

$$\mathbf{M}_{\text{gvn}} : \begin{array}{|c|} \hline \mathbf{y}^{(+)} \\ \hline \end{array} = \begin{array}{|c|} \hline \mathbf{K}_1 \\ \hline \end{array} \begin{array}{|c|} \hline \mathbf{y}_1^{(-)} \\ \hline \end{array} + \cdots + \begin{array}{|c|} \hline \mathbf{K}_{l_k} \\ \hline \end{array} \begin{array}{|c|} \hline \mathbf{y}_{l_k}^{(-)} \\ \hline \end{array}$$

$$\mathbf{M}_{\text{prp}}^{(\text{j})} : \begin{array}{|c|} \hline \mathbf{y}^{(+)} \\ \hline \end{array} = \begin{array}{|c|} \hline \tilde{\mathbf{K}}_1 \\ \hline \end{array} \begin{array}{|c|} \hline \mathbf{y}_1^{(-)} \\ \hline \end{array} + \cdots + \begin{array}{|c|} \hline \tilde{\mathbf{K}}_{l_k} \\ \hline \end{array} \begin{array}{|c|} \hline \mathbf{y}_{l_k}^{(-)} \\ \hline \end{array} \\ + \begin{array}{|c|} \hline \tilde{\mathbf{K}}_{l_k+j} \\ \hline \end{array} \begin{array}{|c|} \hline \mathbf{y}_{l_k+j}^{(-)} \\ \hline \end{array}$$

$$\textbf{Find:} \quad \text{argmax}_j \, I \left(\mathbf{y}^{(+)}, \mathbf{M}_{\text{prp}}^{(\text{j})} \middle| \mathbf{M}_{\text{gvn}} \right)$$