

II Spanish Parallel Programming Contest

MPI+OpenMP test: Problem B

Tomás Ramírez García, Víctor Manuel Ruiz Sánchez
University of Murcia, Spain

The main idea for this program is to get each row of the matrix to be sorted by a different thread. To get this, we just put a parallel for before the loop which call the quicksort function for each row. We get a better time by using the memory cache. To make this, first we need to get the transpose of A in a Temporal Matrix called "mtemp". The function to transpose the matrix it's just the math description of a transposed matrix by using a parallel for over the iterator. Once it's ready, we make again the parallel sorting over the matrix. Finally, you have to get the transpose again written in "t" .

Note: The memory cache performance's increase may not be suitable for every input test.