MECH 731: Introduction to Parallel Computing
Autumn Quarter 2005

Instructor: Dr. Kumar Vemaganti, Assistant Professor of Mechanical Engrg.
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Course page: http://blackboard.uc.edu/

Textbook: Parallel Programming with MPI, by Peter Pacheco, 1997, Morgan Kaufmann.

Goals: To introduce the basics of high performance computing & distributed parallel computing to graduate students in engineering.

Class: Tuesday 3:30 – 5:30, Thursday 3:30 – 4:30, 641 Baldwin

Office hours: 4:30 – 5:30 Thursday; 629 Rhodes.

Prerequisites: Basic programming in FORTRAN, and C or C++. Basic UNIX. Linear algebra and numerical analysis.

Topics: (1) Introductory concepts in computing
(2) High performance computing on serial computers
(3) Parallel computing paradigms
(4) Message passing with MPI
(5) Applications

Grading: 50%: Assignments
25%: Exam
25%: Project

Other information

- Class attendance and punctuality are highly recommended.
- Late work will not be accepted.
- You can expect this class to be time consuming, just like any other class that involves programming assignments. Please plan ahead.
- Unless otherwise stated, all work is to be done independently.
- If you are new to UNIX, please visit www.min.uc.edu/~kumar/teaching.html for links to some online UNIX tutorials.