Homework 2

Copy the hw2code.tar file to Scholar using sftp, e.g., *sftp scholar.rcac.purdue.edu*.

Log into *scholar.rcac.purdue.edu* and untar it (*tar -xv -f hw2code.tar*) and go into the resulting *hw2code* directory. Compile *omp_hello.c* and *omp_hello2.c* and put the output of the compiles into *omp_hello* and *omp_hello2*, respectively. Run the programs using the *qsub* command and the *openmp.sub* script.

What to turn in: You will get output files called openmp.sub.oxxxx and openmp.sub.exxxx, where x are integer digits. The .oxxxx file contains the stdout output from the programs, and the .exxxx contains the stderr output. The .exxxx file should be empty. Create a directory called *userid* (your Purdue userid, not literally userid!) and put the .exxxx and .oxxxx files into the directory. Create a .zip file for the directory and turn this into Blackboard.

Notes:

To compile with the Intel compiler, once logged into Scholar type

module load intel
icc -qopenmp -std=c99 your_program.c -o your_program

You can submit your job using:

qsub openmp.sub

but it will default to a longer running time than we need, and will end up in a lower priority, slower queue. Using the command

qsub -l walltime=00:00:30 openmp.sub

will give your job 30 seconds of walltime, which is approximately 30 seconds on all 20 cores of a Scholar node, and will be more than enough time to run this job, and most of our programs.

Documentation can be found at the course web page at https://engineering.purdue.edu/~smidkiff/ece563/scholar.html. It has a link to the main scholar documentation page at https://www.rcac.purdue.edu/knowledge/scholar/all, which will prove invaluable during the semester.

Even though this is due on Wednesday, if you don't have it working then I'll give you more time. It is essential for future homework and the project that you figure this out.