1. InputConnection (P->G):

global parameters: lr, α (0.3 runtime), β (5 runtime)

pre:

$I_{post} \mathrel{+}= w$

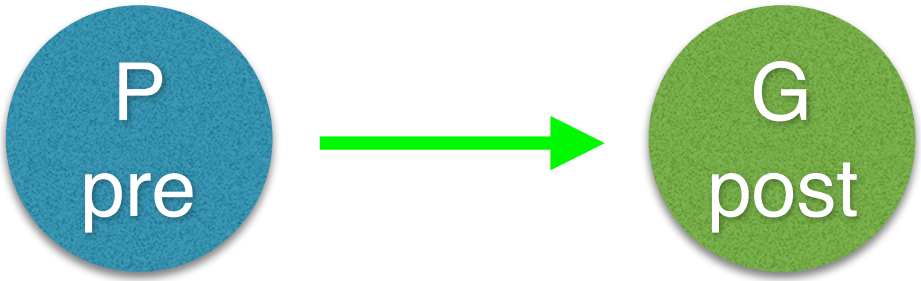
$a_{pre} \mathrel{+}= 1 / (\alpha \, num\_G)$

$\Theta_{pre} \mathrel{+}= 1 / (\beta \, num\_G)$

post:

$\Delta w = -0.001 + lr \, (a_{pre} - \Theta_{pre})$

$w = clip(w + \Delta w, 0, 1)$



2. NegativeConnection (G->G):

global parameters: lr_{neg}

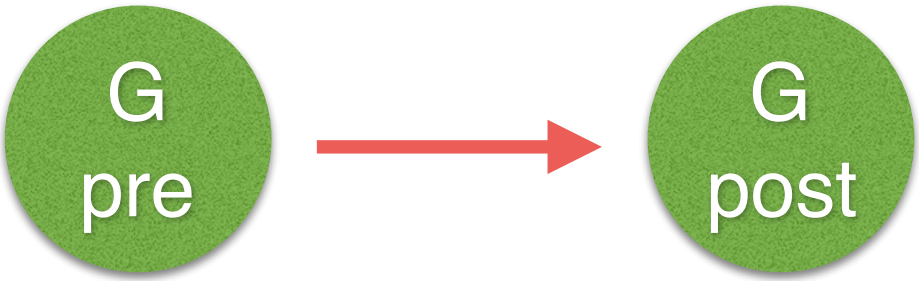
pre:

$I_{post} \mathrel{-}= w_{neg}$

post:

$\Delta w_{neg} = lr_{neg} (a_{pre} - \Theta_{pre})$

$w_{neg} = clip(w_{neg} + \Delta w_{neg}, 0, 1)$



3. OutputConnection (G->H):

global parameters: lr, α (0.3 runtime), β (5 runtime)

pre:

$I_{post} \mathrel{+}= w$

$a_{pre} \mathrel{+}= 1 / (\alpha \, num\_H)$

$\Theta_{pre} \mathrel{+}= 1 / (\beta \, num\_H)$

post:

$a_{post} \mathrel{+}= 1 / (\alpha \, num\_G)$

$\Theta_{post} \mathrel{+}= 1 / (\beta \, num\_G)$

$\Delta w = -0.001 + lr \, (a_{pre} - \Theta_{pre})$

$w = clip(w + \Delta w, 0, 1)$

Reverse part:

$I_{pre} \mathrel{+}= w_{rev}$

$\Delta w_{rev} = lr_{rev} \, w \, (a_{pre} - \Theta_{pre})$

$w_{rev} = clip(w_{rev} + \Delta w_{rev}, 0, 1)$