

Lecture 28: Course Evaluation Beyond 370 Benjamin's Research

CSE 370, Autumn 2007
Benjamin Ylvisaker

Course Evaluation

- Numbers are useful
- Comments are even better

Administrative Stuff

- Review session this afternoon at 2 in CSE 303
- Final exam Monday morning at 8:30 in EE 037
- Lab check-off opportunities entirely up to lab TAs (until next Friday)
- Unreturned/uncollected material will be available during the exam
 - Will be recycled shortly thereafter

Computer Engineering at UW Beyond 370

- 378: Much more computer organization
- 466: Embedded systems software
- 467: Advanced hardware design
- 468: VLSI (not taught often)
- 471: Advanced computer organization
- 477: Digital system design

Computer Engineering in EE

- EE 331: Devices and Circuits I
- EE 341: Signals and systems
- EE 476: Layout!

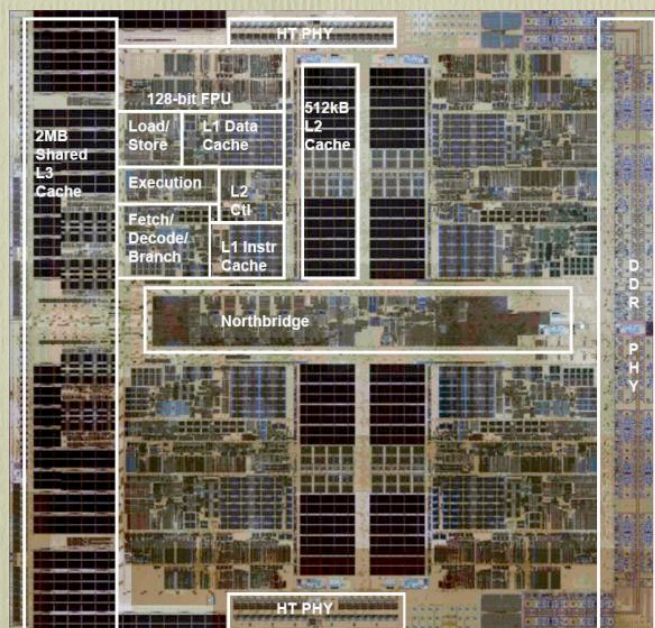
More Distantly Related Courses

- 401: Compilers
- 451: OS
- 461: Networks

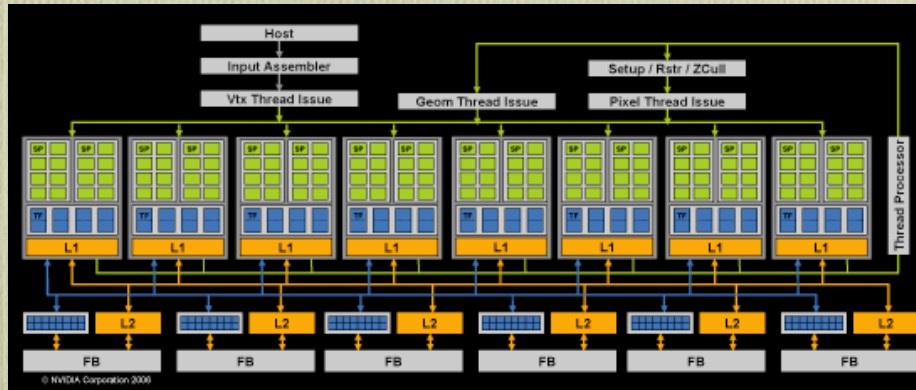
Rant About Research

- UW CSE is a research-oriented department
- Research is qualitatively different from taking classes
 - Some students with less than stellar grades do excellent research
- Take advantage of the opportunity to see what working on a research team is like

Motivation for Benjamin's Research



GPU Block Diagram



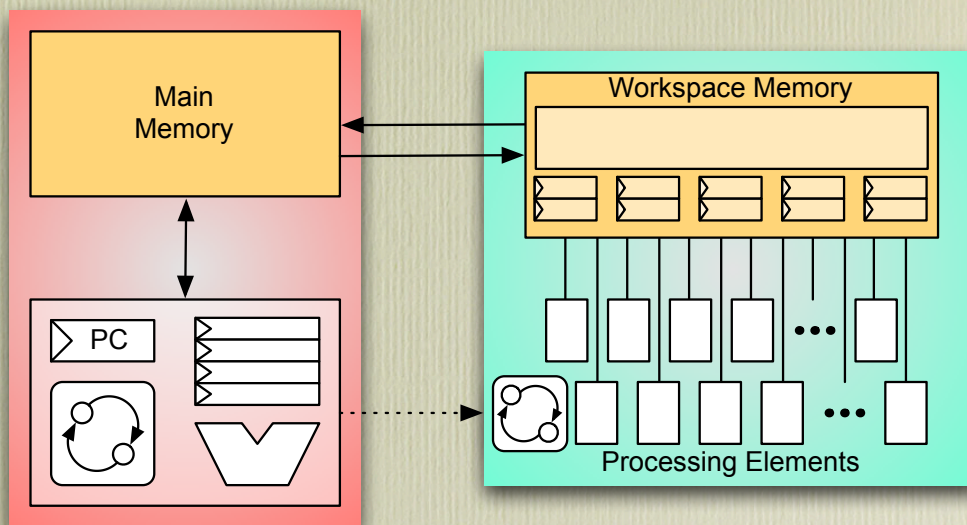
Some Algorithms Are/Have:

- Many independent operations
- Repetitive
- Predictable
- Many operations per unit of primary input data
- A small working set of data
- A substantial total amount of work

Accelerators

- These algorithms can be run much faster and more energy efficiently by coprocessor accelerators
 - FPGAs, GPUs
 - $\sim 10\times$ is reasonable for many applications
- Accelerators are much harder to program

Abstract Programming Models



Thanks for Your Attention

- Good luck on the final exam
- Have a good holiday