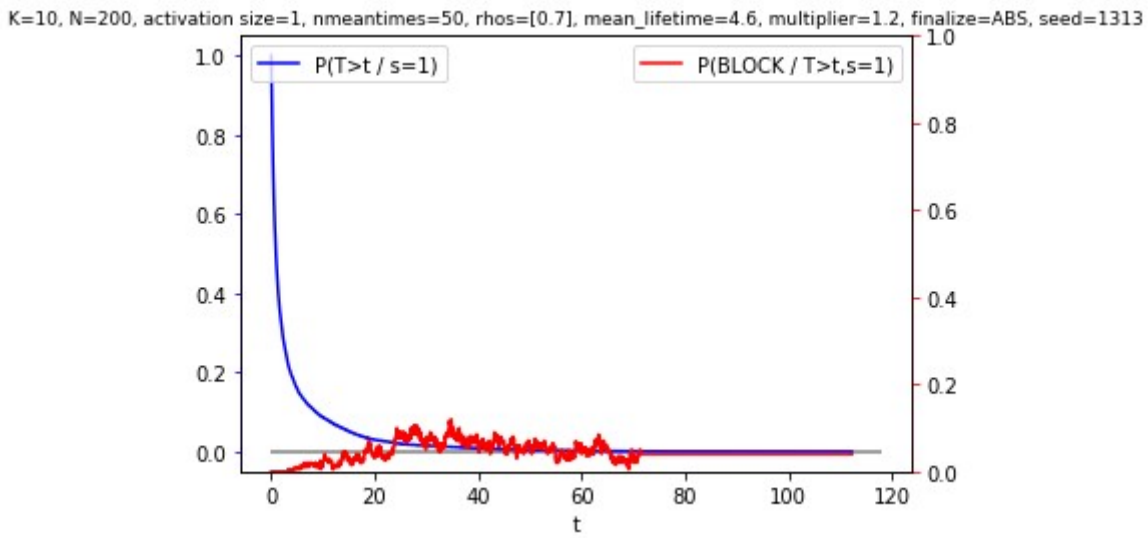
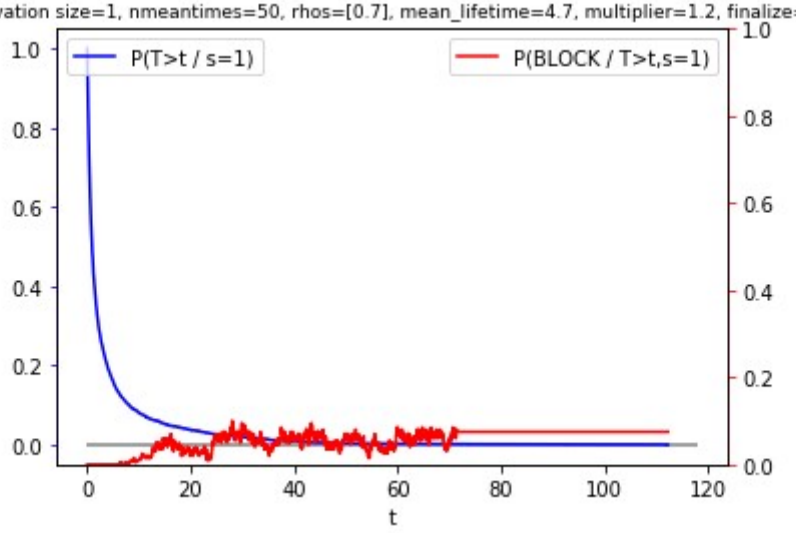
```
Python 3.6.4 |Anaconda custom (64-bit)| (default, Jan 16 2018, 10:22:32) [MSC v.1900 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 6.2.1 -- An enhanced Interactive Python.

Restarting kernel...
```

```
In [1]: runfile('E:/Daniel/Projects/PhD-RL-Toulouse/projects/Python/test/test_QB.py', wdir='E:/Daniel/Projects/PhD-RL-Toulouse/projects/Python/test')
Directory:
E:\Daniel\Projects\PhD-RL-Toulouse\projects
has been prepended to the module search path.
Log file '../../RL-002-QueueBlocking/logs/analyze_convergence_20210424_122819.log' has been open for output.
Started at: 2021-04-24 12:28:19
C:\ProgramData\Anaconda\Anaconda3\lib\site-packages\matplotlib\pyplot.py:528: RuntimeWarning: More than 20 figures have been opened. Figures created through
the pyplot interface (`matplotlib.pyplot.figure`) are retained until explicitly closed and may consume too much memory. (To control this warning, see the
rcParam `figure.max_open_warning`).
  max_open_warning, RuntimeWarning)
C:\ProgramData\Anaconda\Anaconda3\lib\site-packages\pandas\core\groupby.py:4291: FutureWarning: using a dict with renaming is deprecated and will be removed in
a future version
  return super(DataFrameGroupBy, self).aggregate(arg, *args, **kwargs)
Ended at: 2021-04-24 15:11:20
Execution time: 163.0 min, 2.7 hours
```



K=10, N=200, activation size=1, nmeantimes=50, rhos=[0.7], mean_lifetime=4.7, multiplier=1.2, finalize=ABS, seed=1313



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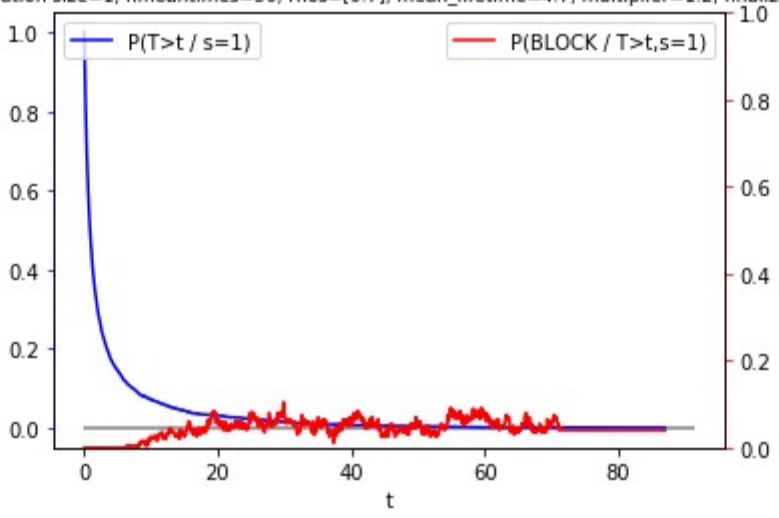

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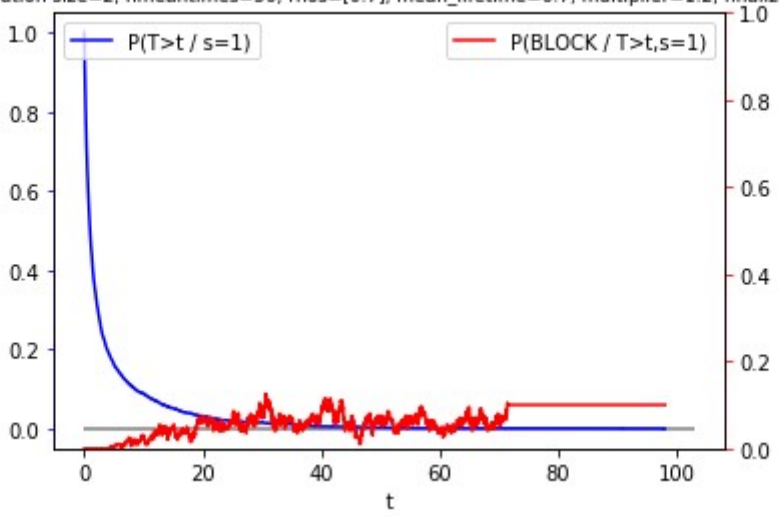
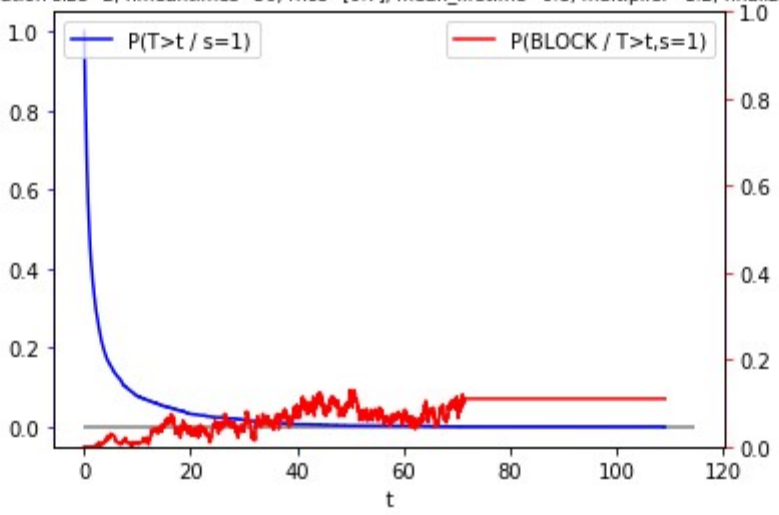


K=10, N=200, activation size=2, nmeantimes=50, rhos=[0.7], mean_lifetime=6.8, multiplier=1.2, finalize=ABS, seed=1313



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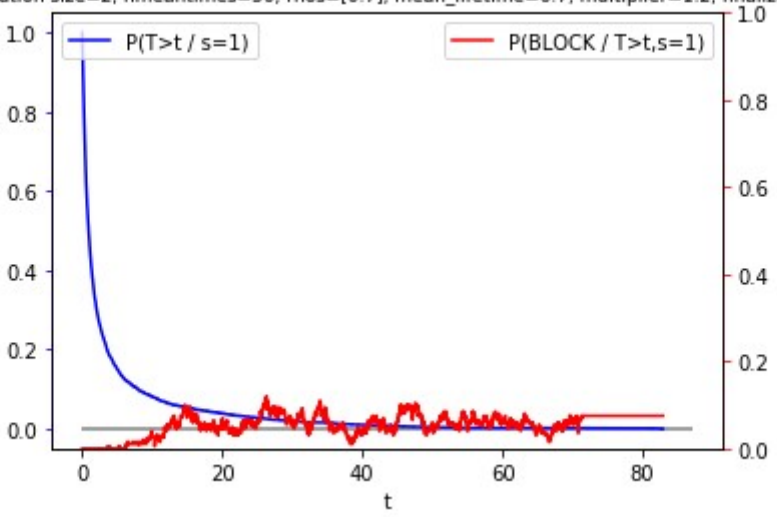
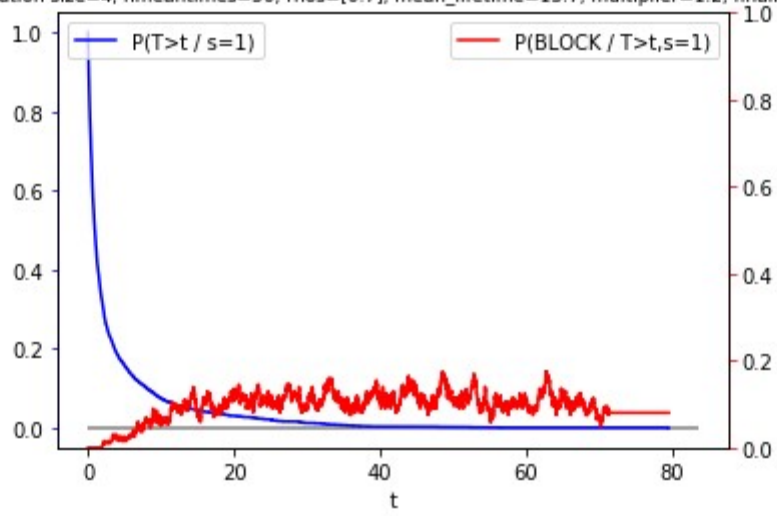
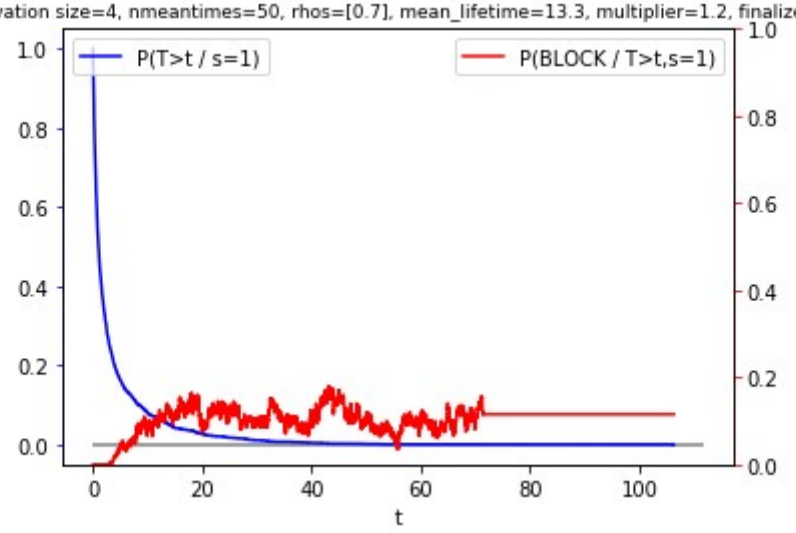


K=10, N=200, activation size=4, nmeantimes=50, rhos=[0.7], mean_lifetime=13.7, multiplier=1.2, finalize=ABS, seed=1313



K=10, N=200, activation size=4, nmeantimes=50, rhos=[0.7], mean_lifetime=13.3, multiplier=1.2, finalize=ABS, seed=1313



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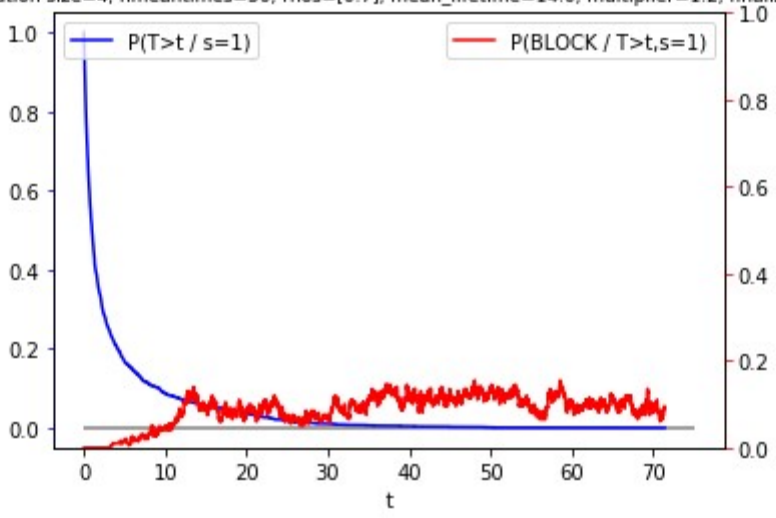
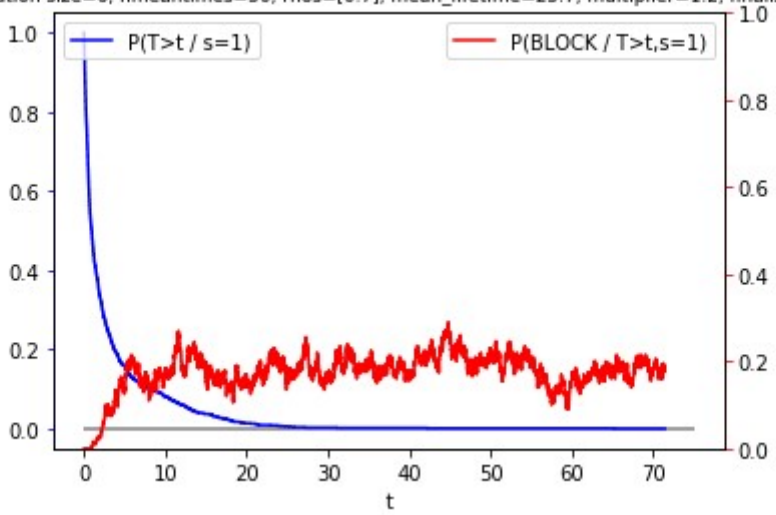
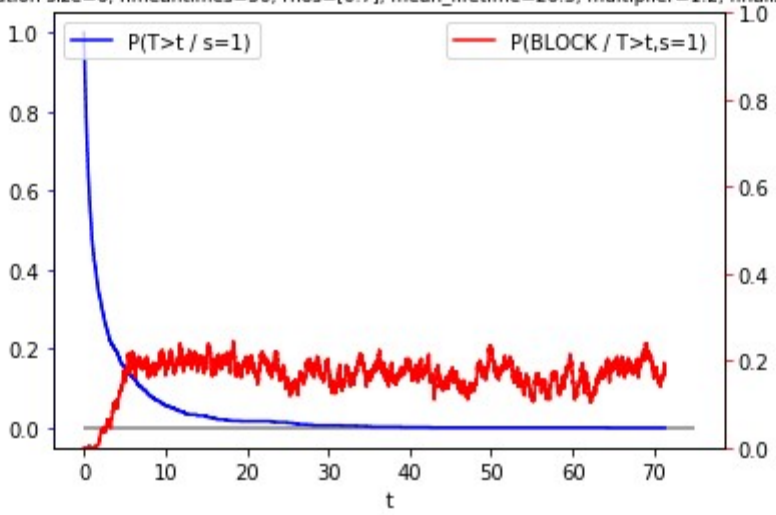


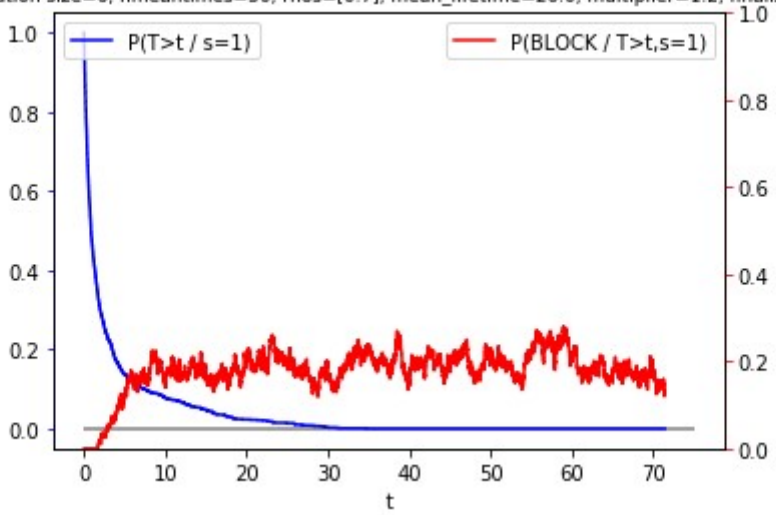
K=10, N=200, activation size=6, nmeantimes=50, rhos=[0.7], mean_lifetime=25.7, multiplier=1.2, finalize=ABS, seed=1313



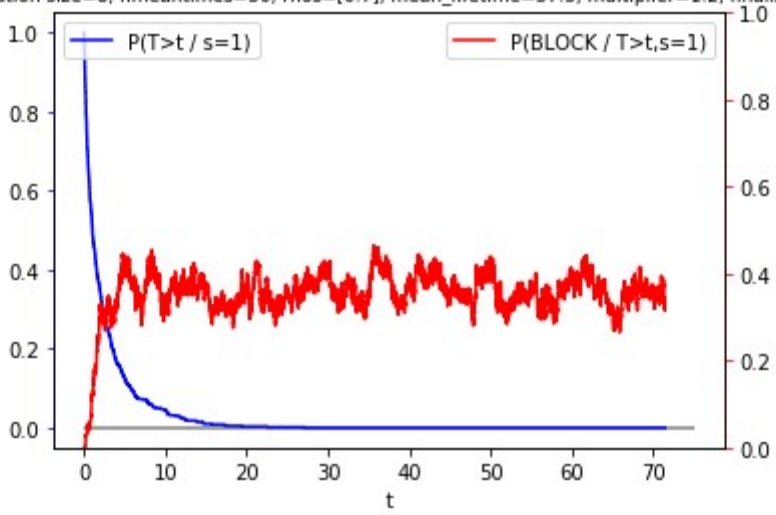
K=10, N=200, activation size=6, nmeantimes=50, rhos=[0.7], mean_lifetime=26.3, multiplier=1.2, finalize=ABS, seed=1313



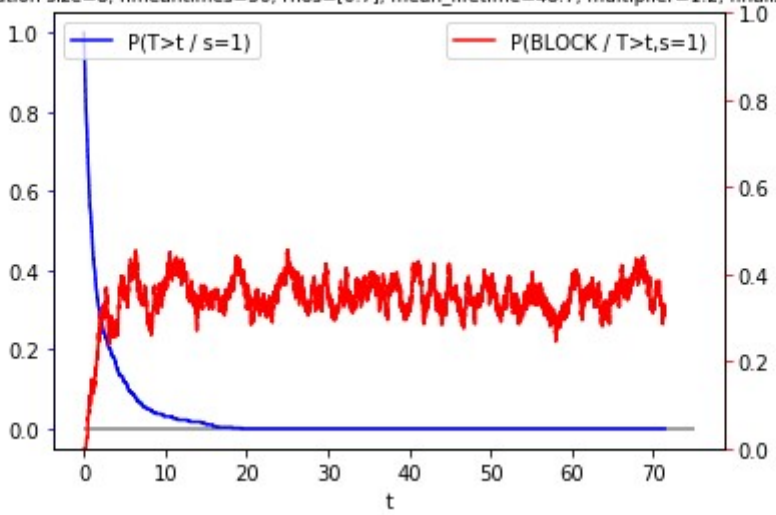
K=10, N=200, activation size=6, nmeantimes=50, rhos=[0.7], mean_lifetime=26.0, multiplier=1.2, finalize=ABS, seed=1313



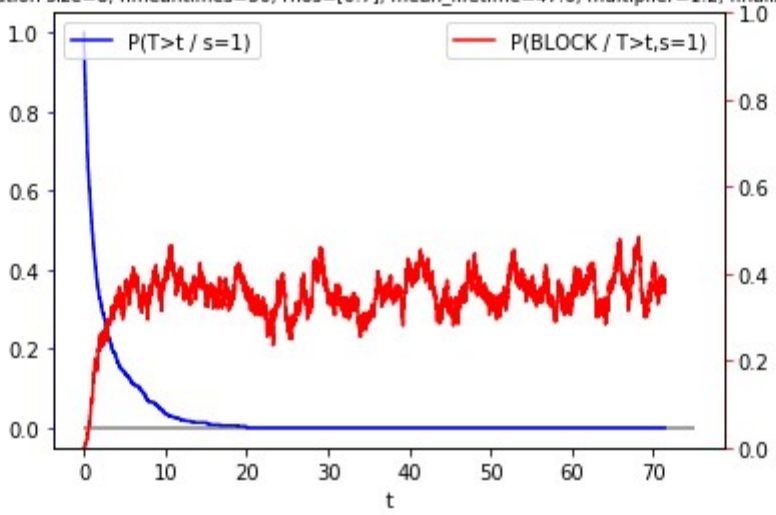
K=10, N=200, activation size=8, nmeantimes=50, rhos=[0.7], mean_lifetime=57.3, multiplier=1.2, finalize=ABS, seed=1313

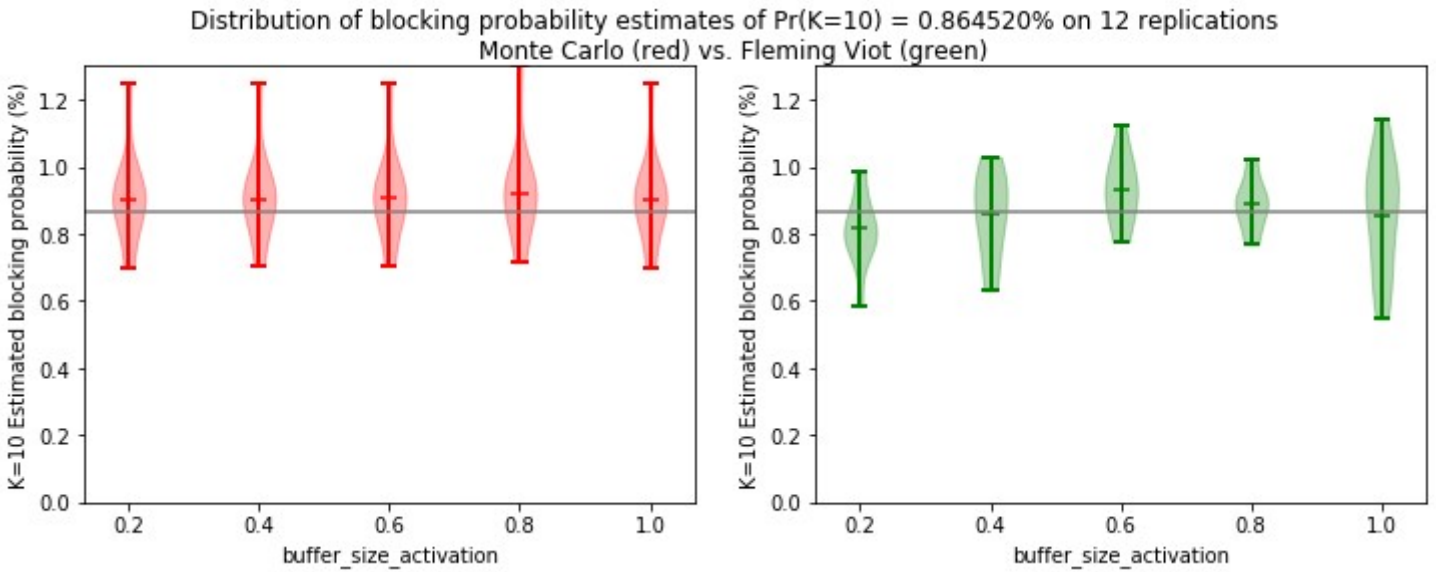


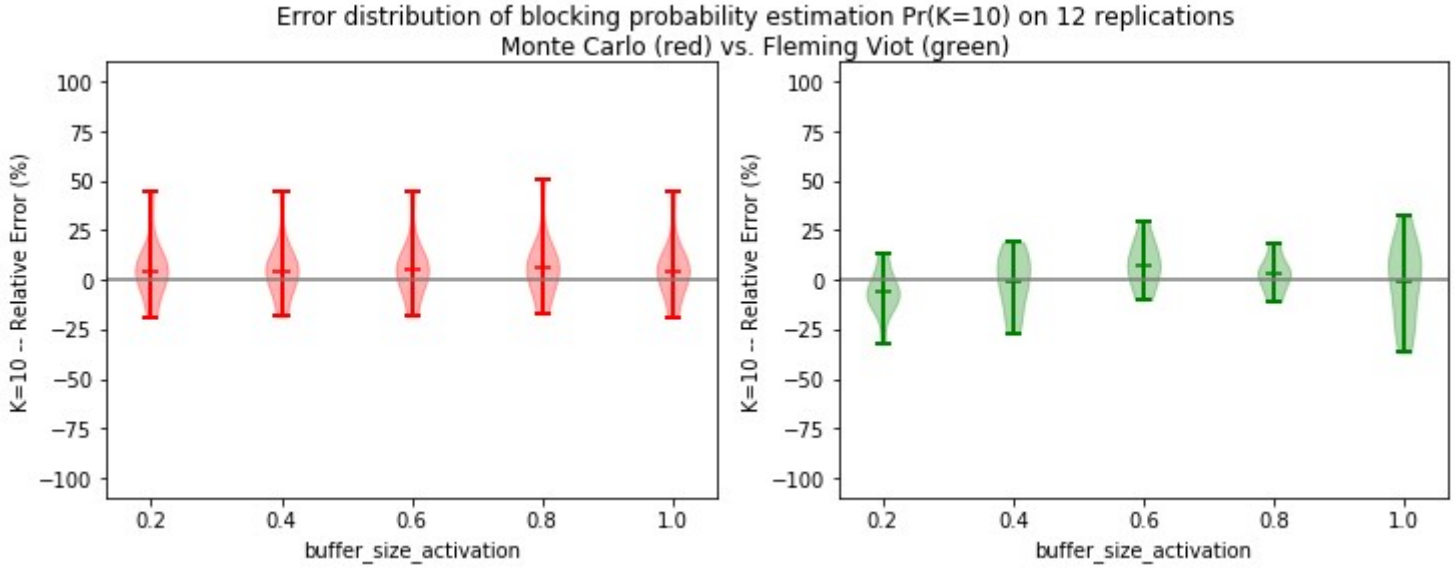
K=10, N=200, activation size=8, nmeantimes=50, rhos=[0.7], mean_lifetime=48.7, multiplier=1.2, finalize=ABS, seed=1313



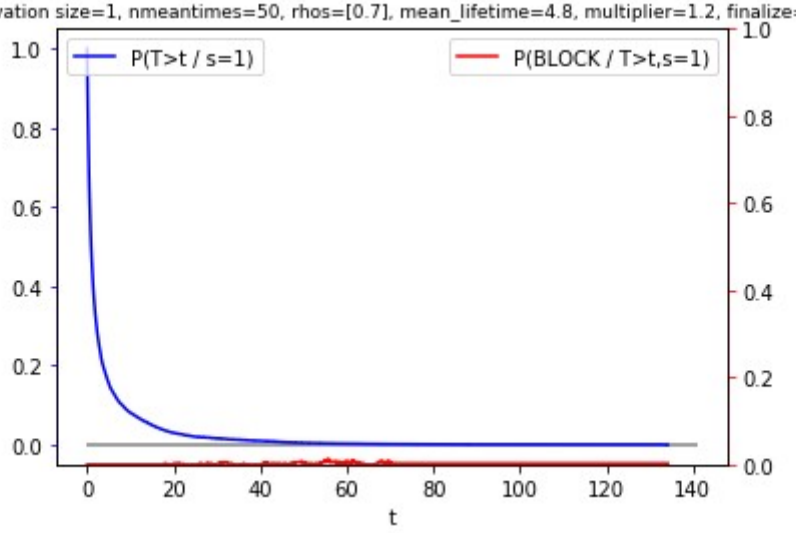
K=10, N=200, activation size=8, nmeantimes=50, rhos=[0.7], mean_lifetime=47.6, multiplier=1.2, finalize=ABS, seed=1313



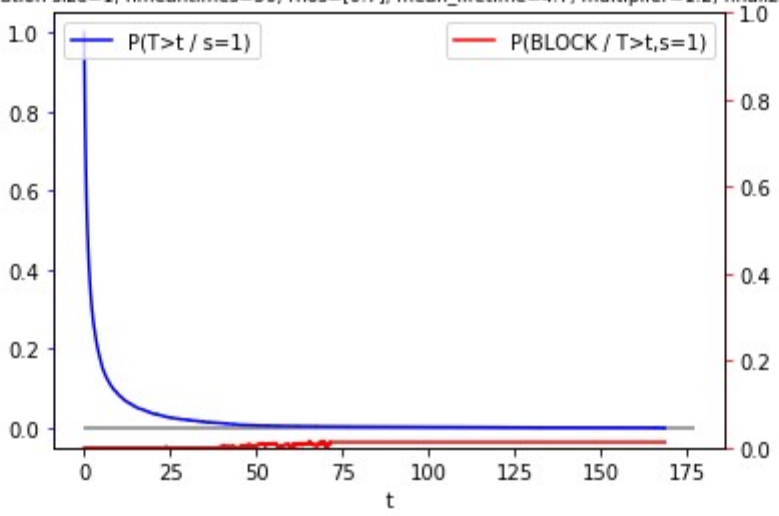

Distribution of blocking probability estimates of Pr(K=10) = 0.864520% on 12 replications
Monte Carlo (red) vs. Fleming Viot (green)
K=10 Estimated blocking probability (%)
buffer_size_activation
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0.2
0.4
0.6
0.8
1.0


Error distribution of blocking probability estimation Pr(K=10) on 12 replications
Monte Carlo (red) vs. Fleming Viot (green)
K=10 -- Relative Error (%)
buffer_size_activation
100
75
50
25
0
−25
−50
−75
−100
0.2
0.4
0.6
0.8
1.0

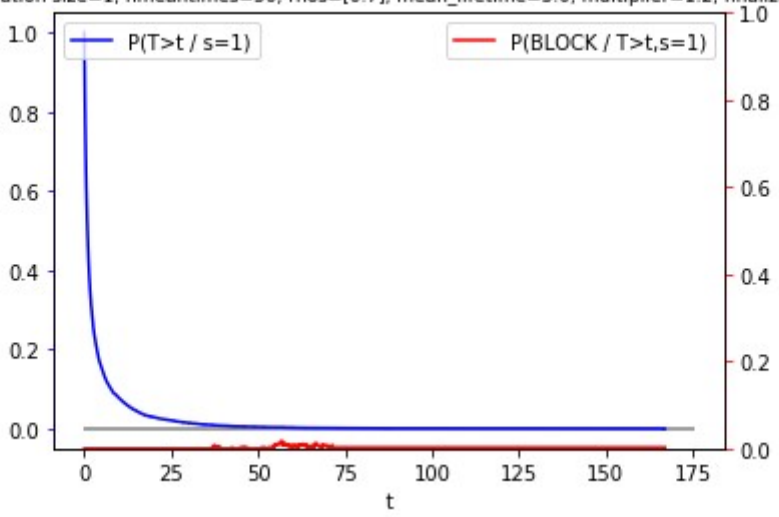
K=20, N=400, activation size=1, nmeantimes=50, rhos=[0.7], mean_lifetime=4.8, multiplier=1.2, finalize=ABS, seed=1313



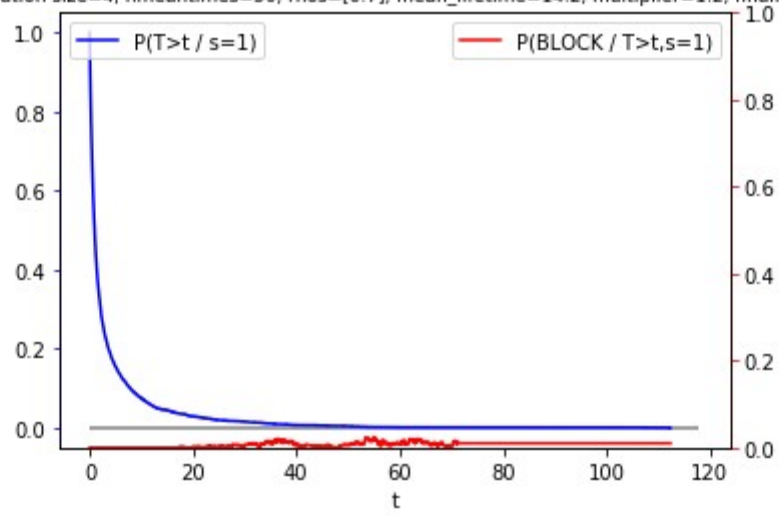
K=20, N=400, activation size=1, nmeantimes=50, rhos=[0.7], mean_lifetime=4.7, multiplier=1.2, finalize=ABS, seed=1313



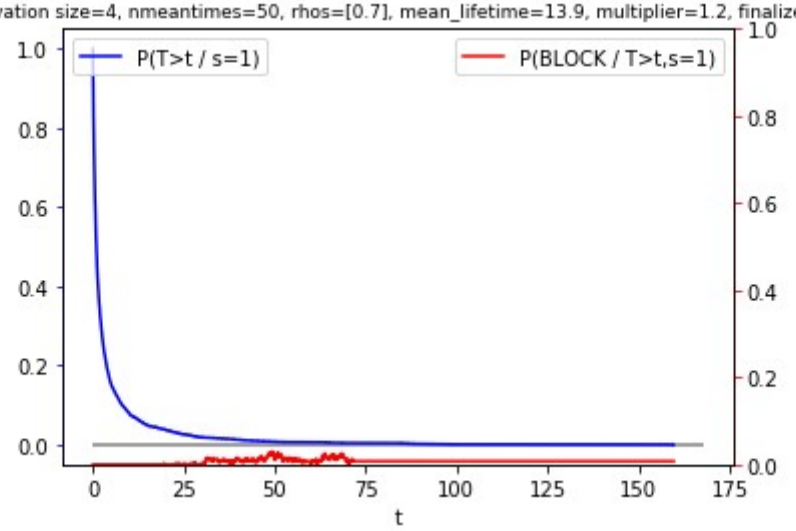
K=20, N=400, activation size=1, nmeantimes=50, rhos=[0.7], mean_lifetime=5.0, multiplier=1.2, finalize=ABS, seed=1313



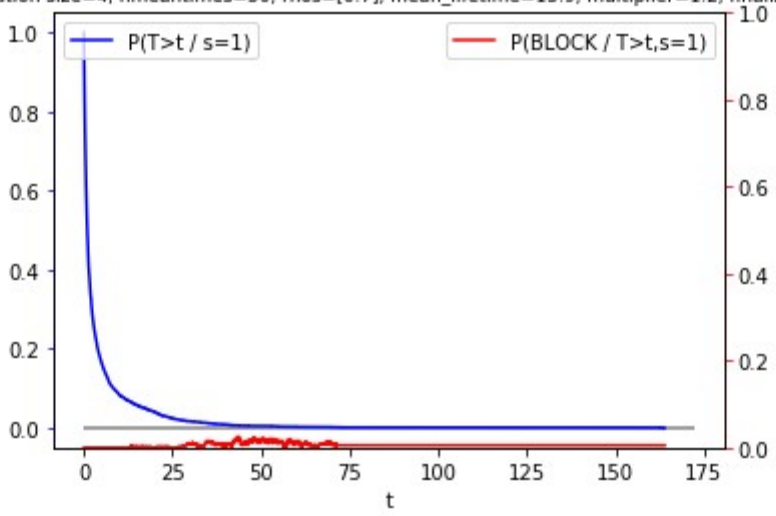
K=20, N=400, activation size=4, nmeantimes=50, rhos=[0.7], mean_lifetime=14.2, multiplier=1.2, finalize=ABS, seed=1313



K=20, N=400, activation size=4, nmeantimes=50, rhos=[0.7], mean_lifetime=13.9, multiplier=1.2, finalize=ABS, seed=1313



K=20, N=400, activation size=4, nmeantimes=50, rhos=[0.7], mean_lifetime=13.9, multiplier=1.2, finalize=ABS, seed=1313



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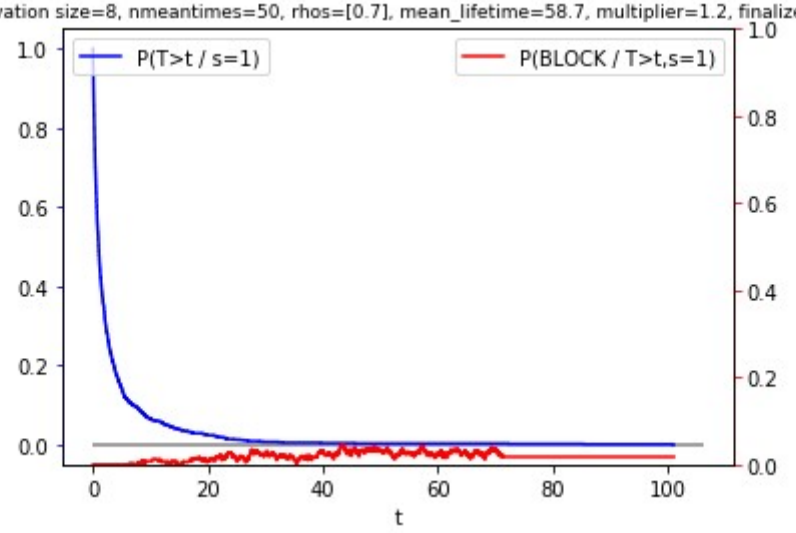
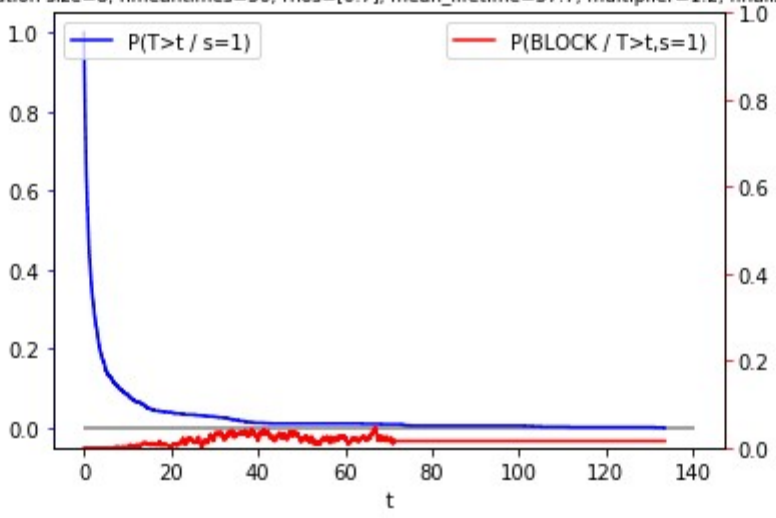


K=20, N=400, activation size=8, nmeantimes=50, rhos=[0.7], mean_lifetime=57.7, multiplier=1.2, finalize=ABS, seed=1313



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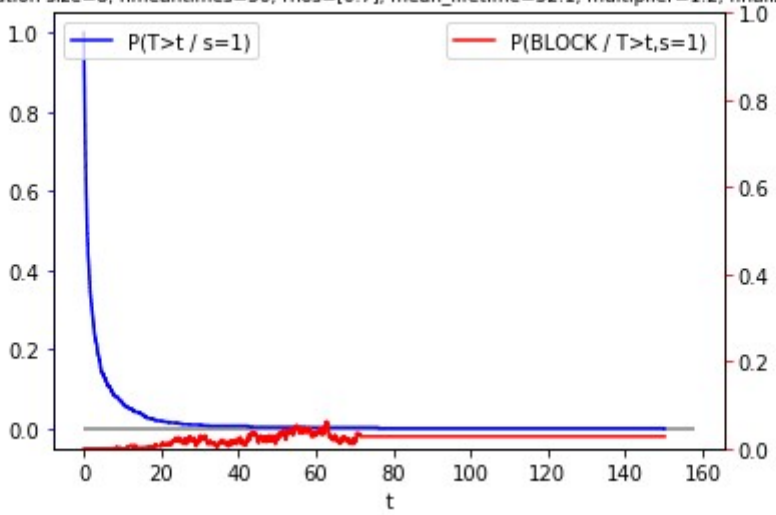

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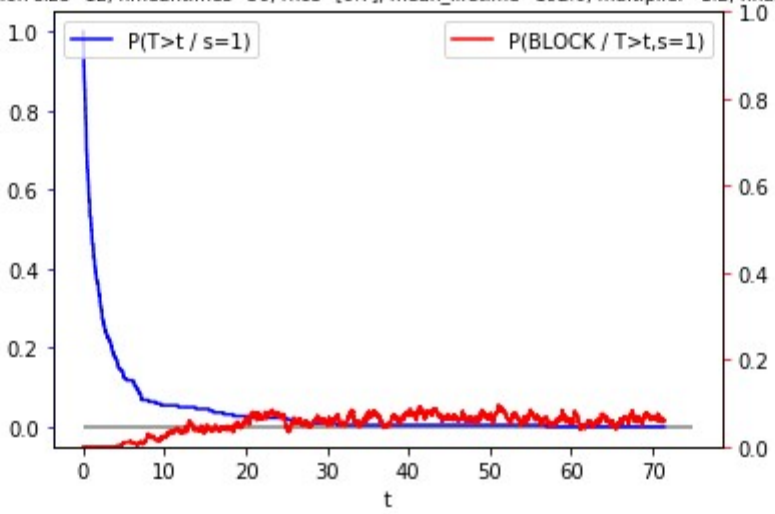
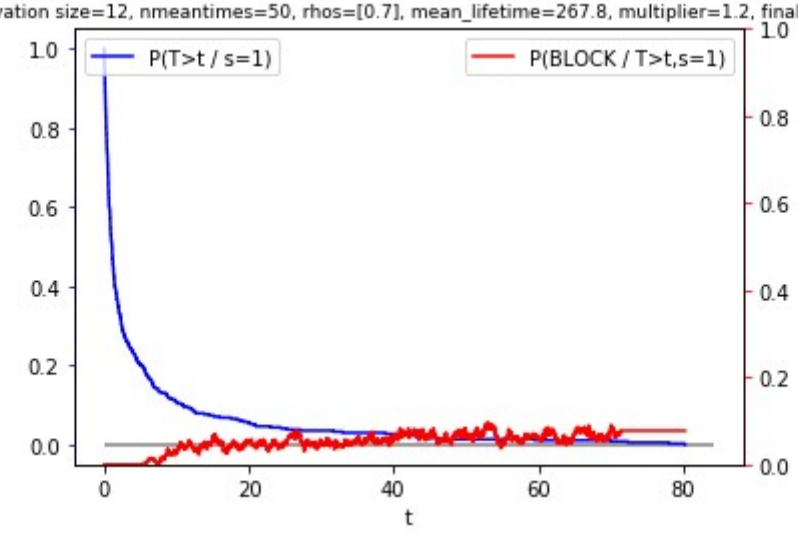
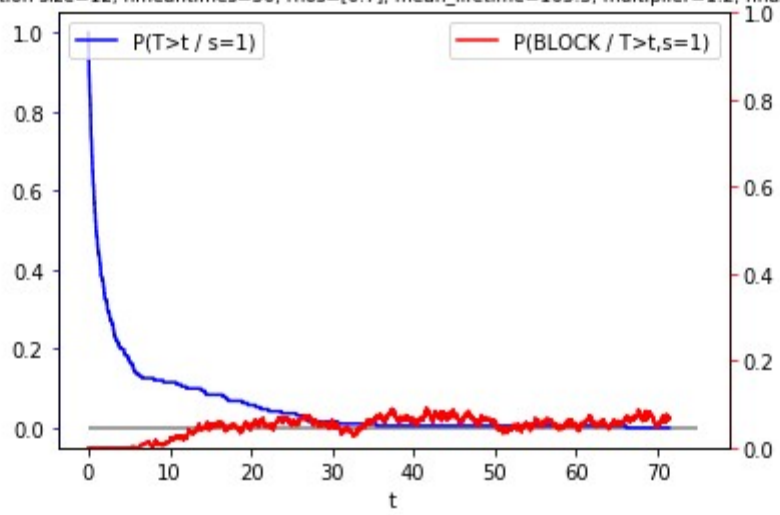


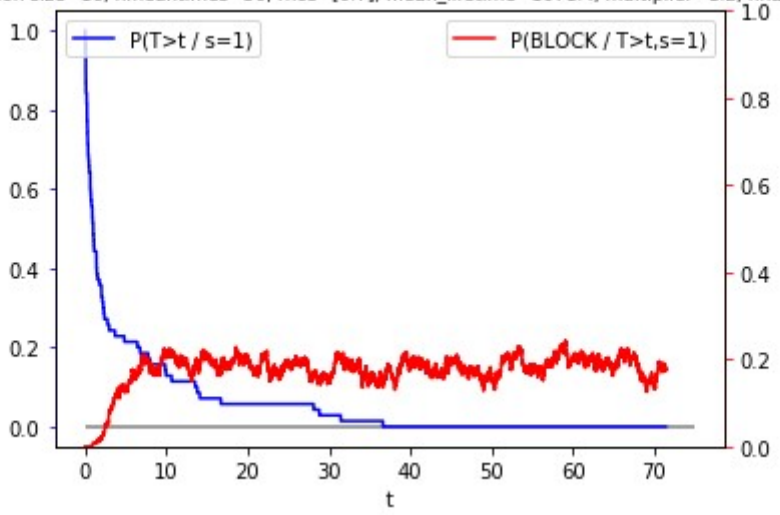
K=20, N=400, activation size=12, nmeantimes=50, rhos=[0.7], mean_lifetime=267.8, multiplier=1.2, finalize=ABS, seed=1313



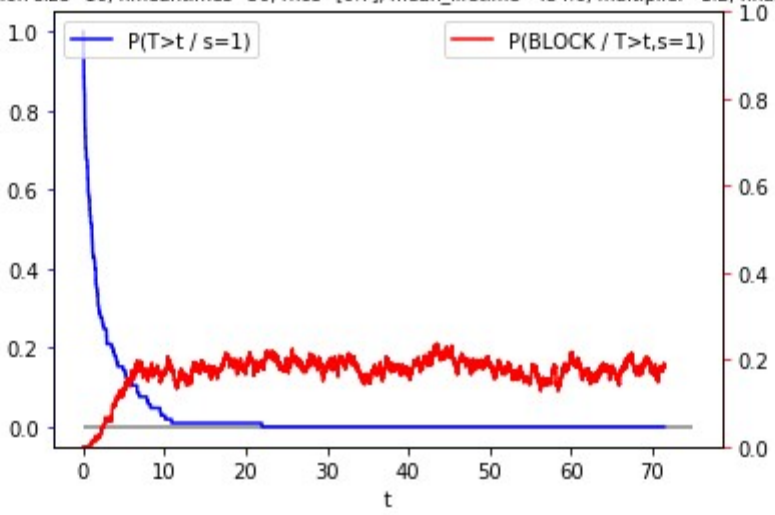
K=20, N=400, activation size=12, nmeantimes=50, rhos=[0.7], mean_lifetime=165.3, multiplier=1.2, finalize=ABS, seed=1313

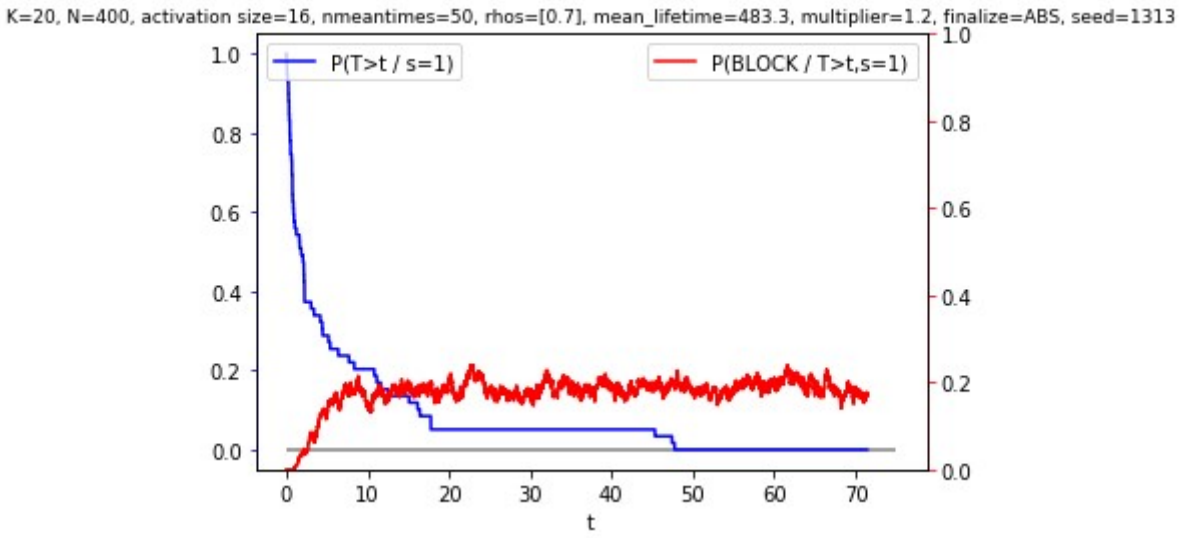


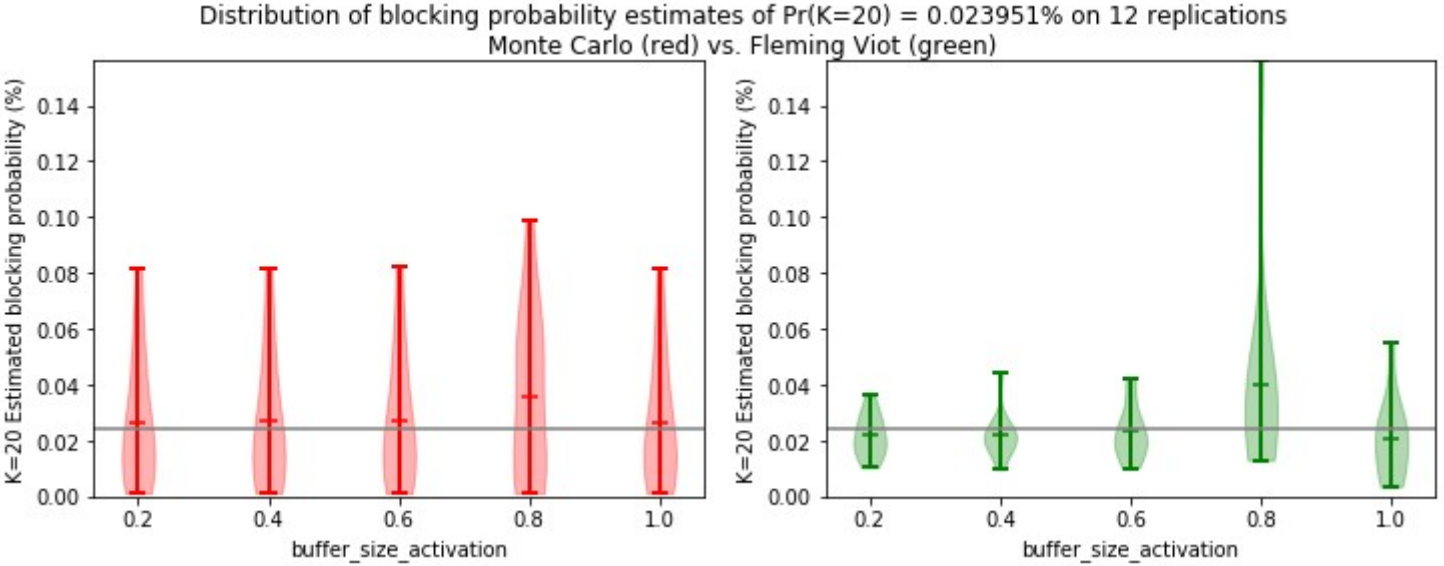
K=20, N=400, activation size=16, nmeantimes=50, rhos=[0.7], mean_lifetime=1071.4, multiplier=1.2, finalize=ABS, seed=1313

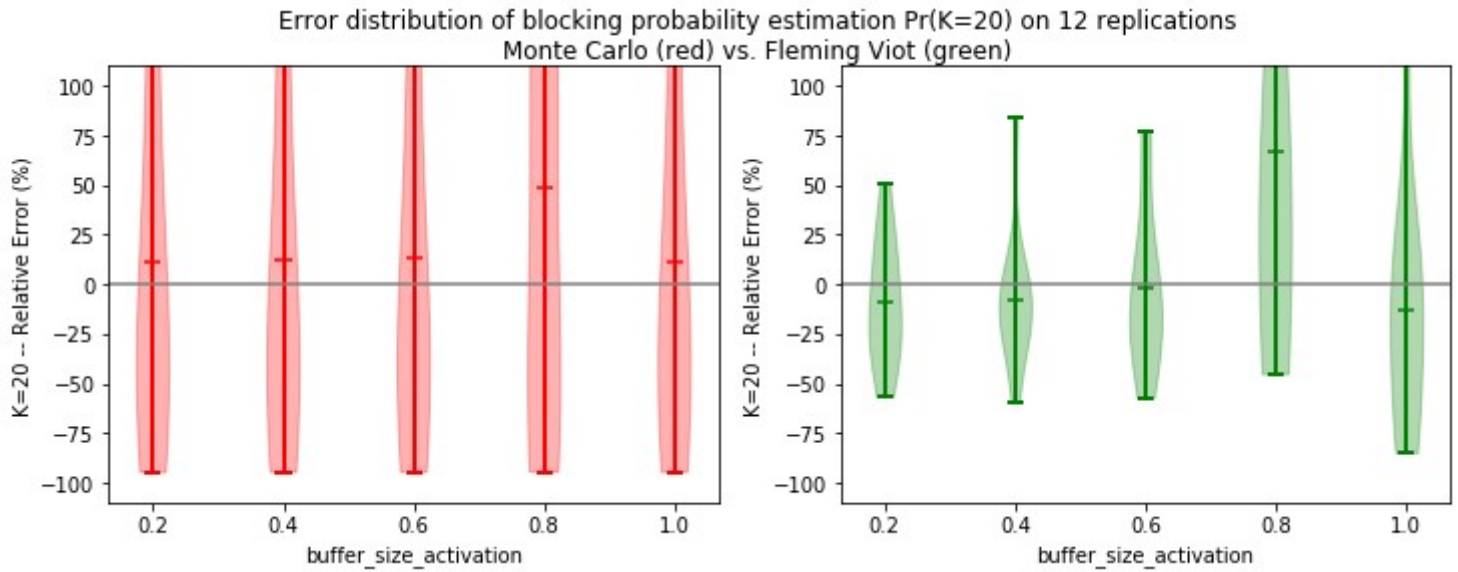


K=20, N=400, activation size=16, nmeantimes=50, rhos=[0.7], mean_lifetime=454.6, multiplier=1.2, finalize=ABS, seed=1313




K=20, N=400, activation size=16, nmeantimes=50, rhos=[0.7], mean_lifetime=483.3, multiplier=1.2, finalize=ABS, seed=1313
P(T>t / s=1)
P(BLOCK / T>t,s=1)
t


Distribution of blocking probability estimates of Pr(K=20) = 0.023951% on 12 replications
Monte Carlo (red) vs. Fleming Viot (green)
K=20 Estimated blocking probability (%)
buffer_size_activation
K=20 Estimated blocking probability (%)
buffer_size_activation


Error distribution of blocking probability estimation Pr(K=20) on 12 replications
Monte Carlo (red) vs. Fleming Viot (green)
K=20 -- Relative Error (%)
100
75
50
25
0
−25
−50
−75
−100
0.2
0.4
0.6
0.8
1.0
buffer_size_activation
K=20 -- Relative Error (%)
buffer_size_activation

In [2]: