

Massachusetts Institute of Technology  
Department of Electrical Engineering and Computer Science

6.846: Parallel Computing

Spring 2008, Agarwal

Handout #2

Course at a Glance

Lecture	Topic
L1, Feb 7	Introduction, why multicore Applications, Technology, Parallelization
L2, Feb 12	Applications I, Continuum problems Parallelization, partitioning, communication, synchronization
L3, Feb 14	Introduction to the Tile Multicore Processor Introduction to parallel programming <i>HW1 out</i>
Feb 19	No Class. (Monday schedule of classes)
L4, Feb 21	Applications II, continuum problems, direct methods Applications III, particle methods
L5, Feb 26	Applications IV, graph problems Applications V, stream problems <i>HW1 due; HW2 out</i>
L6, Feb 28	Computational models Synchronization, communication
L7, Mar 4	Machines, Languages I
L8, Mar 6	Machines, Languages II, Shared-memory, dataflow, etc.
L9, Mar 11	Machines, Languages III, Unification <i>HW2 due; HW3 out</i> <i>Discuss project ideas, teams</i>
L10, Mar 13	Technology primer, Interconnection Networks I Cost, balance, locality, scalability
L11, Mar 18	Interconnection Networks II locality, scalability <i>Project proposals due</i>
L12, Mar 20	Performance evaluation Interconnection Networks III

Lecture	Topic
Mar 25	Spring break
Mar 27	Spring break
L13, Apr 1	Caches, Memory Systems I <i>HW3 due; HW4 out</i>
L14, Apr 3	Caches, Memory Systems II
L15, Apr 8	Synchronization I Mechanisms Language constructs
L16, Apr 10	Synchronization II Waiting algorithms
L17, Apr 15	Processor architecture I <i>HW4 due; HW 5 out</i>
L18, Apr 17	Processor architecture II
Apr 21	Patriots Day
L19, Apr 22	Compilation I
L20, Apr 24	Compilation II <i>HW5 due</i>
L21, Apr 29	Compilation III
L22, May 1	Compilation IV
L23, May 6	Runtime systems I
L24, May 8	Runtime Systems II
L25, May 13	<i>Project presentations</i> <i>Project reports due</i>
L26, May 15	<i>Project presentations</i>