

# CS 423 – Spring 2012

## Homework #4

### Due May 22<sup>nd</sup>, 2012

Due Tuesday, May 22, 2012 by 5:00PM an email to Ismail Akturk. Remember to read and comply with the Homework Policy posted on the course Website.

#### Using OpenMP

The goal of this homework is to use OpenMP directives to exploit the parallelism that exists in the given [scientific code](#). You have to identify the regions that can be executed in parallel, and use appropriate OpenMP directives to run them in parallel. You need to compare your parallel implementation with the given sequential code for various thread numbers.

To compile the given scientific code with gcc, you need to run:

```
gcc -o sequential_scientific scientific_sequential.c -lm
```

When you modify the scientific code with OpenMP directives, you need to run the following to compile it with gcc:

```
gcc -o scientific_parallel scientific_parallel.c -lm -fopenmp
```

**What to Submit:** Submit a zip file with an email to iakturk@cs (with a subject line **CS423 HW4 YourName**). Zip file should be named as **HW4\_YourName.zip**. In the zip file you will provide:

- A report explaining your changes and reasons
- Results with different number of threads
- Your modified source code
- Outputs generated