

5.1.2. Parallelization of the PCG by Non-overlapping DD

■ Distribution of the data to the processors $P_j, j=1, \dots, J$:

We use two types of the distribution of the data (vectors, matrices), which are appeared in the PCG, to the processors:

Type I: overlapping:

$\underline{u}, \underline{w}, \underline{s}$ will be stored in $P_j (\cong \bar{\Omega}_j)$ as

$$\underline{u}_j = A_j \underline{u}, \quad \underline{w}_j = A_j \underline{w}, \quad \underline{s}_j = A_j \underline{s} \in \mathbb{R}^{N_j}$$

(\rightarrow overlap in the G_i -components):

