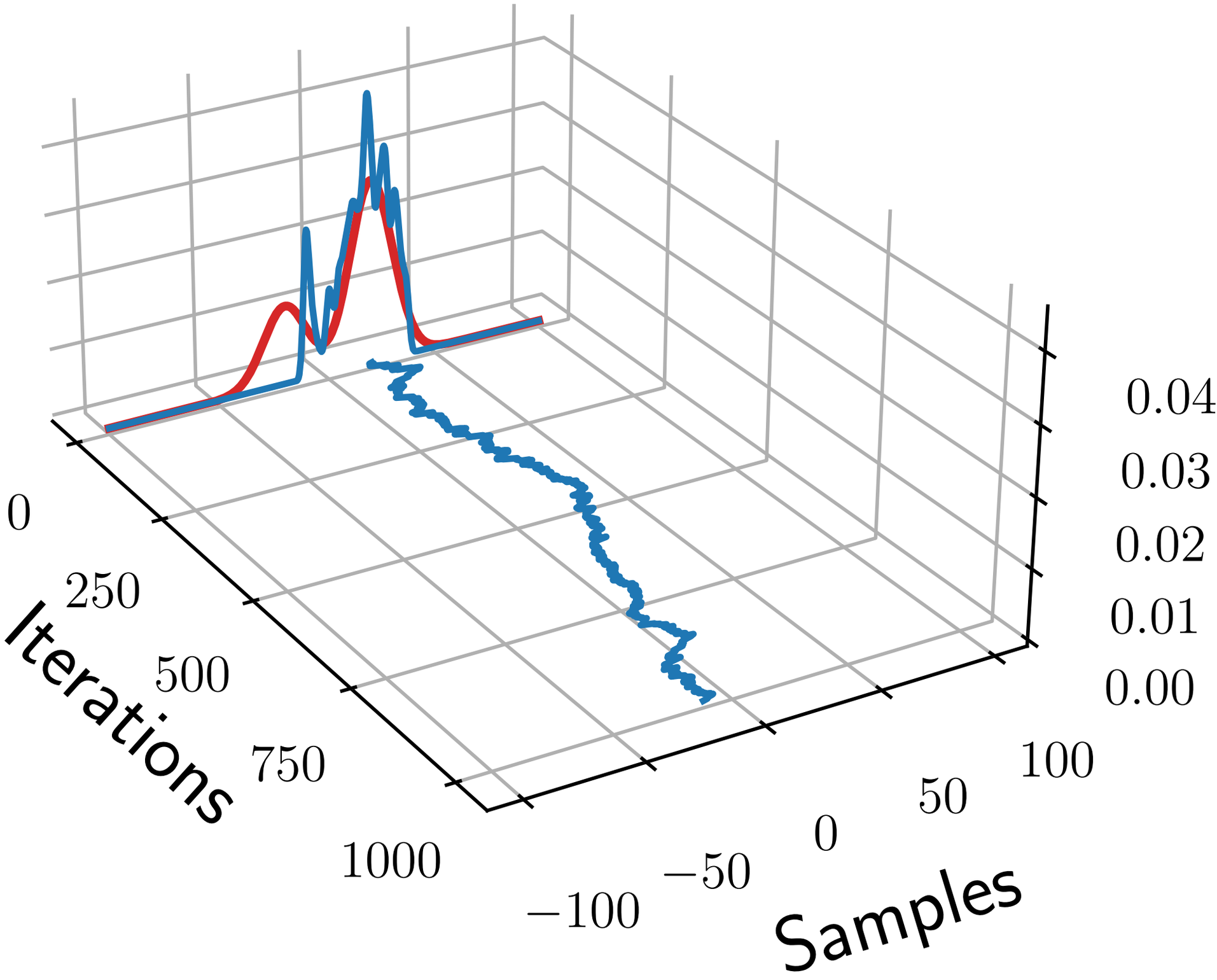MH with $\mathcal{N}(0, 1^2)$ proposal