CS3210 Parallel Computing

2012/13 – Semester I
www.comp.nus.edu.sg/~teoym/cs3210-12

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TA & Lab Tech
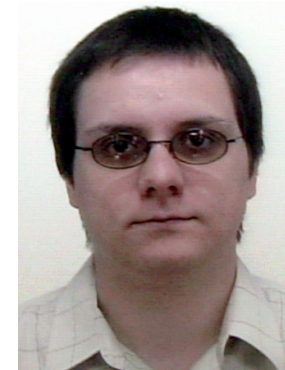
TA:

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Bogdan Marius Tudor
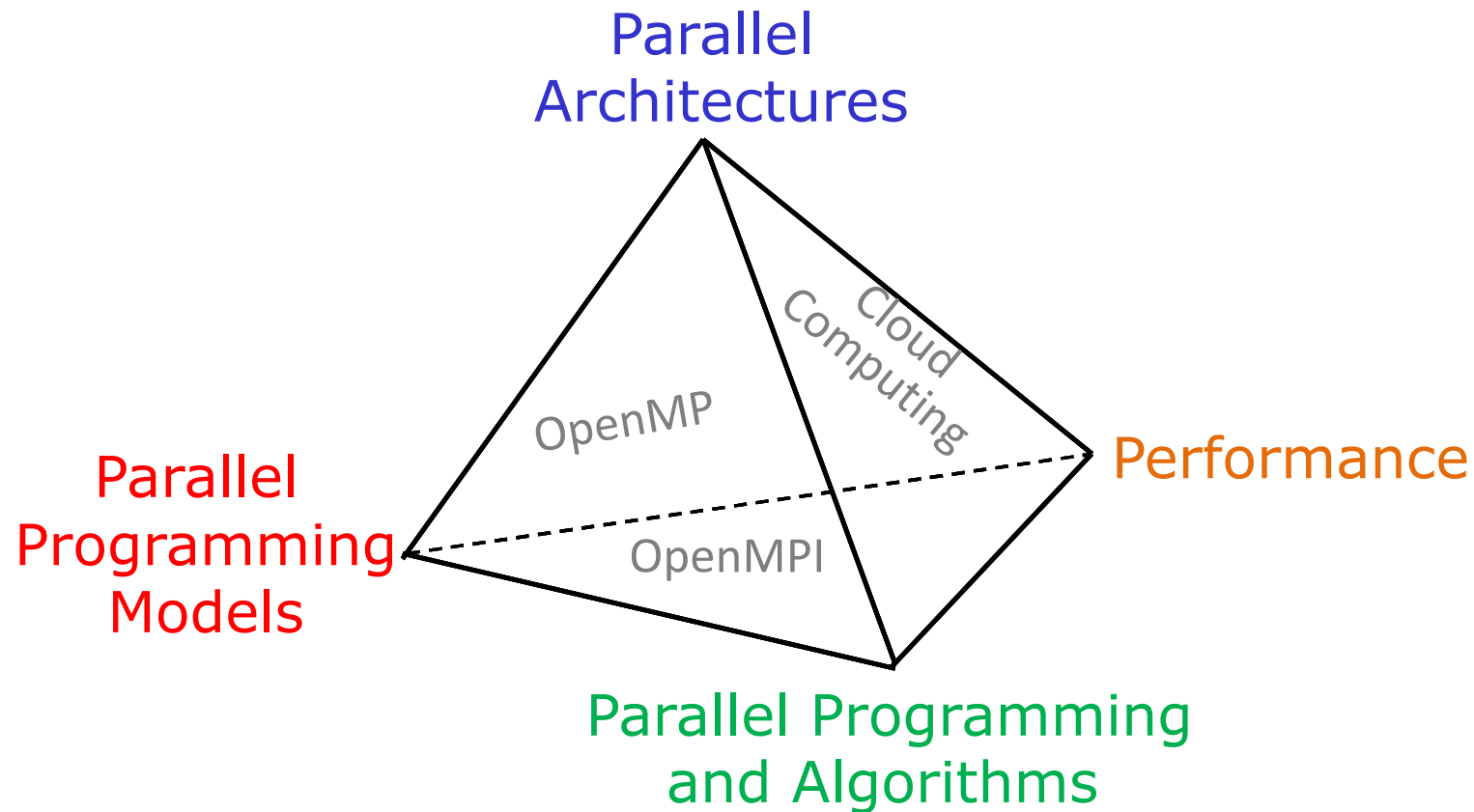Room: Com2, #B-01
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Lab Technologist:
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What will we cover?

Parallel Architectures

Parallel Programming Models

Performance

Parallel Programming and Algorithms

Cloud Computing

OpenMP

OpenMPI

Course Schedule and Webpage

- Lecture: Wed, 2-4pm, Com1, #02-12 (SR3)

- Tutorials and Lab on alternate weeks:

  - Parallel & Distributed Computing Lab, Com 1, #B-01

  - Group 1: Wed, 0900-1100 (Bogdan)
    Group 2: Wed, 1100-1300 (Bogdan)
    Group 3: Mon, 1200-1400 (Khanh)

  - Hardware in lab is organized into 7 workbenches and each bench is shared among a group of 3 students

Course Schedule and Webpage

- Group discussions & assignments:
  Parallel & Distributed Computing Lab, Com2, #B01-01

- Consultation:
  Mon, 2-3pm (Khanh)
  Wed, 1-2pm (Bogdan)
  Wed, 2-3pm (Yong Meng)

- Webpage:
  - IVLE
  - www.comp.nus.edu.sg/~teoym/cs3210-12 for lecture slides, tutorial and lab handouts, and assignments -> userid/password (IVLE announcement)

Schedule - http://www.comp.nus.edu.sg/~teoym/cs3210-12/schedule.htm

Schedule (AY2012/13 - Semester I)

Wk	Date	Lecture - Tue 2-4pm, COM1 #02-12 (SR3)	Tutorial	Lab – Parallel & Distributed Computing Lab, Com1 #B-01	Others
1	14 Aug	L00: Course Admin L01: Introduction		Lab Layout	
2	21 Aug	L02: Processor & Memory Organization		Lab1: Parallel Computing & Data Centers	
3	28 Aug	L03: Interconnection Networks & Memory Hierarchy	T01: Parallel Computer Architecture		
4	4 Sep	L04: Performance Analysis of Parallel Systems		Lab2: Setting up a Parallel Computer Cluster	**Assignment 1:** (due on xx) Comments / Marks
5	11 Sep	L05: Parallel Programming Models	T02: Performance of Parallel Systems		
6	18 Sep	L05:Parallel Programming Models		Lab3: Running Parallel Programs and Instrumentation	**Mid-term Test**
Sep 22-30, Recess					
7	2 Oct	L06:Thread Programming	T03: Parallel Programming Models		OpenMP Tutorial
8	9 Oct	L07: Message-passing Programming		Lab4: Introduction to Message-passing Model	MPI Tutorial
9	16 Oct	L08: Cloud Computing		Lab5: Programming in MPI	**Assignment 2:** (due on xx)
10	23 Oct	L09: Parallel Algorithm Design	T04: Thread and Message-passing Programming		
11	30 Oct	L09: Parallel Algorithm Design	T05: Cloud Computing		
12	6 Nov	L10: Conclusion & Revision			
13	13 Nov	Table of Contents			Deepavali
Nov 17-23, Reading Week					
Examination: 27 November 2012, evening (to be confirmed)					

(updated: 13 August 2012)

Parallel and Distributed Computing Lab(COM1#B-01) Layout
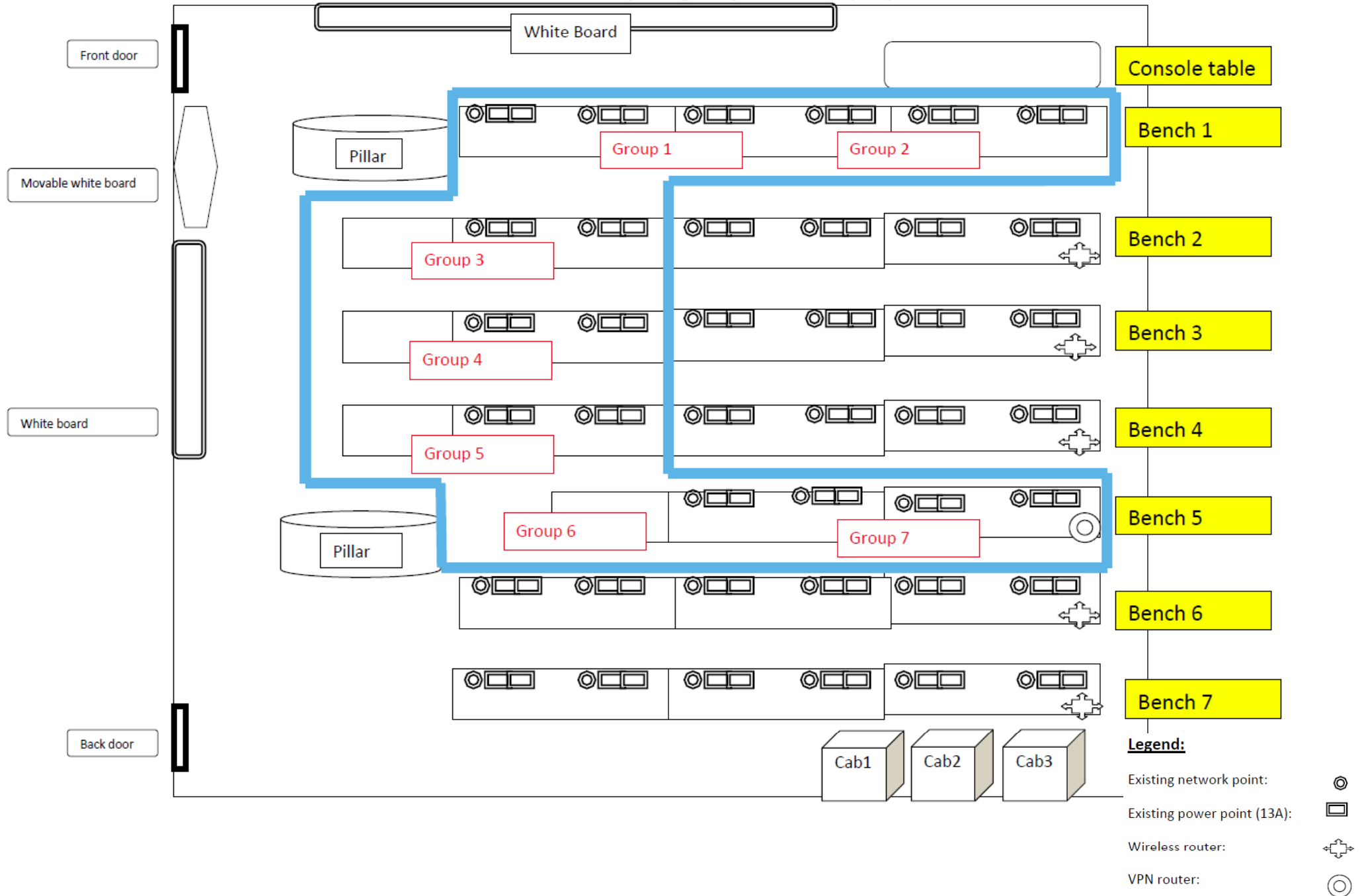
Module Assessment

- Continuous Assessment (60%)
  - Lab (10%)
  - Mid-term Test (15%)
  - Two assignments (35%)

- Open Book Exam (40%)

Main Textbook

- *E-book: Parallel Programming for Multicore and Cluster Systems*, Thomas Rauber and Gudula Rünger, 1st Edition, Springer-Verlag, 2010 (NUS Digital Library - http://linc.nus.edu.sg/record=b2974382).