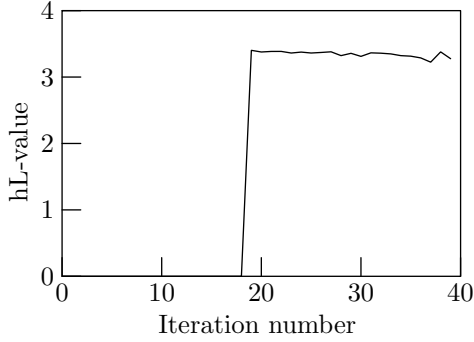
(b) Cost functions (search distance)



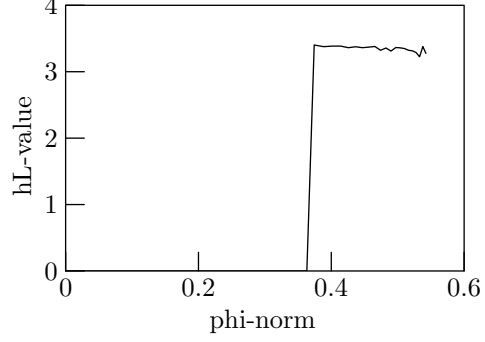
(c) Gradient of f_0 on the search path



(d) Gradient of f_0 on the search path
(search distance)



(e) Hessian of f_0 on the search path



(f) Hessian of f_0 on the search path
(search distance)

Figure 1: Numerical example of mean flow resistance minimization: cost functions and gradients and Hessians of f_0 on the search path.

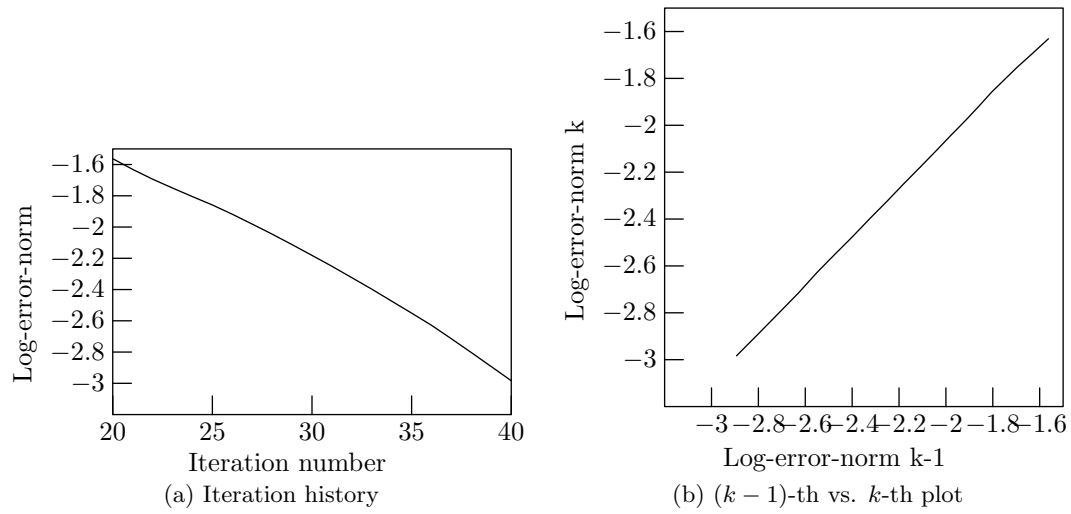


Figure 2: Numerical example of mean flow resistance minimization problem: distance $\|\phi_{(k)} - \phi^*\|_X$ from an approximate minimum point ϕ^* .