Evaluation of different Performance Prediction Models based on Memory Hierarchies

Description

Software Performance Engineering is a sub-discipline of Software Engineering. Software Performance Engineering (SPE) aims to predict software performance in an early development phase on the basis of abstract software models [1]. To derive performance metrics from such models, it is necessary to combine hardware models (description of used hardware) with software models (description of used software components) and environment models (description of usage scenarios).

In the last years, new hardware environments like multicore CPU’s became commonly used. To adapt to the new hardware specifications, Software Performance Engineers have created new prediction models based on the used Memory Hierarchies.

Objective of this seminar thesis is to search, compare, and evaluate existing approaches based on their usability to predict the performance for current multicore CPU’s.

Further reading: [5, 4, 6, 3, 2]

References


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