# CS470 Computer Architecture

Term Project Spring 2017

Objective: Investigate a computer architecture topic of current interest. It can include recent developments, emerging technologies, evaluation of key trade-offs. It can also be development of new ideas, novel analysis or software packages.

**Due dates: Proposal Mon. March 27, Progress report Wed. April 12, Slides Wed. April 26, Final report Wed. May 3.**

**Potential topics:** Cache architectures; Software/hardware design incorporating a major concept related to the class; Mobile Device architectures, optimization; Advancements in general, special purpose, embedded architectures; Biological computer architecture; Quantum computing: how close are we?; Architecture Wars: Conceptual/Corporate; Multicore architecture: specific issues; New storage architecture/technology.

**Proposal** Format: 1 page. It should include

- Title
- Name and Student ID
- Motivation
- Approach
- Major sources of information? Give names of a few journals, conferences, research groups, industry publications, technical news articles.
- Specific references: about 3-4, should include at least one from 2017-15, and at least one from 2010-15.

**Progress Report**: Progress report: It should indicate that you have finished about half of the work. It should include a summary of the findings, any refinements of the objectives as a result of the past study, what the final report will contain and the applicable references.

**Slides** (power point): 12-15 minute presentation (12-15 slides): Include motivation, background, findings thus far and additional work that will be in the final report.

**Final report:**

Final report (5-10 pages): It should follow the format for IEEE conference papers. It should include

- The title, name of the author, name of the class and professor,
- An abstract,
- Introduction (modification, background and related work, objectives and methods),
- Description of assumptions/schemes/models/problem-formulation,
- Comparison/discussion/derivation etc. of the results,
- Conclusions (findings and suggestions for improvements) and
- References.

Use appendixes for details like raw data, listings etc., if needed. Report must include appropriate figures and must have some hard data (tables/plots/screen-shots etc.).

**Guide:** A useful guide for writing papers can be found at:
http://www.cs.colostate.edu/~malaiya/writingguide.pdf