E0243 Aug. 3:1

Computer Architecture

Instructor

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Teaching Assistant

Email:

Department: CSA

Course Time:

Lecture venue:

Detailed Course Page: www.serc.iisc.ernet.in/~govind/243.html

Announcements

Brief description of the course

The course is meant for graduate (M.Tech /research) students who wish to pursue computer systems related work.

Prerequisites

None

Syllabus

Processor Architecture: Instruction-Level Parallelism, Superscalar and VLIW architecture; Multi-core processors;

Memory Subsystem: Multilevel caches, Caches in multi-core processors, Memory controllers for multi-core systems;

Multiple processor systems: taxonomy, distributed and shared memory system, memory consistency models, cache coherence, and Interconnection networks;

Advanced topics in architecture

Course outcomes

Understanding of processor microarchitecture (single and multi-core), memory system design, parallel architecture, accelerator architecture, latest developments and research problems in the area of computer architecture.

Grading policy

20% for Mid-term;

25% for Term project;

5% for assignments/class participation

50% for final examination

Assignments

Resources