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Title: Técnicas de asignación de procesos homogéneos en entornos heterogéneos

Abstract:

During recent years a large number of parallel routines and libraries have been developed. These routines have been conceived for homogeneous systems. Thanks to the evolution of technology, now it is quite usual to have heterogeneous systems. These routines and libraries need to be adapted to the new environment. There are at least two options. The routines could be rewritten, but this would be excessively costly in terms of time and money. Alternatively, the processes of a homogeneous routine can be mapped into the processors in the heterogeneous system. To do this, the development of efficient mapping techniques is necessary. Our approach to satisfactory mappings consists of modelling the execution time of the parallel routine, and obtaining the mapping that gives the minimum modelled execution time. Exact solutions to this problem are very time consuming. As an alternative, we are researching the application of heuristic techniques to solve this problem. This paper analyzes how Scatter Search can be applied to parallel iterative schemes.

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