School of Computer Science and Engineering

CSE 695D Independent Study Presentation

Date& Time

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Place

JB 359

Title

Data Dependence

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Abstract

The concepts of data dependence have been well-known for quite some time. Data dependency is one of the key issues in real-time high performance computing. Detection of parallelism in an application involves finding sets of computations that can be performed simultaneously. The approach to parallelism is based on the study of data dependencies. The presence of dependence between two computations implies that they cannot be performed in parallel. In general, the fewer the dependencies, the greater the parallelism

Writing parallel code is all about finding parallelism in an algorithm. What limits parallelism are the dependencies among different code portions. Understanding the dependencies in a program early on can help the programmers (a) determine the amount of available parallelism, and (b) chose the best parallel programming paradigm for the program

This Presentation will try to illustrate data dependence and its characteristics while contemplating a few ways to achieve parallelism in compilers thereby achieving higher performance.