

Figure 1 is a plot showing the cumulative distribution function (CDF) of the number of iterations required for convergence for different values of K . The x-axis represents the number of iterations, and the y-axis represents the cumulative probability. A dashed red line represents the theoretical distribution. Solid lines of various colors represent the empirical distributions for $K=2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048$. As K increases, the curves shift to the left, indicating faster convergence.

