Efficient Algorithms for Scheduling the Tasks of Parallel Programs

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Efficient implementation of scientific codes is a difficult problem on new parallel and distributed platforms. In this talk, we propose first to briefly review the existing computational models (divisible tasks, parallel tasks), then, we will present the analysis of the parallelization of an application from the view point of the users and the system administrators. It needs to solve a scheduling problem which corresponds to determine an allocation of the tasks to the processors and a date at which they will start their execution