MULTIPLE EXPERIMENTS – ONE INPUT AFTER THE OTHER (REMAINING INPUTS $\emptyset$)

- ONE GENERATOR
- MEASUREMENT TIME = n_u × "NORMAL"
- ONLY 1 INPUT POWER TO THE OUTPUT
  - $SNR_{out} \downarrow \frac{1}{\sqrt{n_u}}$ → LESS DROP IN VARIANCE

MULTIPLE EXPERIMENTS – ALL INPUTS PRESENT

SELECTIVE DE-FUSING IT! {
- MULTIPLE EXPERIMENTS
  - INFORMATION FUSION

NOISELESS CASE: $[p,q]$ AT FREQ. k

p: INPUT, OUTPUT n_u, n_y — q: EXPERIMENT INDICES n_e

$$\begin{matrix} & 1 & 2 & & n_e \\ 1 & Y_{(1,1)}(k) & Y_{(1,2)}(k) & \cdots & Y_{(1,n_e)}(k) \\ 2 & Y_{(2,1)}(k) & Y_{(2,2)}(k) & \cdots & Y_{(2,n_e)}(k) \\ \vdots & \vdots & \vdots & \rightarrow n_e \text{ EXPERIMENTS} & \\ n_y & Y_{(n_y,1)}(k) & Y_{(n_y,2)}(k) & \cdots & Y_{(n_y,n_e)}(k) \end{matrix} =$$

$$\begin{matrix} & 1 & & n_u \\ 1 & G_{0(1,1)}(k) & \cdots & G_{0(1,n_u)}(k) \\ \vdots & \vdots & G_{(i,j)}(k) & \vdots \\ n_y & G_{0(n_y,1)}(k) & \cdots & G_{(n_y,n_u)}(k) \end{matrix} \cdot \begin{matrix} & 1 & 2 & & n_e \\ 1 & U_{(1,1)}(k) & \cdots & & U_{(1,n_e)}(k) \\ \vdots & \vdots & & & \vdots \\ n_u & U_{(n_u,1)}(k) & \cdots & & U_{(n_u,n_e)}(k) \end{matrix}$$

$$\underline{\underline{Y}}_0 = \underline{\underline{G}}_0 \cdot \underline{\underline{U}}_0 \qquad \underline{\underline{G}}_0 = \underline{\underline{Y}}_0 \underline{\underline{U}}_0^{-1}$$

$$\underset{n_y \times n_e}{\underline{\underline{Y}}_0} = \underset{n_y \times n_u}{\underline{\underline{G}}_0} \cdot \underset{n_u \times n_e}{\underline{\underline{U}}}$$