Notes for 11/16/09

Hard disks
Spinning platters and moving heads to read and write data
Each of the platters has tracks, which are concentric circles
Each track has sectors in them
Each platter typically has 10k – 50k tracks
Each track typically has 100 to 500 sectors
A sector is 512 bytes
Platters will typically spin in the range of 5400 rpm to 15000 rpm

ILP – instruction level parallelism, e.g., superscalar
TLP – task level parallelism, e.g., multithreading
DLP – data level parallelism, e.g., vector processing

SMP – shared memory multiprocessor

Shared memory
UMA vs. NUMA – uniform memory access versus nonuniform memory access
Whether or not all memory addresses take a uniform amount of time to read or write

MPI – message passing interface
Instead of sharing memory, one processor will send data over the network to another processor