

Seminar

A comparison of Global Memory and Distributed Memory Architectures

The rise of Multicore processors in the recent decade induced also the necessity appropriate Memory Models. Especially with the ever-growing number of cores, it is not distinct by default whether a global memory hierarchy or a distributed memory structure is more beneficial. While former can potentially become a bottleneck if too many cores access it simultaneously, latter arises new challenges of data-to-task locality and a prescient data placement.

This seminar topic is about a comparative analysis of both approaches. This includes amongst others their benefits and drawbacks, their suitable application fields and typical system architectures.

The task during the seminar consists of an exhaustive literature study on that topic in order to describe, analyze and compare the most important approaches. Individual adjustments of the seminar topic according to the student's preferences is possible.

Prerequisites

B.Sc. in Electrical Engineering, Computer Science or a similar topic

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