

Computer Architecture

Overview

Textbook

- John L. Hennessy and David A. Patterson. 2012. *Computer Architecture: A Quantitative Approach, Sixth Edition*. Morgan Kaufmann.

Contents

- Fundamentals of Quantitative Design and Analysis
- Memory Hierarchy Design
- Instruction-Level Parallelism and Its Exploitation
- Data-Level Parallelism in Vector, SIMD, and GPU Architecture
- Thread-Level Parallelism
- Warehouse-Scale Computers to Exploit Request-Level and Data-Level Parallelism
- Domain-Specific Architectures

Evaluation

- Participation 10%
- Homework 30%
- Midterm exam (April) 30%
- Final exam (June) 30%