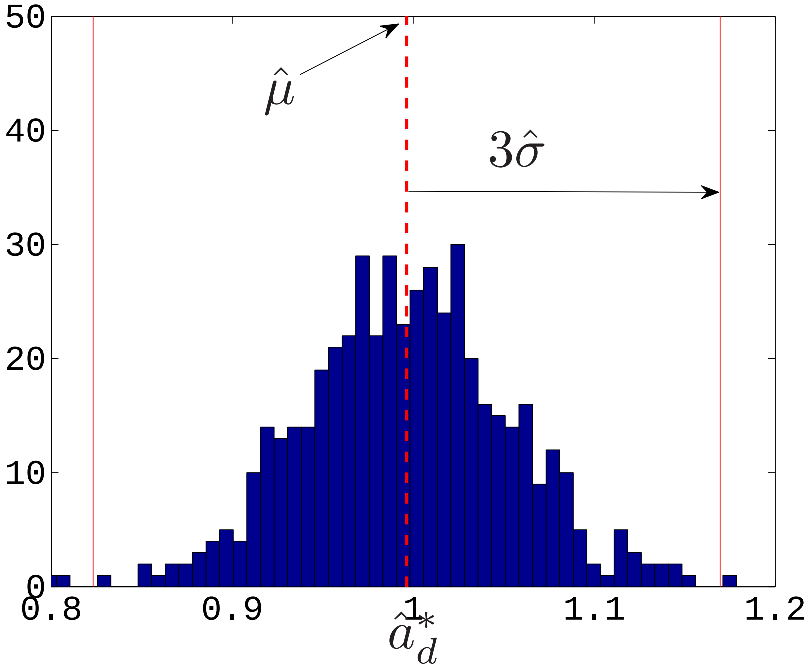

Figure 5: Histogram of the estimated a_d's. Estimated mean $\mu = 0.996408$ and estimated standard deviation $\sigma = 0.057748$.

Suppose

$$E \triangleq \{\hat{a}_d^* < 1\}. \qquad \text{recall } (a_d = e^{aT})$$

We can estimate $P(E)$, the probability of E from the simulation data as :

$$\hat{P}(E) = \frac{\text{Number of experiments in which the event occurs}}{\text{Total number of experiments}}$$

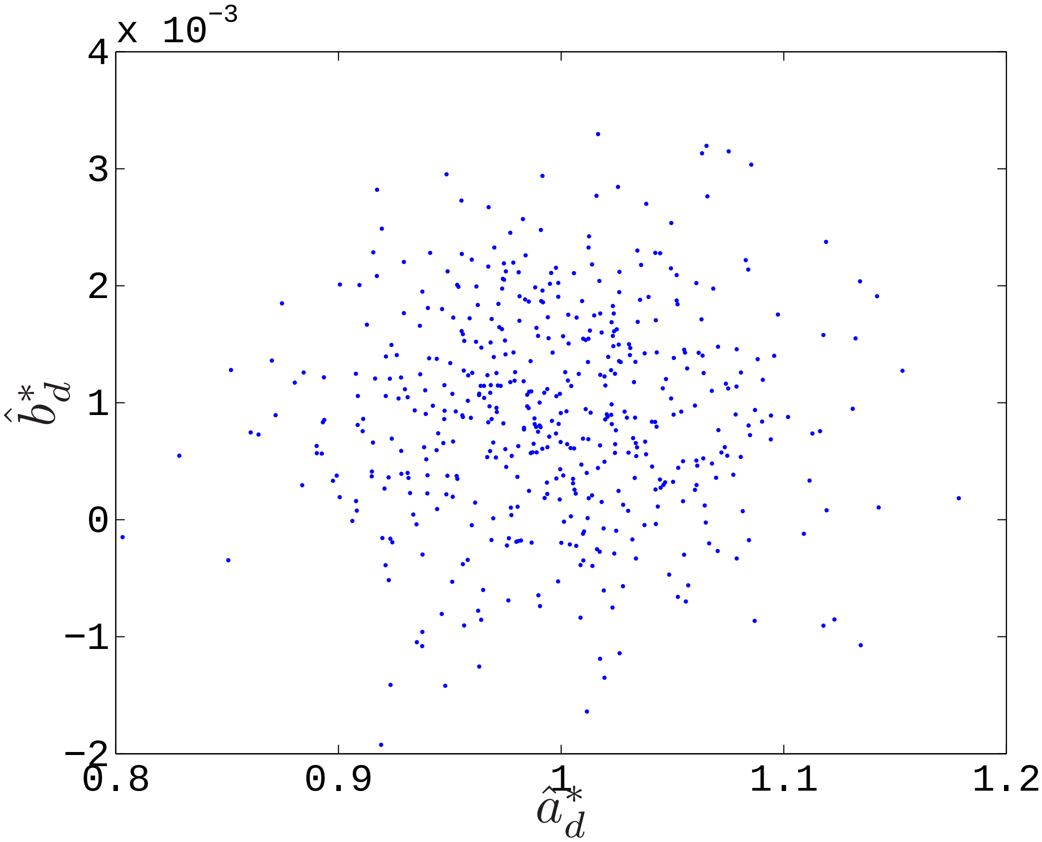

Figure 4: Estimated values of $\boldsymbol{\theta}$ from 500 experiments.

From the data, we estimate :

$$\hat{\mu} = \frac{\sum_{i=1}^{1000} \hat{a}_d^*(i)}{500}$$

$$\hat{\sigma} = \sqrt{\frac{\sum_{i=1}^{1000} (\hat{a}_d^*(i) - \hat{\mu})^2}{499}}$$