rand_walk_omp_diagram

March 30, 2018

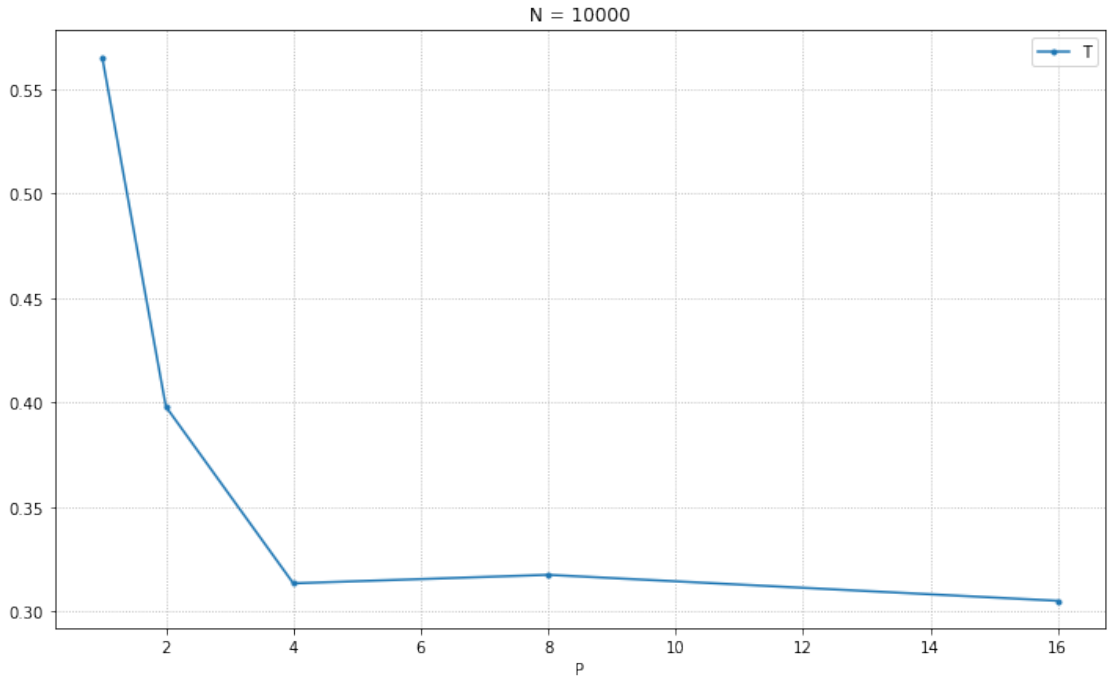
In [20]:
```
import numpy as np
import matplotlib.pyplot as plt

%matplotlib inline
```

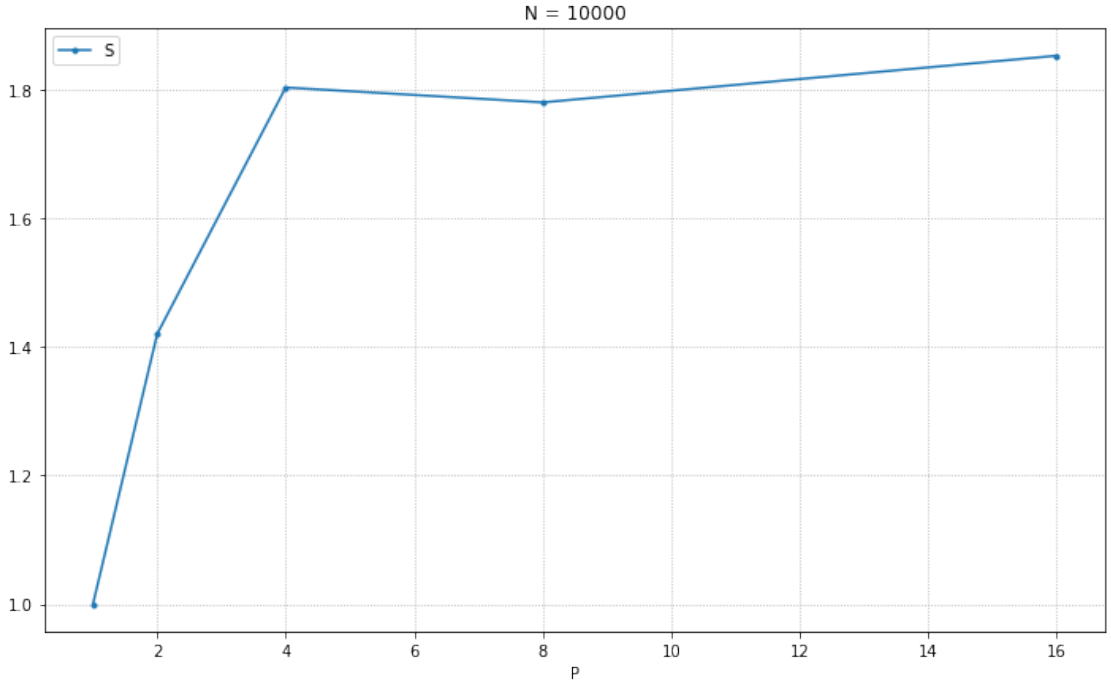
N = 10000 P.

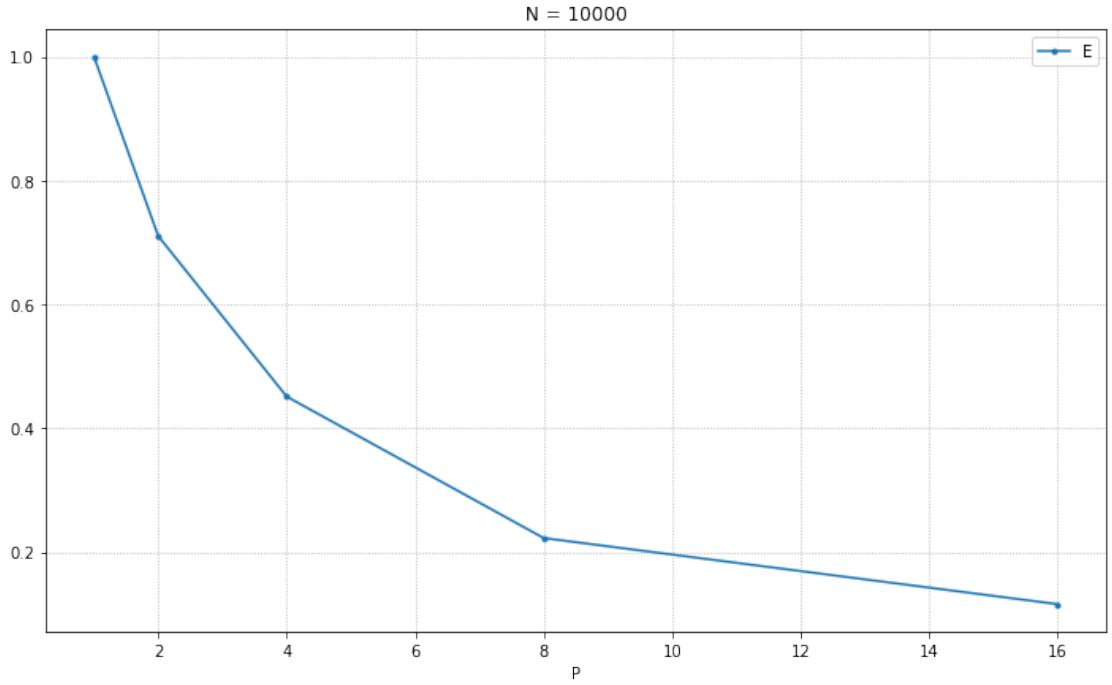
In [21]:
```
P = np.array([1, 2, 4, 8, 16])
T = np.array([0.56536, 0.39799, 0.31338, 0.31746, 0.30502])
S = np.full(T.size, T[0]) / T
E = S / P
```

In [22]:
```
plt.figure(figsize=(12, 7))
plt.xlabel('P')
plt.title('N = 10000')
plt.grid(ls=':')

plt.plot(P, T, '.-', label = 'T')
plt.legend()
plt.show()



plt.figure(figsize=(12, 7))
plt.xlabel('P')
plt.title('N = 10000')
plt.grid(ls=':')

plt.plot(P, S, '.-', label = 'S')
plt.legend()
plt.show()


plt.figure(figsize=(12, 7))
plt.xlabel('P')
plt.title('N = 10000')
plt.grid(ls=':')
```

```
plt.plot(P, E, '.-', label = 'E')
plt.legend()
plt.show()
```



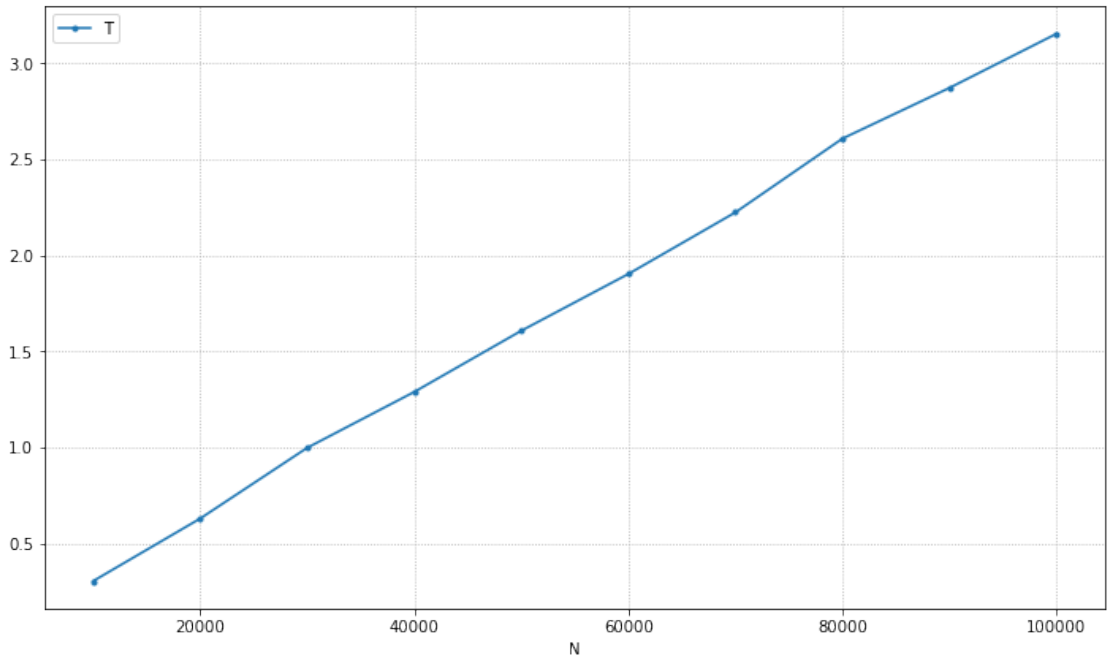


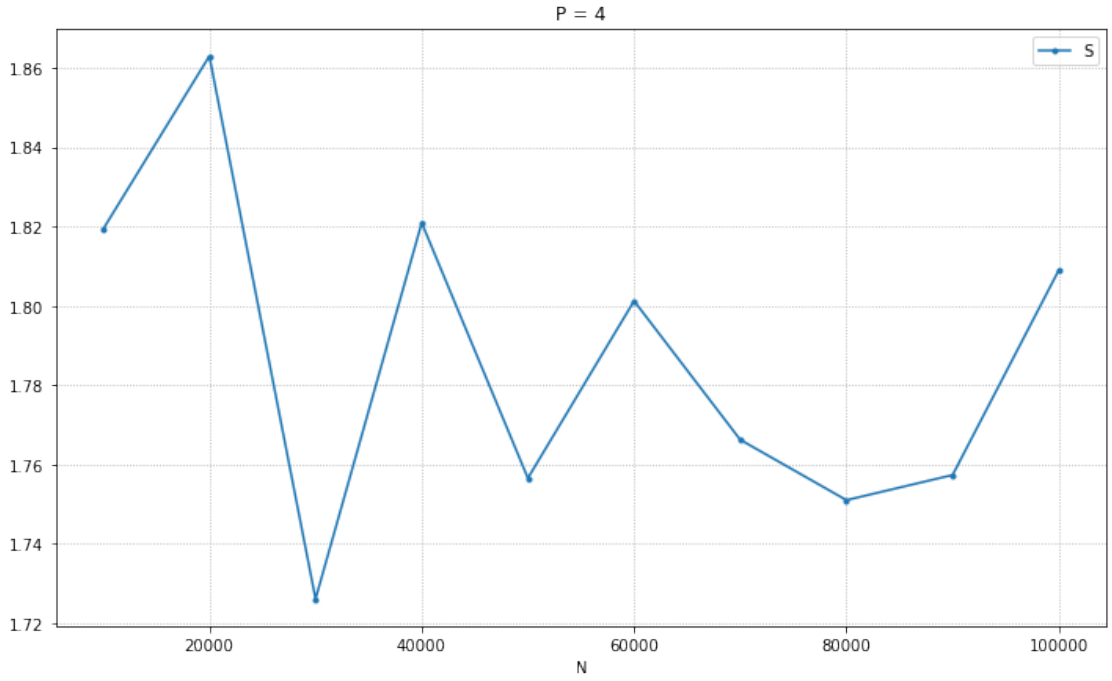


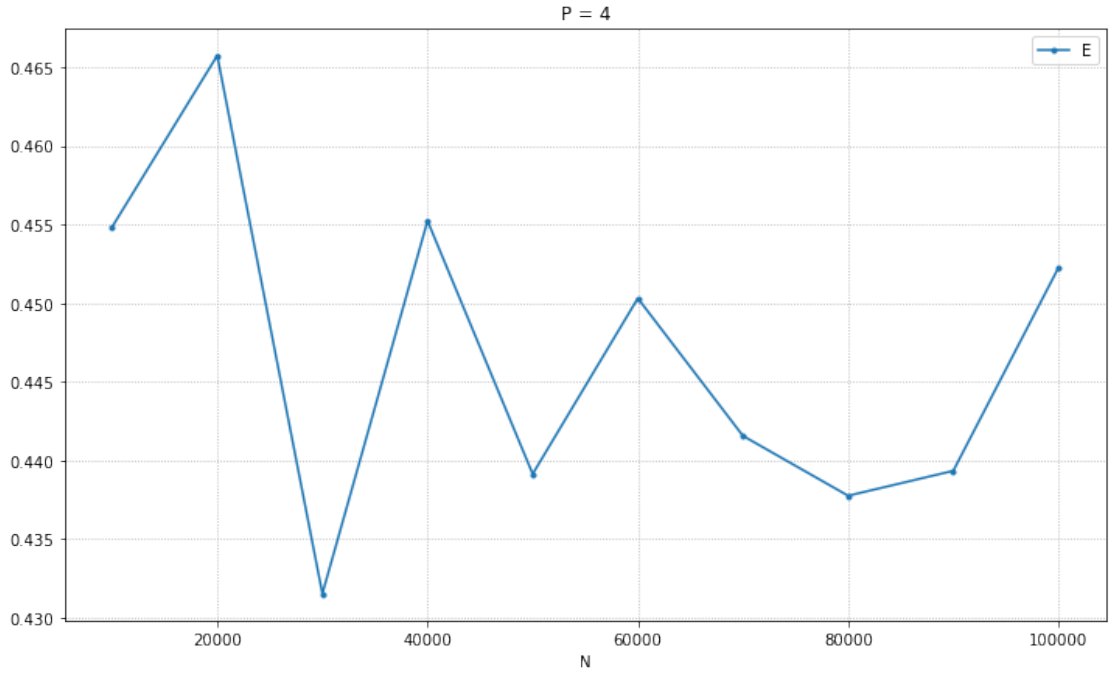
P = const (4)

```
In [23]: N = np.arange(10000, 110000, 10000)
         T_4 = np.array([0.30356, 0.62909, 0.99744, 1.28837, 1.60679, 1.90233, 2.22295, 2.60710,
         T_1 = np.array([0.55228, 1.17195, 1.72172, 2.34601, 2.82244, 3.42653, 3.92628, 4.56512,
         S = T_1 / T_4
         E = S / 4

In [24]: plt.figure(figsize=(12, 7))
         plt.xlabel('N')
         plt.grid(ls=':')

         plt.plot(N, T_4, '.-', label = 'T')
         plt.legend()
         plt.show()


         plt.figure(figsize=(12, 7))
         plt.xlabel('N')
         plt.title('P = 4')
         plt.grid(ls=':')

         plt.plot(N, S, '.-', label = 'S')
         plt.legend()
         plt.show()
```

```
plt.figure(figsize=(12, 7))
plt.xlabel('N')
plt.title('P = 4')
plt.grid(ls=':')

plt.plot(N, E, '.-', label = 'E')
plt.legend()
plt.show()
```




P = 4
S
1.86
1.84
1.82
1.80
1.78
1.76
1.74
1.72
20000
40000
60000
80000
100000
N


P = 4
E
0.465
0.460
0.455
0.450
0.445
0.440
0.435
0.430
20000
40000
60000
80000
100000
N