

CS 498: Program Optimization, Fall 2006

Location: room 1131, Siebel Center for Computer Science

Time: WF 11:00 am –12:15 pm.

CRN: 43501, 40096

Instructor: Maria J. Garzaran

Office: 4308, **email:** garzaran@cs.uiuc.edu

Office Hours: By appointment (send me an email).

Course website: <http://www.cs.uiuc.edu/class/fa06/cs498dp/>

Tentative Course Outline

F 8/25: Introduction. Course Organization. What is program optimization?
Optimization and machine organization.

W 8/30: Optimization Challenges for High Performance Architectures.

F 9/1: Compiler Optimizations

W 9/6: Compiler Optimizations

F 9/8: Vtune (Paul Petersen)

W 9/13: Locality/Tiling

F 9/15: Locality/Tiling

W 9/20: Locality/Tiling

F 9/22: Parallel Programming- Episodes I & II (Arch Robison)

W 9/27: Parallel Programming- Episodes III & IV (Arch Robison)

F 9/29: Parallel Programming- Episodes V & VI (Arch Robison)

W 10/4: Threading Tools (Paul Petersen)

F 10/6: Introduction to OpenMP

W 10/10: Instruction-Level Parallelism

F 10/13: Introduction to Library Generators. Empirical Search

W 10/18: Midterm

F 10/20: The ATLAS system

W 10/25: The ATLAS system

F 10/27: Matrix-multiplication for Graphics Processor unit

W: 11/1: Sorting

F: 11/3: Sorting

W: 11/8: The SPIRAL system

F: 11/10: The SPARSITY system

W: 11/15: Datamining optimizations

F: 11/17: Datamining optimizations

W: 11/29: Programming SSE devices

F: 12/1: Power-Aware Compiler Techniques

W: 12/6: Project presentation

F: 12/8: Project presentation

