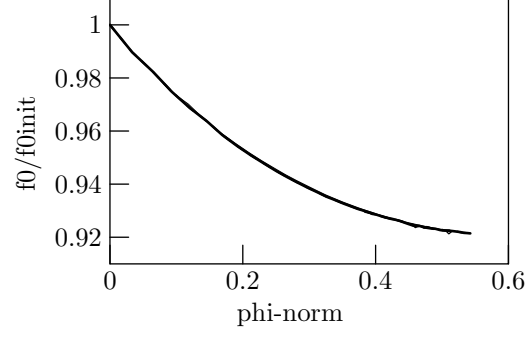
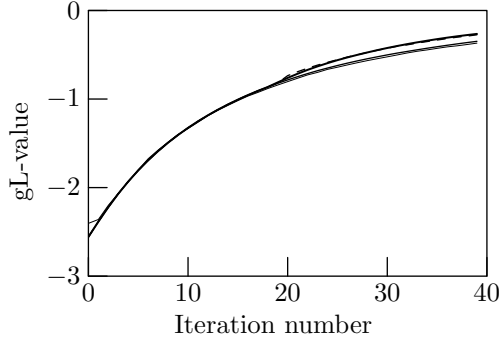


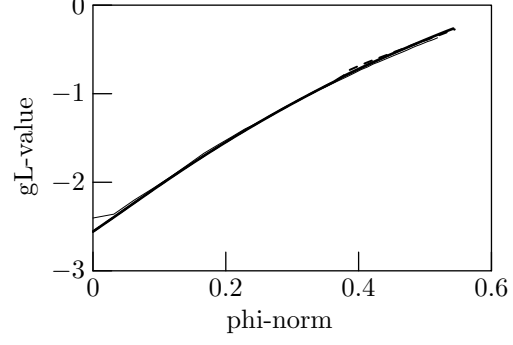
(a) Cost functions



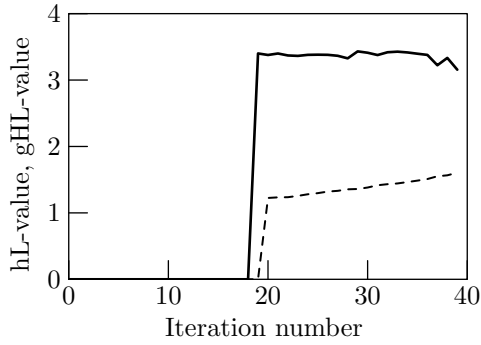
(b) Cost functions (search distance)



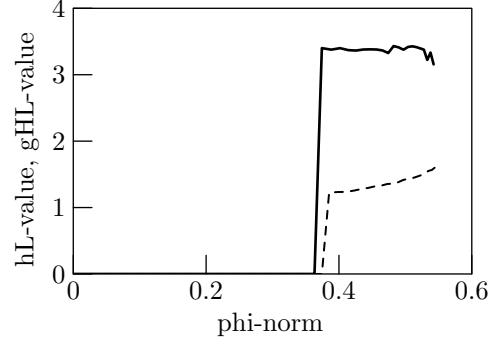
(c) Gradient of  $f_0$  on the search path



(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.

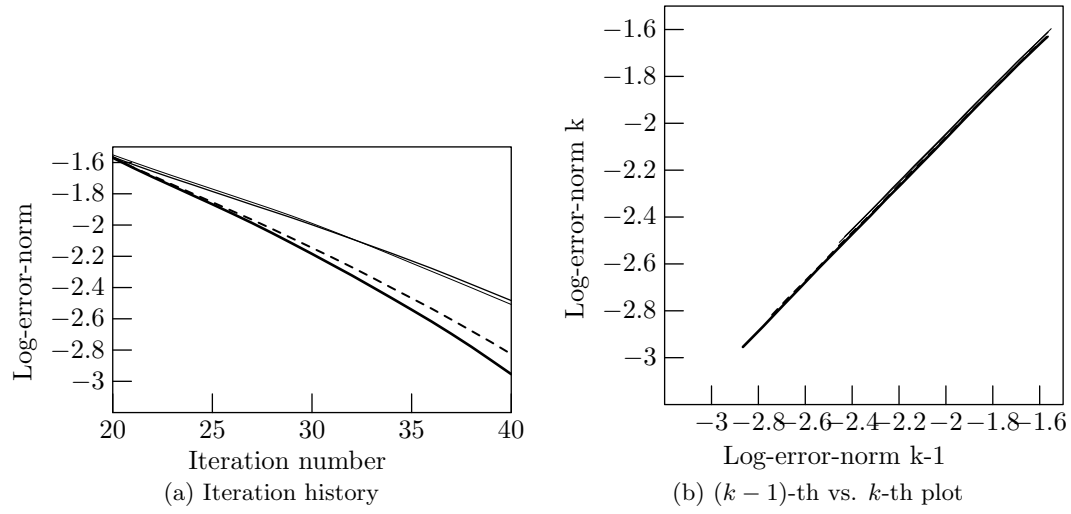


Figure 2: Numerical example of mean flow resistance minimization problem:  
distance  $\|\phi_{(k)} - \phi^*\|_X$  from an approximate minimum point  $\phi^*$ .