

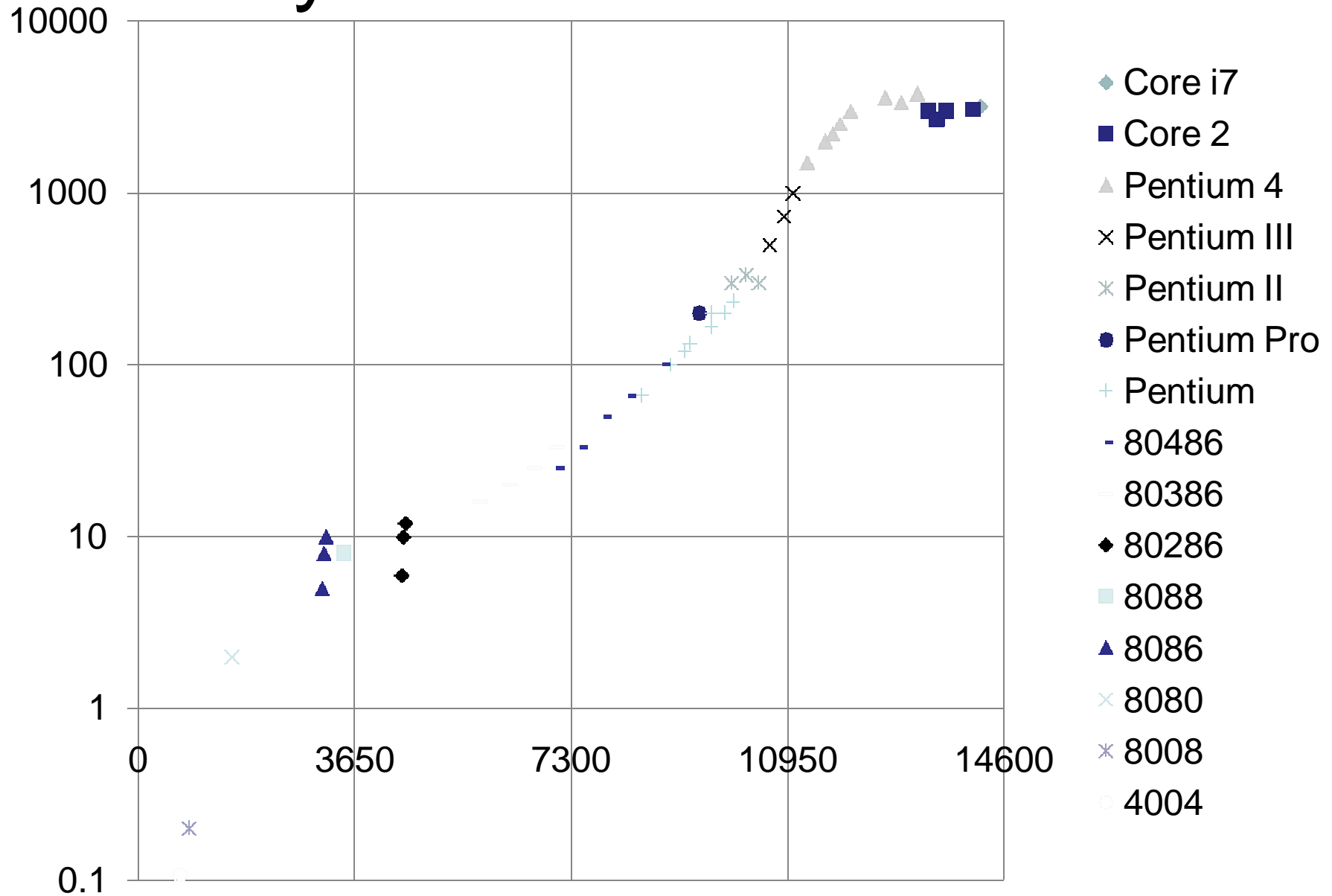
ME 290-R:
General Purpose Computation
(CAD/CAM/CAE) on the GPU
(a.k.a. Topics in Manufacturing)

Sara McMains
Spring 2009
Lecture 28

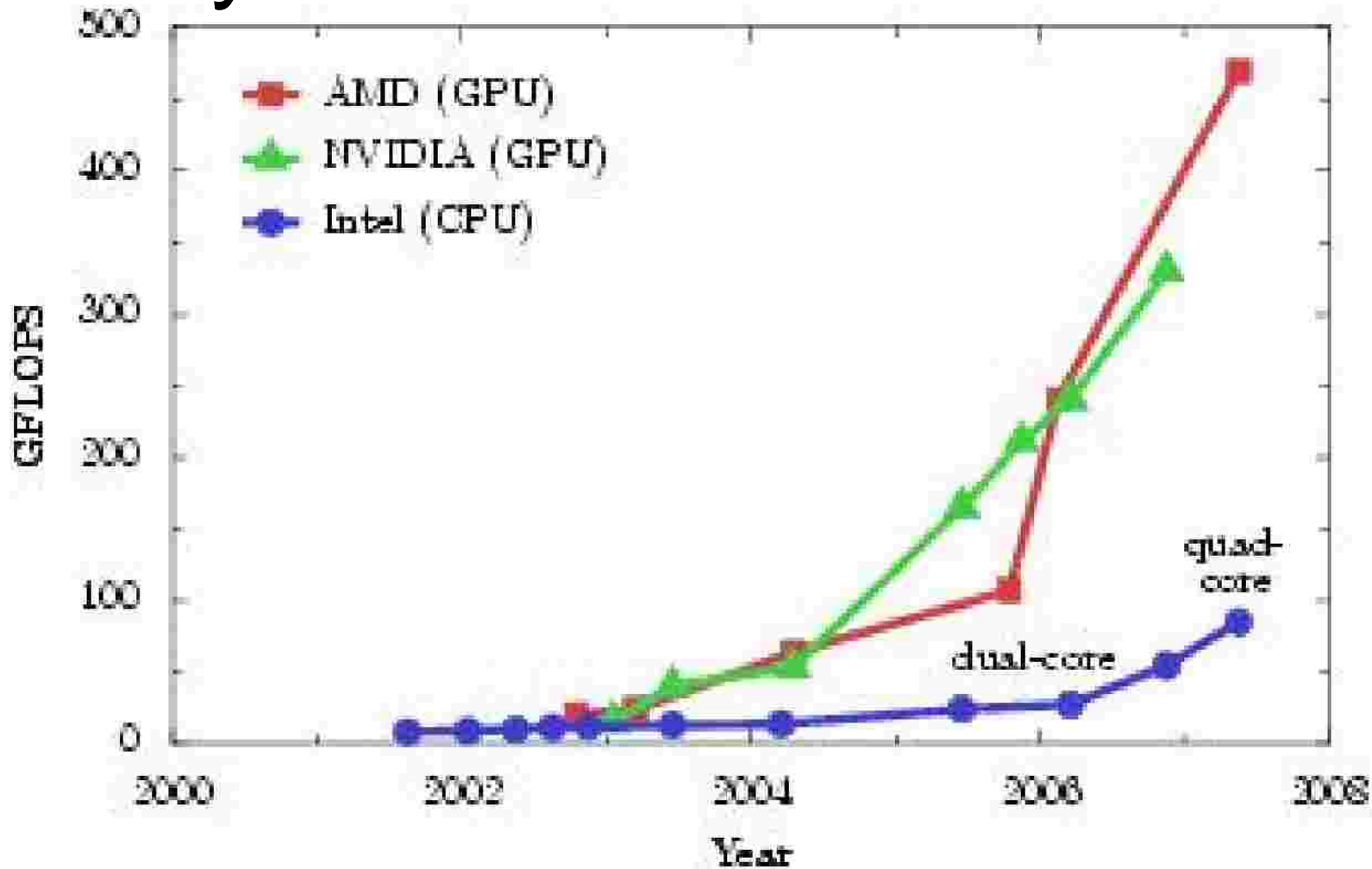
Outline

- GPU Summary
- Final Projects

Why Parallelization Is Vital



Why GPUs Worth the Trouble



GPUs

- (blackboard)

Outline

- GPU Summary
- Final Projects

Final Project

- 10% : quality of oral presentation
- 20% : quality of written report
- 70% : quality of research project

Oral Presentation

- 20 minutes
 - includes setup, demo, Q&A, etc.
 - So only about 15 minutes actual presentation
 - Video capture instead of demo?
 - E.g. <http://www.fraps.com/>
 - OK if results are still preliminary
 - May 20th write-up for final results

Advice for slides

- (Meaningful) figures good
 - Animating figure elements (on click) often useful
 - But takes longer than you think
- Never use smaller than 18 pt font
- Avoid extreme edges, bottom of screen
- Avoid multi-line bullets
- For a 15-min. talk, outline may not be needed
 - Don't re-read on re-appearance

Advice Presenting

- Try to vary tone
 - speed, volume, emphasis, emotion, etc.
- Read axis labels for all graphs
- Pointing or animate-on-click can be useful
 - Don't over-use laser pointer

Written Reports

- Roughly 8-12 pages
- Figures are good
- Graphs are good
- If applicable, include GPU programming caveats
- Clarity, Style

Common Mistakes

- U.S. usage
 - Periods & commas *always* inside quotes
 - Single quotes only inside double quotes
- Et al.
 - Et alia
- Citation before period at end of sentence
 - use [Name Year] format (apalike or Siggraph style in latex)
- Hyphen vs. emdash
 - width of letter m
 - In latex, ---
- Which vs. that
- Patterson rule
 - numerals even for small numbers if mental arithmetic likely
- <http://www.me.berkeley.edu/~mcmains/CopyEditing.html>

Writing Style

- (Re)read “The Elements of Style”
 - aka Strunk & White
 - Strunk: <http://www.bartleby.com/141/>
 - Make the paragraph the unit of composition
 - one paragraph per topic
 - Begin each paragraph with a topic sentence
 - Use the active voice
 - Omit needless words
 - Use parallel structure

Other Style Advice

- Flow
 - Transitions between ideas
 - Make clear at all levels
- Avoid using “and” to join independent clauses
 - Doesn’t describe relationship between clauses
 - Determine relationship & elucidate it
 - Or use semicolon

Reader Expectations

- a. Although Fred's a nice guy, he beats his dog.
 - b. Although Fred beats his dog, he's a nice guy.
 - c. Fred's a nice guy, but he beats his dog.
 - d. Fred beats his dog, but he's a nice guy.
- Does the writer of this sentence want us to approve or disapprove of Fred?
 1. Approve
 2. Maybe approve
 3. Maybe disapprove
 4. Disapprove

Reader Expectations

- e. Fred is a good husband, a caring father, a fine colleague, and an altogether nice guy, even though he beat his dog.
- f. Even though he beats his dog, Fred is a good husband, a caring father, a fine colleague, and an altogether nice guy.
- Does the writer of this sentence want us to approve or disapprove of Fred?
 1. Approve
 2. Maybe approve
 3. Maybe disapprove
 4. Disapprove

Reader Expectations

- a. Although Fred's a nice guy, he beats his dog.
- g. Although he's a nice guy, Fred beats his dog.

- Which is more negative?
 1. a
 2. g

- h. Although Fred is a nice guy, he commits genocide.
- i. Although Fred commits genocide, he is a nice guy.

Acknowledgements

- Reader expectations material is from George Gopen