Parallel Simulations in the Network

The discretization of space (and even time) greatly reduces the freedom degrees and speeds up the simulations. Also an appropiate discretization in problems where the interaction is relatively local, allows the parallelization in a highly efficient way. Parallel simulations can be applied to different research areas such as Molecular Dynamics of Condensed Matter, peptide, protein, docking, Lattice Gauge with and without fermines dynamic finite element or Monte Carlo simulations of magnetic systems among many others. In these models the high parallel efficiencies are obtained not only discretizing space or time, but also developing numerical and computational algorithms. In the seminar, users learnt the basics of the methods that can be applied in order to develop parallel processes in their simulations and as a result getting the improvement of their algorithms.

The RES (Spanish Supercomputing Network), coordinated by BSC, in collaboration with UZ (Zaragoza University) and BIFI (Institute of Biocomputing and Physics of Complex Systems) organized the RES Scientific Seminar of Parallel Simulations in the Network the 30 November 2010.

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