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"Análise de Desempenho de Um Algoritmo para Entrega Ordenada de Mensagens Entre Tarefas que Migram"

Many message-passing algorithms require that messages be delivered to tasks in the FIFO order. However, even when this guarantee is offered at the processor level, task migration between processors may lead to the loss of this ordering. In this thesis, the Pipe Shortening Protocol (PSP), an asynchronous distributed algorithm that ensures the automatic FIFO delivery of messages between migrating tasks is considered. A testing environment consisting of a synthetic application and a migration policy was developed in order to experiment with the PSP on a real parallel machine. Two configurations were considered under different parallel synthetic applications, respectively, with and without the PSP algorithm. Comparative numerical results of the response time were measured in order to assess PSP's performance and determine the parameter settings under which PSP achieves its best performance. Results indicate that there exist situations for which an increase in the number of processors leads PSP to outperform the approach that does not employ it.