

Optimal number of processors

I. FIT PARAMETERS

After analysing the behaviour of the speedup graph for each program, we can find a relation to wisely choose the optimal number of processors. The number of processors that gives the best speedup follows a lineal relation with the number of particles. The fit parameters are resumed in the following table:

$$N_{CPU} = a n_{particles} + b \quad (1)$$

Program	a	b
Double Work	0.1284	24.9898
Pair	0.0616	21.6105
Symmetric Matrix	0.0660	7.9068

TABLE I: Fit parameters to obtain the best speedup for a number of particles.