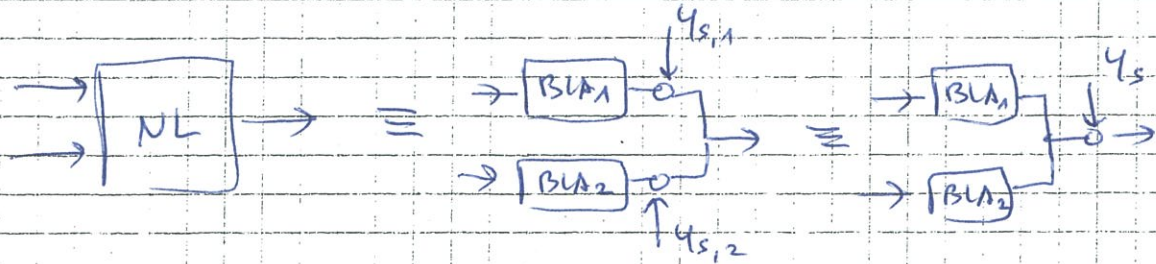


$$G_{BLA,1} = G_1^1(\lambda) + 3 \sum_k G_{111}^3(l, k, -k) |U_1(k)|^2 + 3 \sum_k G_{122}^3(l, k, -k) |U_2(k)|^2 \quad (+ O(\frac{1}{M})) \quad (6) (13)$$

$$G_{BLA,2} = G_2^1(\lambda) + 3 \sum_k G_{222}^3(l, k, -k) |U_2(k)|^2 + 3 \sum_k G_{112}^3(l, k, -k) |U_1(k)|^2 \quad (+ O(\frac{1}{M}))$$

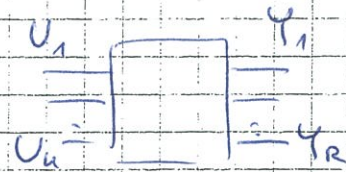


### QUESTION OF OPTIMAL INPUTS

$$y_1(l) = G_{111}(l) U_1(l) + \dots + G_{1,k}(l) U_k(l)$$

$$\vdots$$

$$y_R(l) = G_{R,1}(l) U_1(l) + \dots + G_{R,k}(l) U_k(l)$$



$$\begin{bmatrix} y_1 \\ \vdots \\ y_R \end{bmatrix} = \begin{bmatrix} G_{1,j} \\ \vdots \\ G_{R,j} \end{bmatrix} \begin{bmatrix} U_1 \\ \vdots \\ U_k \end{bmatrix} \quad \underline{y} = \underline{G} \cdot \underline{U}$$

### MORE EXPERIMENTS (INDEPENDENT)

$$\begin{matrix} 1 \rightarrow \text{exp} \rightarrow \\ 1 \\ \vdots \\ R \end{matrix} \begin{bmatrix} \underline{y} \\ \vdots \\ \underline{y} \end{bmatrix} = \begin{bmatrix} \underline{G} \\ \vdots \\ \underline{G} \end{bmatrix} \begin{matrix} 1 \rightarrow \text{exp} \rightarrow \\ \underline{U} \\ \vdots \\ \underline{U} \end{matrix} \begin{matrix} 1 \\ \vdots \\ k \end{matrix}$$

$$\underline{y}_i^{(e)}(l) \quad \underline{U}_i^{(e)}(l)$$

$$\underline{y} = \underline{G} \underline{U}$$

$$\underline{y} \underline{U}^* = \underline{G} \underline{U} \underline{U}^*$$

$$\hat{\underline{G}} = \underline{y} \underline{U}^* (\underline{U} \underline{U}^*)^{-1}$$

$$\text{IF } y = V[U_1, \dots, U_k]$$

LS ESTIMATE

BLA ESTIMATE  
OF FRM

$$(\hat{\underline{G}} = \underline{y} \underline{U}^* (\underline{U} \underline{U}^*)^{-1} (?) )$$