

Live Lecture Chat Window

April 2, 2025

15:04:57: Can you let the interpreter join?

I setup the LL Zoom-room to have no Waiting Room. Anyone can pop in anytime they want. I don't need to let them in.

15:17:05 What are the skillsets and tools we'll learn from this course(to add it to our resume) ? I remember I found it somewhere on the class resource page, but I am not able to find them.

OpenMP, SIMD, CUDA, OpenCL, and MPI

15:19:25 Have Mac students succeeded with no issues in previous terms?

Yes, but there appears to be differing success stories depending on which Mac architecture they are on.

15:23:43 Can we choose to submit projects in either C or C++ for every assignment?

There are occasional C++-isms in the code so it might not compile as a C program. If it does, then go ahead and do it that way.

Should we submit a single coding file along with the PDF, or can we split our program into multiple files?

In that case, submit the multiple code files.

Regarding the soft grading on assignments—if we're asked to explain certain behavior, will we receive points for a reasonable but incorrect answer, or does the answer need to be correct?

You get the points for giving it a good try, not for being absolutely correct.

15:56:56 I used the iMac and it was ok for the project 0. Should I continue use Mac OS?

If it continues to work, keep using it. We will use OpenMP for P0, P1, P2, and P3.

15:59:37 Is it okay that I changed the source code to match Method #2 for scripting (since I'm on a Windows machine and using Powershell)?

Perfectly OK! It is the only way to go if you want to use scripting on Windows with Visual Studio.

16:00:21 Do we just choose one array size like 16k?

For P0, pick just one array size. For P1 you will vary the array size.

16:01:09 I got 3.37 is that ok?

Yes.

16:01:37 Is it okay to run it on the OSU machine?

Absolutely! We setup the projects so that you can do them all with various OSU machines.

16:02:36 Is speedup 1.5 okay?

If that's what you got, then OK. But for code that is this "embarrassingly parallel", it should be in the 2's or 3's. Try running it again just to be sure.

16:02:39 I am using Macbook, can I run it on my own machine?

If it runs, then go ahead and use your Macbook. I can't guarantee if it will work on specific Macs.

16:03:17 We're not actually showing any proof or evidence of our numbers right, we are just typing/reporting the results in our PDF

That's correct, but please give it a serious effort.

16:03:40 Do we need graphs for Project 0?

No. The graphs start in P1.

16:07:51 On my Mac M1, I compile using clang. Is that ok?

If it works, then it is OK.

16:11:19 How do I access to OSU Linux system?

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ssh flip.engr.oregonstate.edu
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I use the vim editor as my "IDE".

One of our former TAs wrote this:

<https://cs.oregonstate.edu/~anklesan/flipsetup.html>

16:25:17 Are there any reason you recommend to learn scripting?

Over the course of the next 10 weeks, scripting instead of editing-compiling-running will save you hours and hours. If you have all that extra time to burn, it won't matter. But I'm treating all of you as if your time is a valuable commodity.

16:44:30 In project 0, is the unit of the array size none?

That's correct – the array size is just a number.

16:47:38 Other than an algorithm not being fully parallelizable. What are some of the other reasoning I don't see a speedup of 4 for project 0? Could it be that OpenMP is not fully optimizing for Mac M1 chips?

We'll talk much more about this in the Amdahl's Law notes. But the big reason is that there is overhead to starting up the program and starting up the threads before you even can get to doing the parallelizable array multiplying.

16:47:48 How do i access the zoom recording? if I want to go back.

It will be on the Class Resources Page under a heading that says:

Live Lectures

16:49:51 Is there a way to query uptime during program execution so that we can attempt to “normalize” for an overloaded CPU?

Not that I know of.

16:52:03 While the particular method of choice for limiting info/variable access between threads may vary between problems, do you have particular recommendations for project 1 with minimal scheduling issues? i.e. you can of course lock while you increment, but that is slowing things down drastically on my end

Take a look at the noteset called *Trapezoid Integration*. It deals with the same kind of problem as P1's numHits does. OpenMP has a reduction capability which solves both.

16:55:40 What is the difference between the 475 and 575 version of this class?

The CS 575ers have an extra assignment.