11:58:28 From Parsons, Zachary M to Everyone: For project 3, for our own agent, is having something that affects the grain during specific times of the year enough?

Yes, that will work fine. Just make sure the graph has a curve that shows when your specific times are happening. Even just a little blip on the curve is needed to see if that event affects the grain and/or the deer.

11:58:59 From Jacob Eckroth(He/him/his) to Everyone: Santa comes by and gives a grain boost perhaps

One of your classmates has Santa kidnapping deer for the month of December and then returning them in January. This is the kind of thing that makes me like working with you all so much!

11:59:08 From Parsons, Zachary M to Everyone: Is it okay if the agent itself doesn't get affected by the deer or grain?

Yes, that is OK.

11:59:45 From Chen, Xiaoru to Everyone: Hi, question about project#3. Should we get random results every single run?

If you set the seed to the same constant, then each run will be the same. If you set it to some function of time-of-day, each run will be different.

12:00:57 From Wil Coiner to Everyone: Project 4: Can we use a different array size range than the requirements?
12:01:11 From Wil Coiner to Everyone: I found a smaller range to produce more interesting graph results

Yes.

12:01:09 From Shen, Nuocheng to Everyone: I set a wild fire to kill everything when Precipitation is zero during 5~11

Ripped from the headlines!

12:01:12 From Kao, Wei-Chen to Everyone: A question in extra credit in Project4, do we only need to pick one case of multithread compare to the non-multithreading?

Pick a handful of combination, sorts of like Slide #19 in the SIMD notes. Maybe not as many as that, but something similar.

12:02:56 From Jacob Eckroth(He/him/his) to Everyone: I'm getting my second Pfizer dose tomorrow!

Congratulations! We are going to reach herd immunity one person at a time. You are helping.

12:03:39 From Zimmerman, Michael to Everyone: For project 4 does it matter which multiplication function we use (SimdMul vs SimdMulSum)?

Pick one, but if you are really curious, do both. You'll enjoy it.
12:03:52 From Wil Coiner to Everyone: Would you prefer a second PDF for the extra credit or add the graph, table, etc. at the bottom?

Just one PDF.

12:05:26 From Fogus, Joshua Ryan to Everyone:

Do we need to email you if we lost points on that question?

No, I will work on figuring it out automatically for now. I might ask for emails later.

12:23:15 From Gibbs, Matthew Leigh to Everyone: When does registration for fall term start again? Is it the end of this term?

May 16.

12:26:43 From Beniamin Condrea to Everyone: Visual Studio supports x86 inline MASM:

I’ll see if the SIMD assembly can be made to work here.

12:32:00 From Adam W. to Everyone: Do hyperthreading and SIMD play nice?

They should because each hyperthread state has its own registers, which includes the xmm* 128-bit registers that SSE SIMD uses.

12:53:26 From Scott to Everyone: a GPU kernel is an instance that we’re running, right?

Yes

12:56:57 From Huy to Everyone: did he show us how to use/get on rabbit?

It’s in the DGX notes: ssh rabbit.engr.oregonstate.edu
The only trick is that you must ssh from another OSU system – rabbit is one of the OSU machines that you cannot get to from the outside. But, you can easily get to it from flip. And, BTW, as soon as you login into rabbit, you will see all your directories/files the same way you see them on flip. No files to transfer!

13:05:16 From Zhang, Zisong to Everyone: what’s cs491 about?

CS Skills for Simulation and Game Programming – http://cs.oregonstate.edu/~mjb/cs491

13:05:55 From Kao, Wei-Chen to Everyone: In project4, is it possible the performance with SIMD is 5 times greater than without SIMD?

With the assembly language, you will probably see a SIMD-Multiply-and-Sum speedup of 5. The reason is that the assembly uses a 128-bit xmm* register to add into whereas the C code uses a stack variable.

13:06:16 From Huang, Kyle Anthony to Everyone: will cs 450 be in person?

At this point, I am assuming it will be remote because of its size and the desire to continue distancing in the lecture halls.
13:10:33 From Pemberton, Jordan E to Everyone: For Proj 4, what is a good range for the actual float values in our arrays? If I fill my arrays with random vals, do I just need to make sure to avoid overflow when multiplying and summing?

Other than that, the arrays can be filled with anything.

13:12:10 From Kao, Wei-Chen to Everyone: Then, in project4, what is the relationship between SSE_WIDTH and the speedup (performance with SIMD)?

The SSE_WIDTH of 4 is just how many floats that SSE SIMD can multiply together in one instruction. I #defined it rather than sticking a 4 out in the code with no explanation.

13:20:02 From Scott to Everyone: For Project 3, I have myagent just affecting the grain every few months. Is that okay or does it need to have a direct effect on deer as well?

Yes, this is OK, just be sure that the every-few-months quantity has a curve in the graph that shows when it is turned on.

13:33:09 From Alcaide, Tiffanie Charlyne Yu to Everyone: awwww

Did you know that “Corgi” is Welsh for “Dwarf Dog”? No, really. https://en.wikipedia.org/wiki/Pembroke_Welsh_Corgi

[ Question about M_PI ]

To be sure that M_PI gets defined, put this line in front of your math.h #include:
# define _USE_MATH_DEFINES
#include <math.h>

13:56:01 From Huy Trieu to Everyone: is there a good way to paste onto flip/rabbit? Im trying to paste the helper files

How copying and pasting is done in a terminal window depends on what terminal emulator you are using. But, to easily get the two CUDA .h files, right click on each in the Project #5 handout and do a Save.