

$$A_{ij} = \begin{pmatrix} A_{11} & A_{12} & \cdots & A_{1\alpha} \\ A_{21} & A_{22} & \cdots & A_{2\alpha} \\ \vdots & \vdots & & \vdots \\ A_{\beta 1} & A_{\beta 2} & \cdots & A_{\beta\alpha} \end{pmatrix} \quad (4)$$

$$x_1 \begin{pmatrix} A_{11} \\ A_{21} \\ \vdots \\ A_{\beta 1} \end{pmatrix} + x_2 \begin{pmatrix} A_{12} \\ A_{22} \\ \vdots \\ A_{\beta 2} \end{pmatrix} + \cdots + x_\alpha \begin{pmatrix} A_{1\alpha} \\ A_{2\alpha} \\ \vdots \\ A_{\beta\alpha} \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ \vdots \\ b_\beta \end{pmatrix} \quad (5)$$