

# automating the sampling procedure: plots for different choices of the number of steps and variance in the Brownian Bridge

Pete Rigas, McMahon Lab

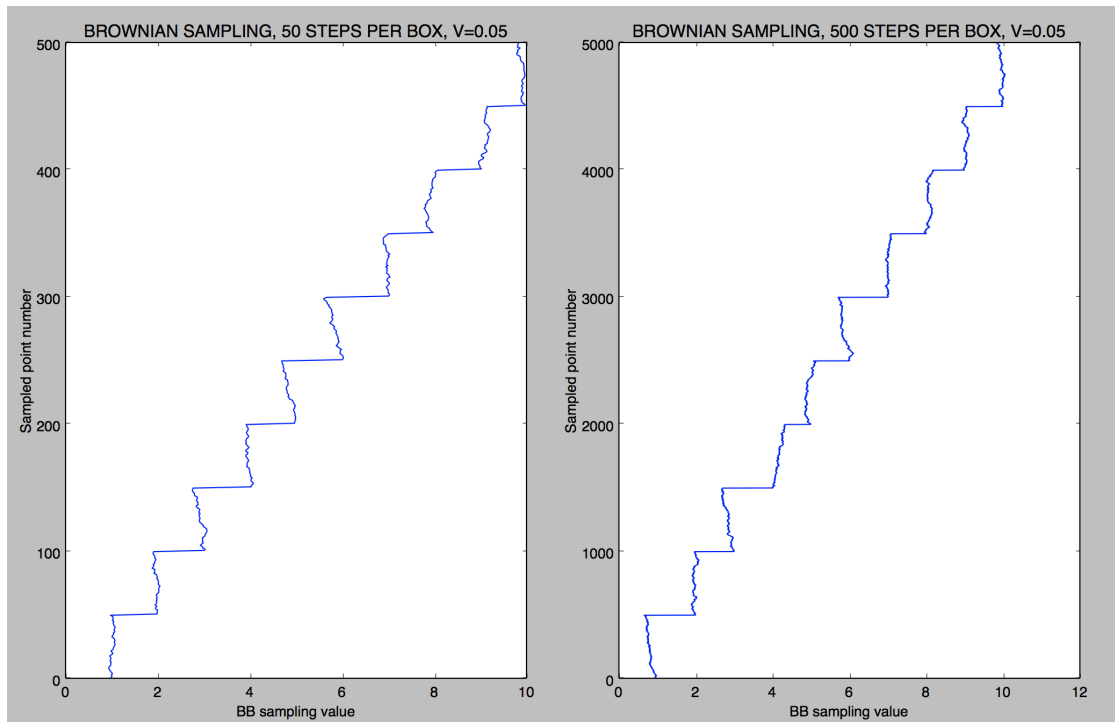
November 27, 2020

---

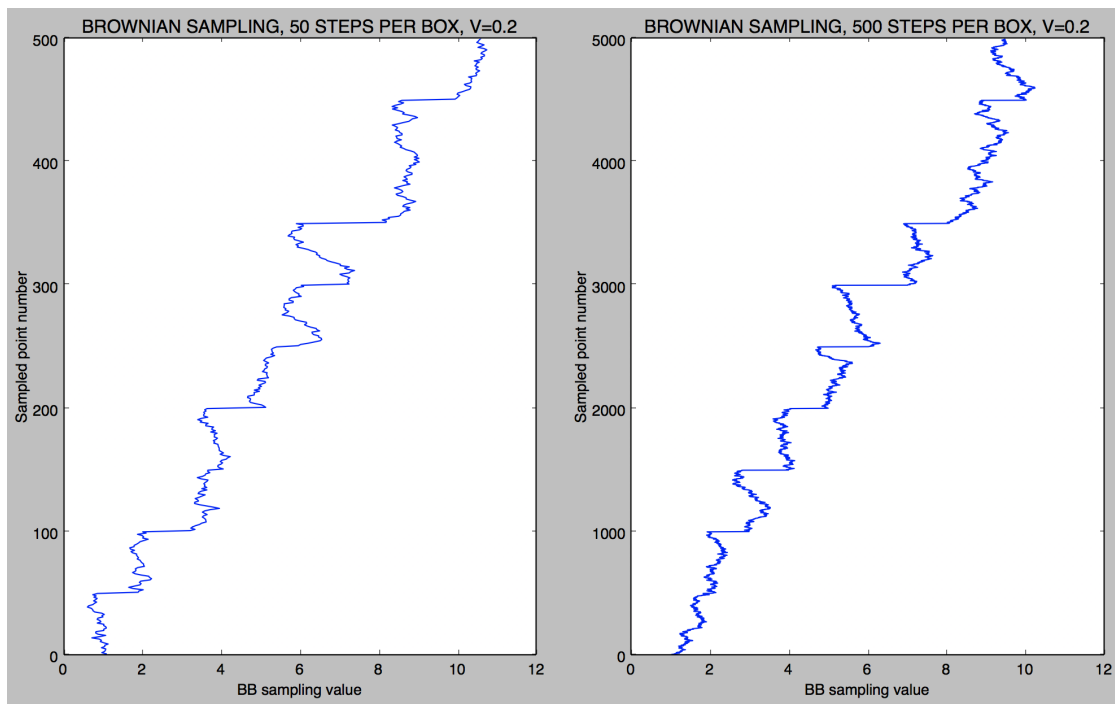
## 1 updated plots

we denote  $N$  as the total number of steps of each Brownian excursion, and  $V$  the variance  $\delta$  of the Wiener process

**1.1 CASE 1:  $N = 50$  steps per box,  $N_{\text{tot}} = 500$ ,  $\delta = 0.05$ ; CASE 2:  $N = 500$  steps per box,  $N_{\text{tot}} = 5000$ ,  $\delta = 0.05$**



**1.2 CASE 1:**  $N = 50$  steps per box,  $N_{\text{tot}} = 500$ ,  $\delta = 0.2$ ; **CASE 2:**  $N = 500$  steps per box,  $N_{\text{tot}} = 5000$ ,  $\delta = 0.2$



**1.3 CASE 1:**  $N = 25$  steps per box,  $N_{\text{tot}} = 250$ ,  $\delta = 1.3$ ; **CASE 2:**  $N = 100$  steps per box,  $N_{\text{tot}} = 1000$ ,  $\delta = 1.3$

