**Neural network model for popping**

**Single neuron dynamics**

(1)

(2)

**Synaptic current**

(3)

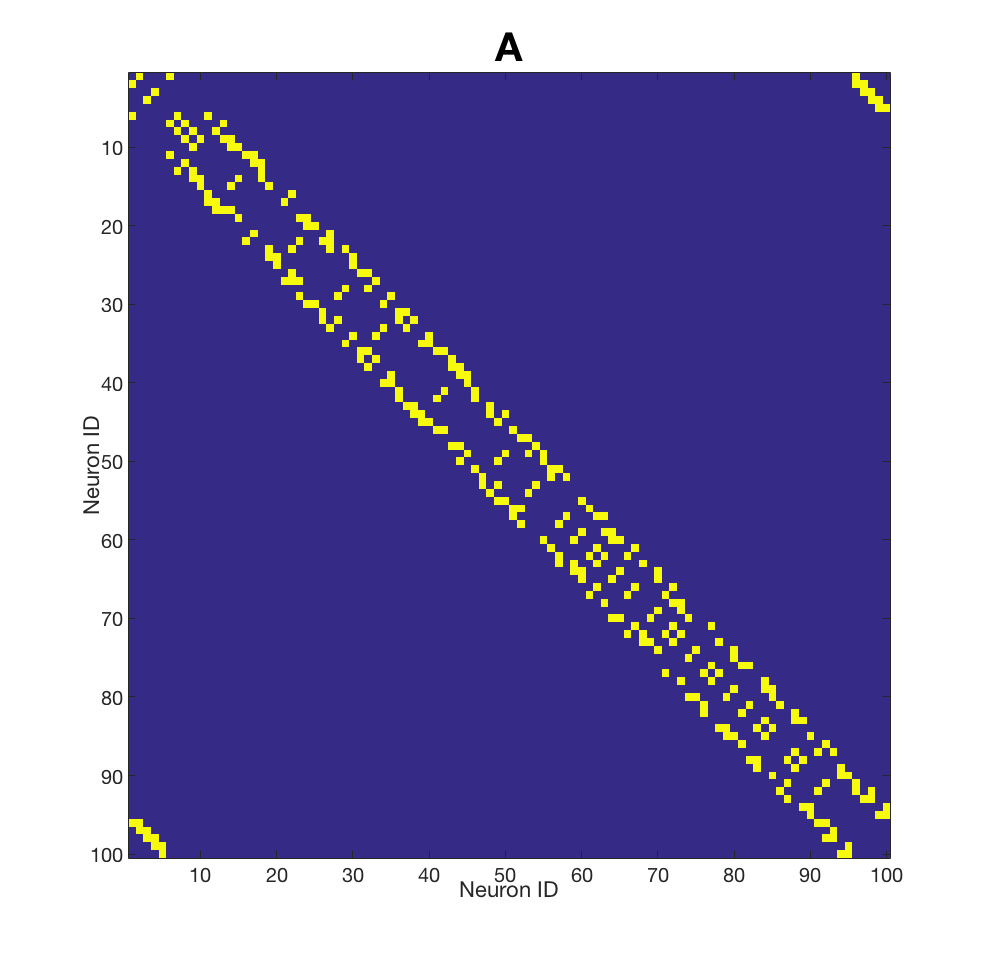
**Actuator dynamics (muscle)**

(4)

**Volume dynamics (plant)**

(5)

if <=Thr, else

****

**Connectivity**

N – number of neurons

S – number of sensors

A – number of actuators

sp – spikes in the spike train

– vector of actuators weights

– vector of sensory weights

**Indexes**

k – index over neurons

i – index over synapses

j – index over spikes

Summation over synaptic connections is organised by sparse connectivity matrix **A**