iCetus: A Semi-automatic Parallel Programming Assistant

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Introduction

The iCetus tool is a new interactive parallelizer, in its early stages of development, providing users with a range of capabilities for the source-to-source transformation of C programs using OpenMP directives in shared memory machines.

Motivations

- To fully utilize the capabilities of a multi-core computer system through parallelization.
- Helping domain scientists with optimizing their computational and data-intensive applications.
- Equip a parallelizing compiler with the ability to interact with the users, involving the user into the decisions that compilers struggle with.

Improve the performance of your C program using the interactive iCetus source-to-source parallelization tool

SCAN ME

Website

Paper

SCAN ME

HTTP://ICETUS.ECE.UDEL.EDU/CETUSWEB/

Developed Features

Customize parallelization options in an interactive menu-driven way.

Inspect compiler analysis and transformation results to identify impediments to parallelization.

Modify the code to improve analyses and transformations.

Show speedup and efficiency gained through optimization.

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iCetus Features Explained

Goals

- Addressing the key problems of Auto-parallelizers.
- Identifying key features of interactive parallelizers.
- Providing a learning tool to help users understand important program patterns and their parallelization.
- Advancing science by increasing the productivity of researchers who use CDI research.

How can we better serve our researchers?

Email us at parinazb@udel.edu