$$\text{49 righe} \left\{ \overbrace{\begin{matrix} X_{1,1} & X_{1,2} & \cdots & X_{1,2500} \\ X_{2,1} & X_{2,2} & \cdots & X_{2,2500} \\ \vdots & \vdots & \ddots & \vdots \\ X_{49,1} & X_{49,2} & \cdots & X_{49,2500} \end{matrix}}^{\text{2500 colonne}} \right. \qquad X_{i,j} \sim \mathcal{U}(0,1)$$

$$2500 \text{ colonne}$$

$$49 \text{ righe} \left\{ \begin{matrix} X_{1,1} & X_{1,2} & \cdots & X_{1,2500} \\ X_{2,1} & X_{2,2} & \cdots & X_{2,2500} \\ \vdots & \vdots & \ddots & \vdots \\ X_{49,1} & X_{49,2} & \cdots & X_{49,2500} \end{matrix} \right. \qquad X_{i,j} \sim \mathcal{U}(0,1)$$

$$\overline{X}_1 = \frac{1}{49} \sum_i X_{i,1} \underset{\substack{49 \gg 30 \\ \Rightarrow \text{TLC}}}{\approx} N\left(\mu, \frac{\sigma^2}{49}\right)$$

2500 colonne

$$\overbrace{\begin{array}{cccc} X_{1,1} & X_{1,2} & \cdots & X_{1,2500} \\ X_{2,1} & X_{2,2} & \cdots & X_{2,2500} \\ \vdots & \vdots & \ddots & \vdots \\ X_{49,1} & X_{49,2} & \cdots & X_{49,2500} \end{array}}$$

49 righe $\Bigg\{$

$X_{i,j} \sim \mathcal{U}(0,1)$

$$\left. \begin{array}{l} \overline{X}_1 = \dfrac{1}{49} \sum_i X_{i,1} \\[2mm] \overline{X}_2 = \dfrac{1}{49} \sum_i X_{i,2} \end{array} \right\} \underset{\text{TLC}}{\approx} N\left(\mu, \dfrac{\sigma^2}{49}\right)$$

2500 colonne

$$\underbrace{\phantom{X_{1,1} \quad X_{1,2} \quad \cdots \quad X_{1,2500}}}$$

49 righe $\left\{ \begin{array}{cccc} X_{1,1} & X_{1,2} & \cdots & X_{1,2500} \\ X_{2,1} & X_{2,2} & \cdots & X_{2,2500} \\ \vdots & \vdots & \ddots & \vdots \\ X_{49,1} & X_{49,2} & \cdots & X_{49,2500} \end{array} \right.$ $\qquad X_{i,j} \sim \mathcal{U}(0,1)$

$$\left. \begin{array}{l} \overline{X}_1 = \dfrac{1}{49} \sum_i X_{i,1} \\[2mm] \overline{X}_2 = \dfrac{1}{49} \sum_i X_{i,2} \\[2mm] \dots\dots\dots\dots\dots \\[2mm] \overline{X}_{2500} = \dfrac{1}{49} \sum_i X_{i,2500} \end{array} \right\} \underset{\text{TLC}}{\approx} N\left(\mu, \dfrac{\sigma^2}{49}\right)$$