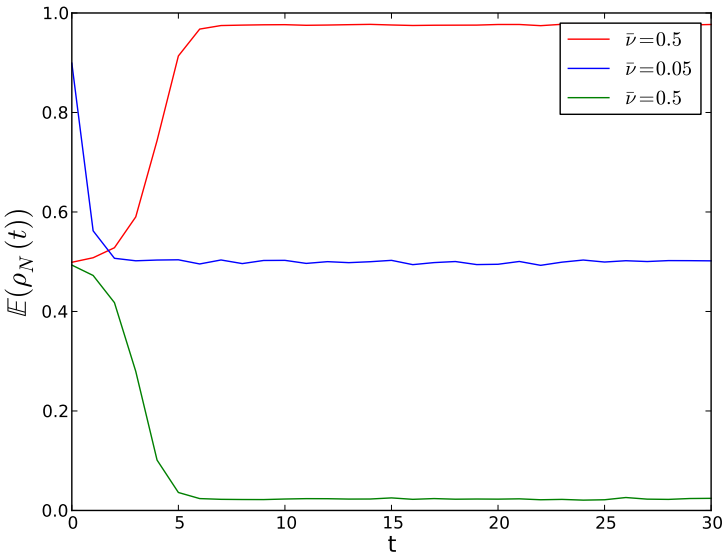

Figure 1: Time evolution of coarse states in a static network with 8000 nodes and all-to-all-coupling.

Figure 1 shows the average state as a function of time for two different coupling constants $\mathcal{N}(\bar{\nu} = 0.5)$ and $\mathcal{N}(\bar{\nu} = 0.05)$ and different initial conditions $\mu_{0n} \sim \mathcal{B}(\mu; 0.5)$ respectively $\mu_{0n} \sim \mathcal{B}(\mu; 0.9)$ for $n = 1, ..., 8000$. The values of the microscopic parameters are chosen in correspondence with those in the lattice-model [1]. Each agent is interacting with all other agents. For big coupling constants, the red and green curves show two possible locked-in states. For small coupling constants, the blue curve shows that the mixed state is the unique macroscopic stable equilibrium.

References

[1] Daniele Avitabile, Rebecca Hoyle, and Giovanni Samaey. Noise reduction in coarse bifurcation analysis of stochastic agent-based models: an example of consumer lock-in. *SIAM Journal on Applied Dynamical Systems*, 13(4):1583–1619, 2014.