

iCetus: A Semi-automatic Parallel Programming Assistant

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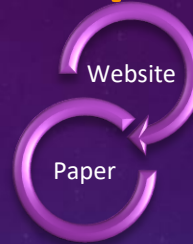
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Improve the performance of your C program using the interactive iCetus source-to-source parallelization tool



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[HTTP://ICETUS.ECE.UDEL.EDU/CETUSWEB/](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

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.