

The plot displays the convergence of the parameter estimate  $\alpha$  over 200,000 iterations. The x-axis is labeled  $N_{iteration}$  and ranges from 0 to 200,000. The y-axis ranges from 9.86 to 9.96. A horizontal red line indicates a reference value of 9.861245642460881. The black line represents the estimated value of  $\alpha$ , which starts at approximately 9.94 and converges to a value of 9.964. The plot includes a grid and a legend in the top right corner.

9.861245642460881

9.964849628641455