

## **Multicore Architecture and Parallel Programming**

### **Assignment on OpenMPI Programming**

**Due : October 22nd**

1. (round-trip time test) A MPI task 0 is sending beacon packets to another MPI task 1. After receiving each beacon, task 1 will reply with an ACK. Task 0 could calculate the round trip time of the connection. Please simulate this process using MPI.
2. (pass-string problem) Consider some children playing a voice passing game. The child #0 say a sentence to child #1, who will write down the first word and pass remaining words to child #2. Child #2 do the same thing as child #1, write down the first word (which is the second word of the original sentence) and pass the remaining words to next child... The first child with no word received write down his ID.  
Please simulate this process using MPI. (The WRITE DOWN action is substituted by PRINT TO STDOUT)

#### **NOTICE:**

1. You have to write a makefile to compile your code.
2. Send your final version to TA at [yanglinan@sjtu.edu.cn](mailto:yanglinan@sjtu.edu.cn) . You should archive your source code and makefile with **StudentID\_Name\_MPI.tar.gz**(or any archive file types). Do not include binary file.
3. Should you have any questions, please feel free to contact TA at [yanglinan@sjtu.edu.cn](mailto:yanglinan@sjtu.edu.cn) .