Lecture 1
First Meeting & Introduction to
Parallel Computing
Lecture Information

Ceng505 *Parallel Computing* at September 27, 2011

Dr. Cem Özdoğan
Computer Engineering Department
Çankaya University

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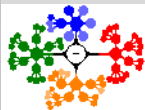Grading Criteria & Policies
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First Meeting

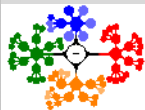- CENG 505 Parallel Computing I Fall 2011

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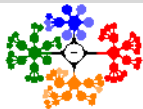- Instructor: Cem Özdoğan Materials Science and Engineering Department, New Campus MHB3 Z-21
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- All the example c-files (for lecturing and hands-on sessions) will be accessible via the link.

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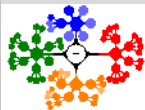
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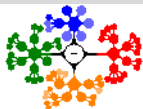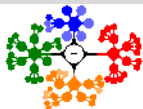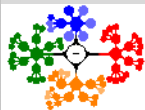
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- Thread-based programming will also be outlined, and the distributed shared memory (DSM) approach (If we have enough time).

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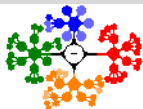- Important announcements will be posted to the Announcements section of the web page, so please check this page frequently.
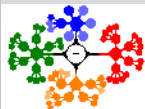
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- Important announcements will be posted to the Announcements section of the web page, so please check this page frequently.
- You are responsible for all such announcements, as well as announcements made in lecture.

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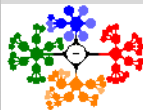
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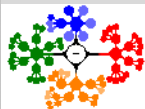 - Synchronous Computations,

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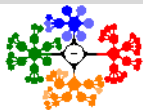 - Load Balancing,

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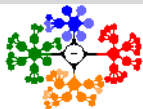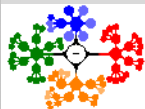 - Programming with Shared Memory

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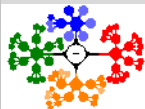- Topics might be classified into two main parts as;
    1. Parallel computers: architectural types, shared memory, message passing, interconnection networks, potential for increased speed.
    2. Basic techniques: embarrassingly parallel computations, partitioning and divide and conquer, pipelined computations, synchronous computations, load balancing, shared memory programming.

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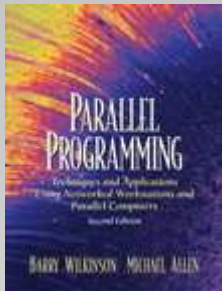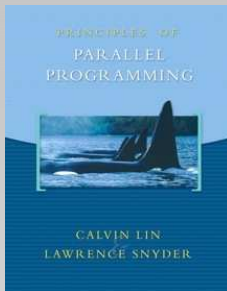
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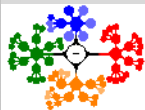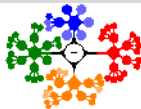- Beowulf Cluster Computing with Linux, 2nd edition, edited by William Gropp, Ewing Lusk, Thomas Sterling, MIT Press, 2003, ISBN 0-262-69292-9.
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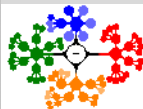
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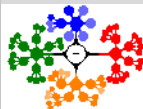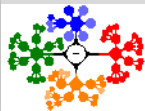Grading Criteria & Policies
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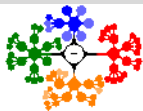
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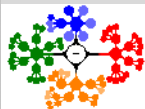Grading Criteria & Policies
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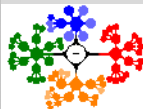 - fast dense circuitry,

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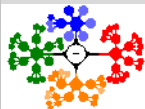 - packaging technology,

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- Parallel processors are computer systems consisting of multiple *processing units* connected via some *interconnection network* plus the software needed to make the processing units work together.

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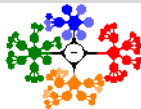
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  - Uniprocessor systems can achieve to a limited computational power and not capable of delivering solutions to some problems in reasonable time.