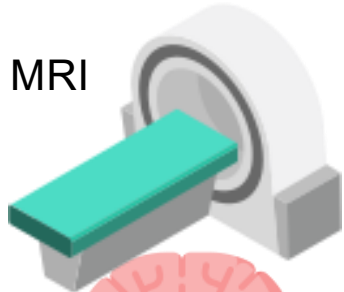
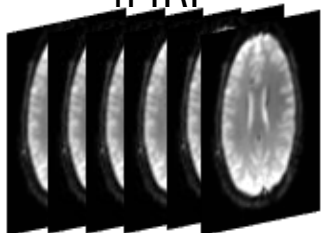


rs-fMRI Time Series

MRI

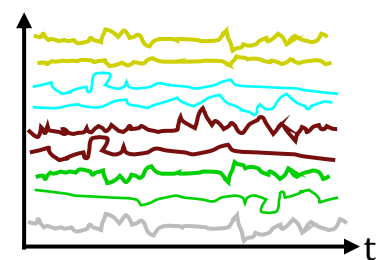


fMRI



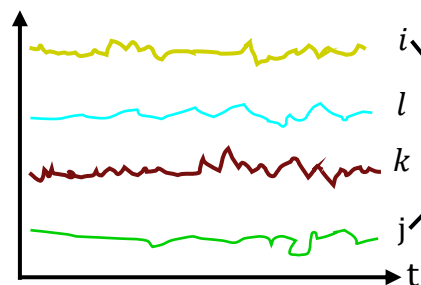
AAL 116 or
Neuromark
2.2 Template

ROIs



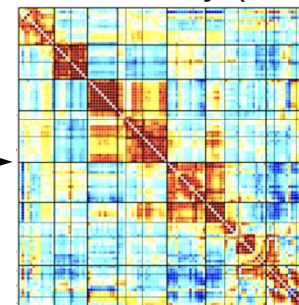
ROIs

2-order: Mutual Information



$$I_{\alpha}(X_i; X_j) = H(X_i) + H(X_j) - H(X_i; X_j)$$

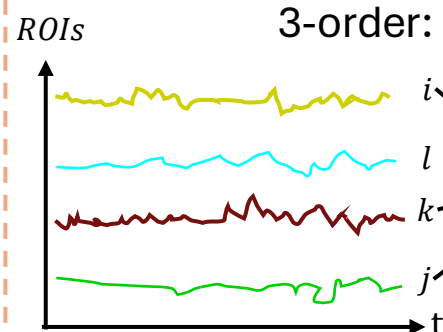
Functional Network Connectivity (FNC) Matrix



ROIs - ICNs

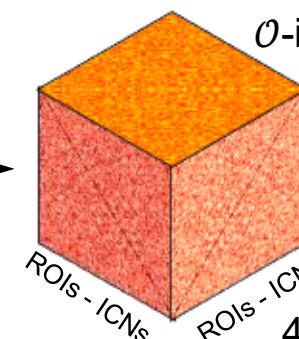
ROIs - ICNs

3-order: \mathcal{O} -Information



$$\mathcal{O}(X_i, X_j, X_k) = \text{TC}(X_i, X_j, X_k) - \text{DTC}(X_i, X_j, X_k)$$

3D Tensor \mathcal{O} -information

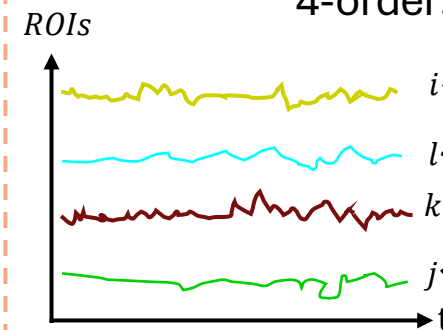


ROIs - ICNs

ROIs - ICNs

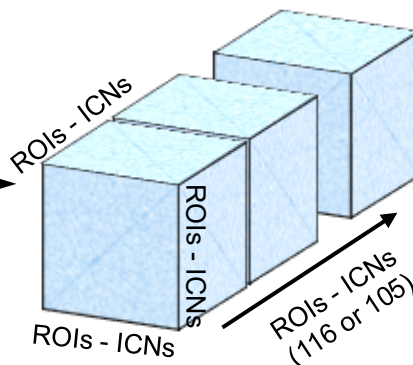
ROIs - ICNs

4-order: \mathcal{O} -Information



$$\mathcal{O}(X_i, X_j, X_k, X_l) = \text{TC}(X_i, X_j, X_k, X_l) - \text{DTC}(X_i, X_j, X_k, X_l)$$

4D Tensor \mathcal{O} -information



ROIs - ICNs

ROIs - ICNs

ROIs - ICNs
(116 or 105)