CS533: Parallel Computer Architecture
Prof. Josep Torrellas
Spring 2023

Student Information

- Name and email address:
- Major (CS,ECE...) and year of grad. student:
- Probability you will take the course:
- Have you programmed in C before? What was the largest program?:
- Area of interest (Architecture, Operating Systems, Languages, AI...):
- Please answer these questions so that I know the background of the students.

1. Please explain: cache line size, set-associative cache, write-back cache, memory latency, bus bandwidth.

2. What are blocking locks and when are they useful?

3. What is a race condition in a parallel program? Suppose processors 1 and 2 share memory; list all possible values of A and B after the following code is executed:

   A = 1;
   B = 1;

Processor 1 executes:	Processor 2 executes:
A = 0;	B = 0;
if (B == 0) then A = 1;	if (A == 0) then B = 1;