

Number of samples drawn
at each generation

A

True covariance
matrix,

1000	0.31	0.31	0.31	0.31
500	0.31	0.31	0.31	0.31
100	0.31	0.31	0.31	0.31
50	0.31	0.31	0.31	0.31
10	0.31	0.31	0.31	0.31
	1	3	5	10

B

Estimated covariance
matrix, $\hat{\Sigma}$

0.31	0.34	0.38	0.46
0.31	0.34	0.37	0.45
0.32	0.34	0.36	0.42
0.31	0.34	0.36	0.41
0.29	0.31	0.32	0.35
1	3	5	10

Time intervals between sampling Δg (generation)

C

Nonlinearly regularized
estimates, $\hat{\Sigma}^*$

0.18	0.2	0.21	0.26
0.18	0.19	0.21	0.25
0.18	0.19	0.2	0.24
0.18	0.19	0.2	0.22
0.17	0.18	0.18	0.2
1	3	5	10