

## **CSC 6740, spring 2019**

### **Programming Assignment 5**

**Assign date: March 14, 2019, Due: March 28 13 2019 11:30 pm**

For this assignment you will implement your own broad cast routine (as a separate function) using MPI point to point communication routines. You cannot use any MPI group communication routines. The arguments to your broad cast routine will be same as MPI\_Bcast.

Write a MPI driver program that will use your routine to broad cast an array of double with 100,000 element to test the scalability performance of your broad cast routine. Measure your broad cast time for 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 26, and 28 processes and compare it with MPI\_Bcast time. Run your experiment on single node on our cluster. Repeat the experiment running the processes on two nodes (half in one node and half in another node).

Submit your code on ilearn. Also submit a report explaining your broad cast algorithm and analysis of your experimental results.