CSCI 440/563: Homework #1

Due at 11:59 PM on Feb 3rd, 2012

Drop in the blackboard

1. Complete the final version of the **Circuit Satisfiability** code talked in class and test its performance on Alamode Lab using 1, 2, …, 16 processes with one MPI process per core.

2. $\pi = \int_0^1 \frac{4}{1+x^2} dx = \lim_{n\to\infty} \sum_{i=0}^{n-1} \frac{1}{n} * \frac{4}{1+(i+0.5)^2}$. Write a parallel program to calculate π assuming $n = 10^{10}$. Compare your calculated π with $\pi = 3.14159265358979323846$ and report the difference. Test the performance of your code on Alamode Lab using 1, 2, …, 16 processes with one MPI process per core.

Note that, in syllabus, we emphasize for **ALL** homework assignments: "Please make sure that your programs are properly documented and indented. **Provide instructions on how to run your programs, give example runs, and analyze your results." Please test your code on Alamode Lab.**