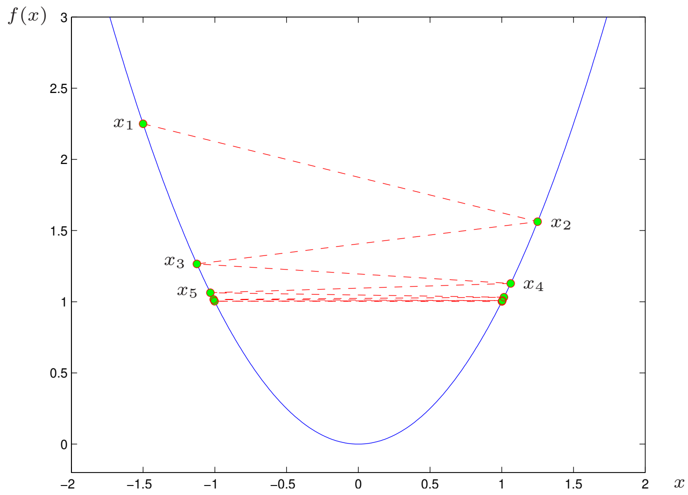
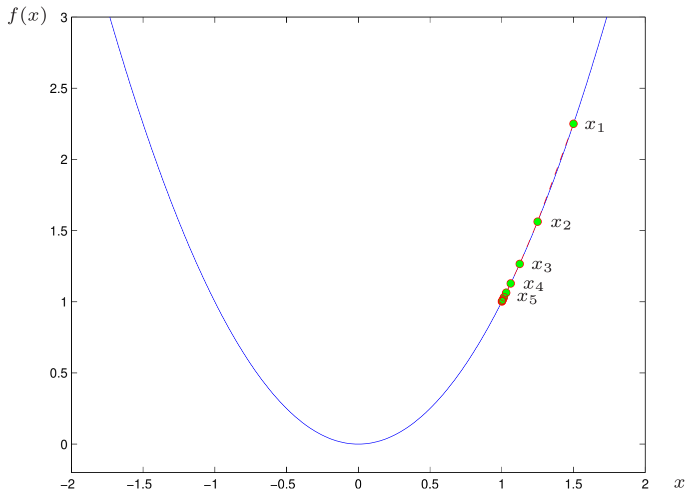
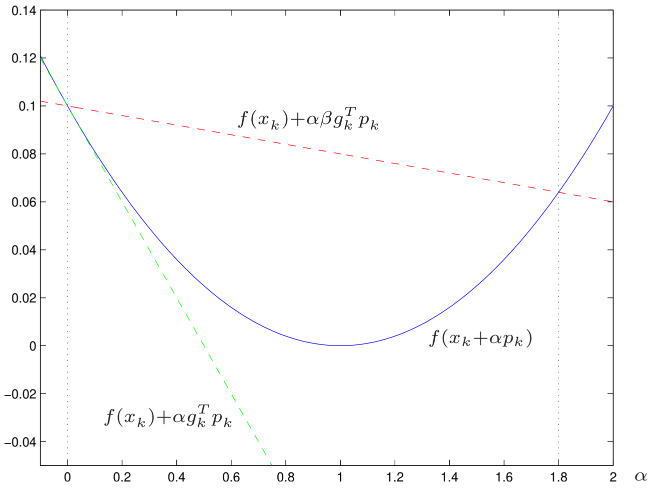

$f(x)$
3
2.5
2
1.5
1
0.5
0
x_1
x_2
x_3
x_4
x_5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
x



$f(x)$
3
2.5
2
1.5
1
0.5
0
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
x
x_1
x_2
x_3
x_4
x_5


0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−0.02
−0.04
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
α
$f(x_k)+\alpha\beta g_k^T p_k$
$f(x_k+\alpha p_k)$
$f(x_k)+\alpha g_k^T p_k$