A) RNN prediction + Match / Non-match (M/NM) task

input $\mathbf{x}_t$ — neural activity $\mathbf{r}_t$ — prediction $\hat{\mathbf{y}}_t$

weights $\mathbf{U}$ — weights $\mathbf{W}$ — weights $\mathbf{V}$ — weights $\mathbf{T}$

A_α, B_α, C_β, D — t — $t+1$ — M / NM
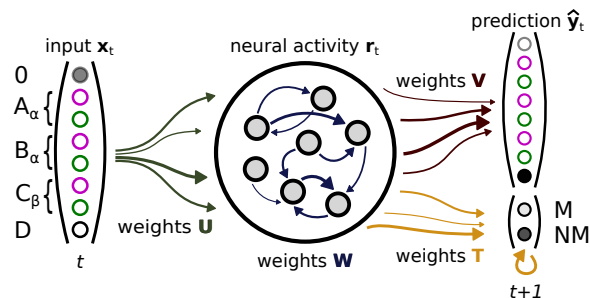
B) H during training

Cross entropy H vs Epoch
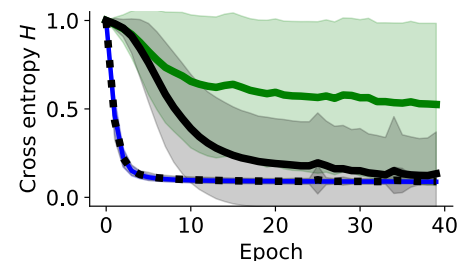
C) Distribution of cross-temporal α decoding accuracy

Average α accuracy — Variance α accuracy

Training time $\tau \rightarrow$ — Testing time $t \rightarrow$
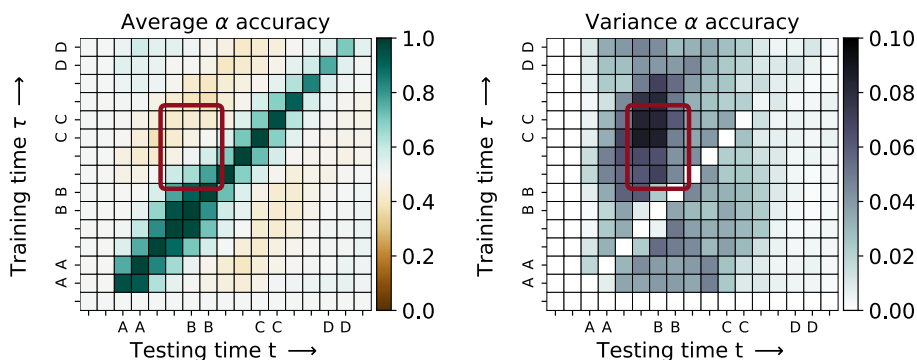
D) Histogram of red regime

Frequency vs Average accuracy
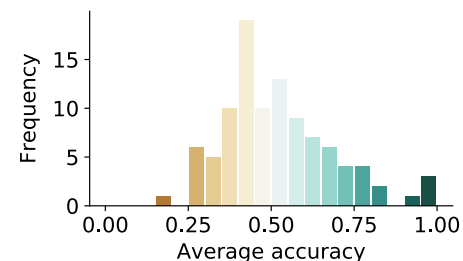
E) Number of switch neurons

Cum. fraction of runs vs # Switch neurons

Prediction only — Prediction + M/NM
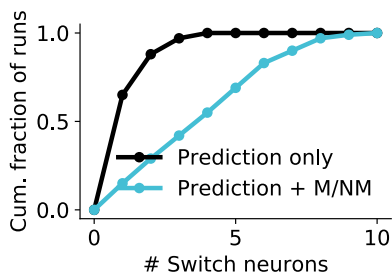
F) Number of stable neurons

Cum. fraction of runs vs # Stable neurons

Prediction only — Prediction M/NM

G) Match vs Non-match

projecting neurons vs Match / Non-match

Stable — Switch

P = 6e-08 — P = 0.014