

Project Proposal

- Project Logistics:
 - 2-3 person teams
 - Significant implementation, worth 55% of grade
 - Parts: proposal, design review (3/30 and 4/1), final presentation and report (end of semester)
 - Each person turns in the proposal (should be same as other team members)
- Proposal:
 - 3-4 page document (11pt, single-spaced)
 - Submit with handin program:
 "handin cs6963 prop <pdf-file>"

Content of Proposal

- I. Team members: Name and a sentence on expertise for each member
- II. Problem description
 - What is the computation and why is it important?
 - Abstraction of computation: equations, graphic or pseudo-code, no more than 1 page
- III. Suitability for GPU acceleration
 - Amdahl's Law: describe the inherent parallelism. Argue that it is close to 100% of computation. Use measurements from CPU execution of computation if possible.
 - Synchronization and Communication: Discuss what data structures may need to be protected by synchronization, or communication through host.
 - Copy Overhead: Discuss the data footprint and anticipated cost of copying to/from host memory.
- IV. Intellectual Challenges
 - Generally, what makes this computation worthy of a project?
 - Point to any difficulties you anticipate at present in achieving high speedup