Today

- Course overview and logistics
  - Syllabus
  - Course structure
- Introduction to Computer Architecture

In this course you will learn how exactly a computer works!

Syllabus

- Language of the computer: ISA
- Arithmetic
- Processor Design
- Performance
- Memory
- IO
- Multiprocessors
Course Structure

- Lecture notes
  - Blackboard and slides
  - Readings from text BEFORE class
- Project
  - Describe a full processor, verify, and simulate it
  - Using a hardware description language called Verilog
  - Optionally map to real hardware
- Homework
- Two exams

Homework

- Homework 0: Introduce yourself
- Homework 1: Logic Design review
- Homework 2: Advanced Logic Design
- Homework 3: Intro to Verilog
- Homework 4: Advanced Verilog
- Homework 5: Intro to project
- Homework 6: Miscellaneous

One every two weeks

The optional highly speculative part!
Grading

- 20% Homework
- 25% Project
- 25% Midterm
- 25% Final
- 5% Class participation

Grades on Learn@UW

Online

- Web
  - http://www.cs.wisc.edu/~karu/courses/cs552
  - Course login and password
  - Course calendar, homework, lecture notes, and reference texts online
- Piazza for discussion:
  - TAs and I will look at it
- Email
  - Include 552 in subject of emails to me
  - Use Piazza if you think its of wide interest

Other

- Come to class on time
- Submit homework on time
- Extensive office hours and feel free to drop in any time my office door is open
- Introduce our TA

This is NOT an easy class
What your Forebears said...

- I am impressed with amount of material covered, learn useful stuff
- Assignments very long and hard, but very useful
- Text was very thorough and helpful
- He got the students involved in everything
- Karu is an awesome professor, material is very interesting, just too much damn work

This is NOT an easy class
You will learn a lot – and will take a lot of time.