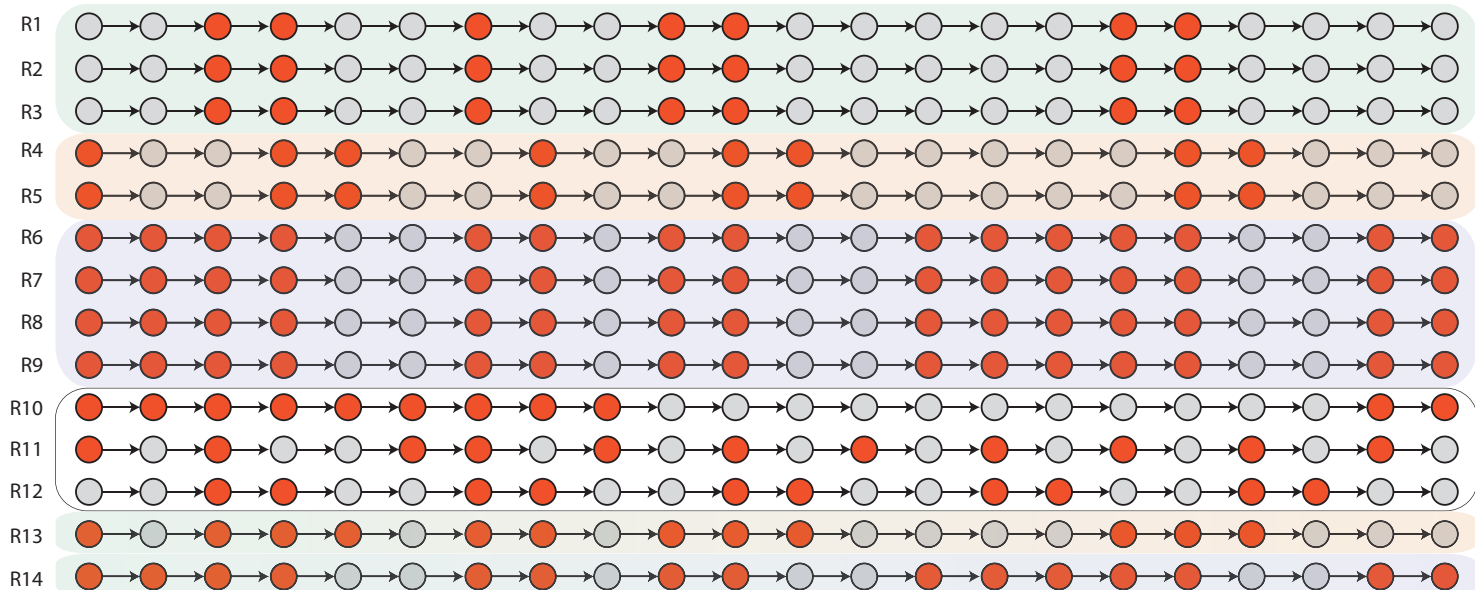
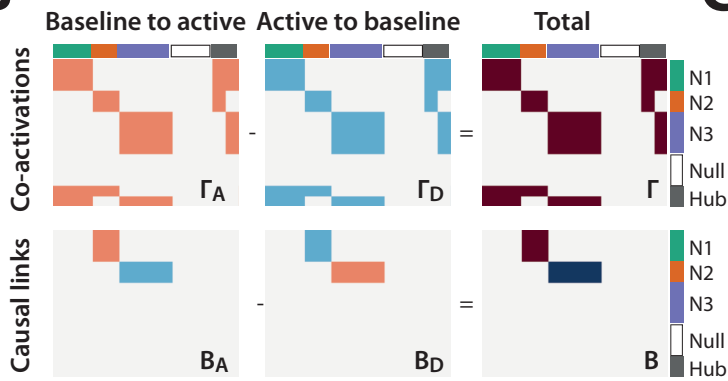


A**B****C**

1. Determine optimal regularisation

$$\lambda \in [10000, 0.02] \quad \xi = \{0, 0.25, 0.5, 0.75, 1\} \quad \longrightarrow \quad (\lambda^*, \xi^*) = \max_{(\lambda, \xi)} \sum_{r=1}^R [\mathcal{L}_A^{(r)}(\lambda, \xi) + \mathcal{L}_D^{(r)}(\lambda, \xi)]$$

2. Build coefficient sets

$$\begin{aligned} \gamma_A^{(r)} &\longrightarrow \Gamma_A = [\hat{\gamma}_A^{(1)} | \hat{\gamma}_A^{(2)} | \dots | \hat{\gamma}_A^{(R)}] \\ \gamma_D^{(r)} &\longrightarrow \Gamma_D = [\hat{\gamma}_D^{(1)} | \hat{\gamma}_D^{(2)} | \dots | \hat{\gamma}_D^{(R)}] \\ \beta_A^{(r)} &\longrightarrow \mathbf{B}_A = [\hat{\beta}_A^{(1)} | \hat{\beta}_A^{(2)} | \dots | \hat{\beta}_A^{(R)}] \\ \beta_D^{(r)} &\longrightarrow \mathbf{B}_D = [\hat{\beta}_D^{(1)} | \hat{\beta}_D^{(2)} | \dots | \hat{\beta}_D^{(R)}] \end{aligned} \quad \longrightarrow \quad \begin{aligned} \Gamma &= \Gamma_A - \Gamma_D \\ \mathbf{B} &= \mathbf{B}_A - \mathbf{B}_D \end{aligned}$$

3. Compute probabilistic cross-regional influences

$$\begin{aligned} \mathcal{P}(h_{t+1}^{(r)} \neq h_t^{(r)} | h_t^{(l)} = +1, h_t^{(-r)} = 0, h_{t+1}^{(-r-1)} = 0) - \mathcal{P}(h_{t+1}^{(r)} \neq h_t^{(r)} | h_t^{(-r)} = 0, h_{t+1}^{(-r)} = 0) &= \Delta \mathcal{P}_{\Gamma, l \rightarrow r} \\ \mathcal{P}(h_{t+1}^{(r)} \neq h_t^{(r)} | h_t^{(l)} = +1, h_t^{(-r-1)} = 0, h_{t+1}^{(-r-1)} = 0) - \mathcal{P}(h_{t+1}^{(r)} \neq h_t^{(r)} | h_t^{(-r)} = 0, h_{t+1}^{(-r)} = 0) &= \Delta \mathcal{P}_{B, l \rightarrow r} \end{aligned}$$