Matrix Transposition

For every element \((i,j)\)
\[ A_T(i,j) = A(j,i) \]

How to do this in parallel?
Matrix Transposition

We can divide it into sub-matrices, assign one to each process, do local transposition, and assemble them.
Parallel Matrix Transposition

1. Create a process grid;
2. Divide the matrix into sub-matrices accordingly and assign one to each process;
3. Let each process perform local transposition;
4. Send the transposed sub-matrix to the root process for assembling