6/76995 Special Topics: Distributed Algorithms

Spring 1997, MWF 11:00-11:50am

Instructors: J. Baker, R. Walker

This course is designed to provide a practical and theoretical understanding of distributed computing and algorithms. The course will begin by presenting a broad overview of how clusters of workstations can be used for parallel / distributed computing. With that overview providing a foundation for discussion, formal models of synchronous and asynchronous systems will then be examined, with the goal of understanding how various algorithms can be implemented on each model. Finally, the course will conclude by exploring various distributed programming systems and environments that are available.

This course does NOT require 4/53301 Parallel Programming, 6/73201 Advanced Operating Systems, or 6/76105 Parallel Algorithms, as a prerequisite, and the overlap with those courses should be minimal. However, some undergraduate knowledge of algorithms will be assumed.

Texts:

"In Search of Clusters", second edition
(if available in time, otherwise we'll use the 1995 first edition)
Gregory F. Pfister, Prentice Hall, 1997

"Distributed Algorithms",
Nancy A. Lynch, Morgan Kaufman, 1996.