A B

6000
5000
4000
3000
2000
1000
0

400
300
200
100
0

500 520 540 560 580   1000 1050 1100 1150
$t(\mathrm{ms})$ $t(\mathrm{ms})$

C D

200
150
100
50
0

250
200
150
100
50
0

1000 1050 1100 1150   1000 1050 1100 1150
$t(\mathrm{ms})$ $t(\mathrm{ms})$

*Figure 8.* Simulation of a network of 10,000 pyramidal cells and 2,500 interneurons, with connection probability 0.1 and $J_E = 0.1$ mV. For each of the four examples are indicated the temporal evolution of the global activity of the system (instantaneous firing frequency computed in bins of 0.1 ms), together with the firing times (rasters) of 50 randomly chosen neurons. The instantaneous global activity is compared in each case with its temporal average (dashed line). **A:** Almost fully synchronized network, neurons firing regularly at high rates ($g = 3$, $\nu_{ext}/\nu_{thr} = 2$). **B:** Fast oscillation of the global activity, neurons firing irregularly at a rate that is lower than the global frequency ($g = 6$, $\nu_{ext}/\nu_{thr} = 4$). **C:** Stationary global activity (see text), irregularly firing neurons ($g = 5$, $\nu_{ext}/\nu_{thr} = 2$). **D:** Slow oscillation of the global activity, neurons firing irregularly at very low rates ($g = 4.5$, $\nu_{ext}/\nu_{thr} = 0.9$).
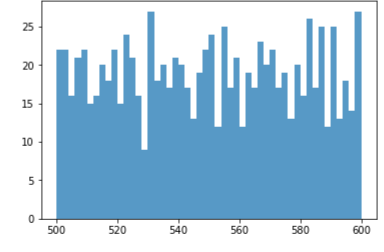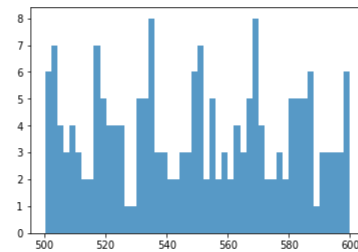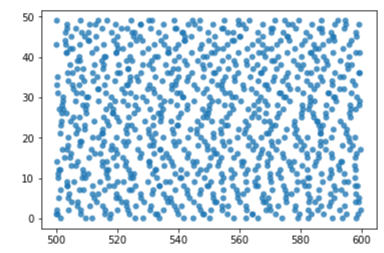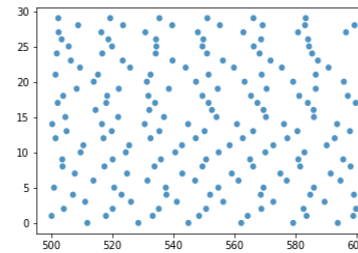
In [ ]: figure a Brunel shows a pattern

: figure b Brunel final
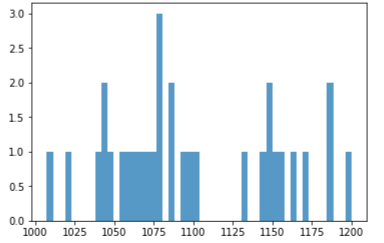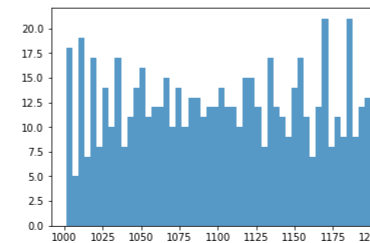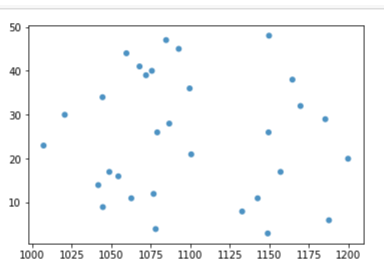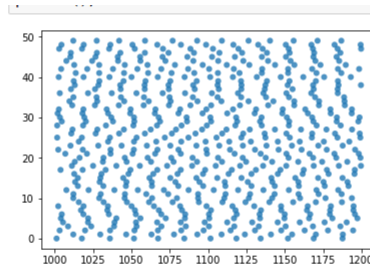
]: figure c **from** Brunel final

: figure d **from** Brunel final

build