Homework 3 due today
(in class)

Homework 4 due Apr 6

No class Apr 16

Quiz 2 Apr 20 (thru lecture 6)

Office Hours: Mon, Thur 12-1

Today:

Memory dynamics (Lect 6)

Ataxia motion video:

https://www.youtube.com/watch?v=Txlvuu2byUY

$$r_A^{t=2} = w_{in,A}r_{in}^{t=1} + w_{B,A}r_B^{t=1}$$
$$r_C^{t=2} = w_{in,C}r_{in}^{t=1} + w_{B,C}r_B^{t=1}$$

$w_{B,A}$=**-0.4** $w_{B,C}$=-0.4 $w_{A,B}$=-0.1 $w_{C,B}$=-0.1

$w_{in,A} = \mathbf{0.5}$ $w_{in,B} = 1$ $w_{in,C} = 0.5$

$r_A^{t=2}$= **0.5**x1 + -0.4 x 0 = <u>**0.5**</u>

$r_C^{t=2}$= **0.5**x1 + -0.4 x 0 = <u>**0.5**</u>

	t=1	t=2	t=3	t=4
A	0	**0.5**	??	
B	0	**1**	??	
C	0	**0.5**	??	
(feedfwd)in	1	1	0	0

$$r_B^{t=2} = w_{in,B}r_{in}^{t=1} + w_{A,B}r_A^{t=1} + w_{C,B}r_C^{t=1}$$

$r_C^{t=2}$= **1**x1 + -0.1 x 0 + -0.1 x 0 = <u>**1**</u>

$$r_A^{t=2} = w_{in,A}r_{in}^{t=1} + w_{B,A}r_B^{t=1}$$
$$r_C^{t=2} = w_{in,C}r_{in}^{t=1} + w_{B,C}r_B^{t=1}$$

$w_{B,A}$=**-0.4** $w_{B,C}$=-0.4 $w_{A,B}$=-0.1 $w_{C,B}$=-0.1

$w_{in,A} = \mathbf{0.5}$ $w_{in,B} = 1$ $w_{in,C} = 0.5$

To compute t=3 output, look at t=2 data

$r_A^{t=3}$ = **0.5** x 1 + -0.4 x ~~0.5~~ 1 = 0.5-~~0.2~~0.4

$= \mathbf{0.1}$

$r_C^{t=3}$ = **??**

	t=1	t=2	t=3	t=4
A	0	0.5	~~0.3~~ 0.1	
B	0	1	0.9	
C	0	0.5	~~0.3~~ 0.1	
(feedfwd)in	1	1	0	0

$$r_B^{t=3} = w_{in,B}r_{in}^{t=2} + w_{A,B}r_A^{t=2} + w_{C,B}r_C^{t=2}$$

$r_B^{t=3}$ = **1** x 1 + -0.1 x 0.5 + -0.1 x 0.5 =

A inhib   B inhib

$= 1 - 0.05 - 0.05 = \underline{\mathbf{0.9}}$