

Matrix  $A$ :

$$A_{948 \times 948} = \begin{bmatrix} 3 & -1 & -1 & 0 & 0 & 0 & 0 & \cdots & 0 \\ -1 & 3 & -1 & -1 & 0 & 0 & 0 & \cdots & 0 \\ -1 & -1 & 3 & -1 & -1 & 0 & 0 & \cdots & 0 \\ 0 & -1 & -1 & 3 & -1 & -1 & 0 & \cdots & 0 \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ 0 & 0 & \cdots & 0 & 0 & 0 & -1 & -1 & 3 \end{bmatrix}$$

Vector  $b$ :

$$b_{948 \times 1} = \begin{pmatrix} \sin(1 \cdot 4) \\ \sin(2 \cdot 4) \\ \vdots \\ \sin(948 \cdot 4) \end{pmatrix}$$