

## CS 598 Project Instructions

A term project is required for this course. Students will select an algorithm and analyze it with respect to one or more architectures and/or programming models. The project must be submitted electronically as PDF to [wgropp@illinois.edu](mailto:wgropp@illinois.edu) by 11:59PM CST, December 15<sup>th</sup>.

A written report is required; 8-10 pages are sufficient (but you may use more if you feel it necessary to explain your project and results). Your project should address at least two of the following three questions:

- \* How does the algorithm fit the selected architecture(s)?
- \* What is an appropriate performance model?
- \* How well do the selected programming models express the algorithm?

The report should be complete and should include a bibliography for any references that you use. You may organize your paper as you see fit, but it must contain the following:

1. An introduction with a clear statement of the project, including background and goals
2. A description of the selected algorithm or algorithms
3. At least two of the following three (from above)
  - a. How does the algorithm fit the selected architecture(s)? This may include experimentation with one or more systems
  - b. What is an appropriate performance model?
  - c. How well do the selected programming models express the algorithm? (Be careful in defining your metric for evaluation)
4. Conclusions and observations
5. References used

Note that the purpose of this project is to demonstrate that you can evaluate an algorithm with respect to a performance model and/or programming model. Don't worry if the algorithm turns out to be a poor match for some (or even all) of the hardware that you consider – learning to use analysis to evaluate ideas without requiring complete experimentation is one goal of this class