Contact Information

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OFFICE HOURS:	Mon,Wed: 10:00-12:00,16:00-18:00	CLASS HOURS:	Mon,Wed 13:00-14:25 (FAC 403)

Syllabus.

The course is intended for computer science and engineering students who are interested in parallel computing. CIS 668 introduces aspects of parallel algorithm design and the same time emphasizes the practicality and programmability of these designs. Various fixed-connection networks are introduced and SIMD (Single Instruction Multiple Data) algorithms are developed for them; routing algorithms are introduced. The PRAM model is presented and shared-memory algorithms are introduced and analyzed. Realistic models of parallel computation are introduced such as the LogP and the BSP and architecture independent design and analysis of algorithms is introduced. Numerical and combinatorial algorithms are presented and their parallel performance analyzed. Implementation issues on clusters of PC workstations will also be discussed. Such clusters will also be used for the programming part of this course.

For course related questions use the following e-mail address. All course material will be made **available** on the following Web-page. Check it regularly **(eg Mon-Wed-Fri)**. After class go to the course Web page download this document and print it. Compare it to the hard copy handed out in class. If there are any differences, adjust your printer.

Course E-mail: `alg668@cis.njit.edu`
Course Web Page: `http://www.cis.njit.edu/~alexg/courses/cis668/index.html`

Course Information

Textbook	F.T. Leighton "Introduction to Parallel Algorithms and Architectures: Arrays - Trees - Hypercubes", Morgan-Kaufmann Publishers.
Other Books	Algorithms Sequential and Parallel: A unified approach by Russ Miller and Laurence Boxer, Prentice Hall.
Grading scheme:	1000 points total can be collected in two quizzes and the best four of five assignments.
Quizzes:	Quiz 1 is scheduled for **Wed Oct 18**. Quiz 2 is scheduled for **Wed Dec 6**. Each Quiz is worth 300 points. The duration of each quiz is 1h20min. Quiz 1 covers the first part of the course, and Quiz 2 the remainder. There is **no final** exam.
PS1-PS3:	Three homework assignments will be given throughout the semester. Each one is worth 100 points. Homeworks are handedout on a Wednesday and are due by the end of class on a Wednesday.
PA1-PA2:	Two programming assignments will be given throughout the semester. Each one is worth 100 points. Elementary knowledge of C or C++ is required for the completion of the assignments (eg pointer manipulation).
Prerequisites	Familiarity with the concept of a matrix, matrix multiplication and sorting (eg insertion sort, quick-sort, merge-sort) are helpful though not necessary to attend this course.
How to obtain a HW	Hardcopy by instructor at office hours; Electronic form in Postscript .PS or Adobe Acrobat .PDF format from Course Web Page.
How to turn in programs	By e-mail to course e-mail address.