Parallel Programming

National Tsing Hua University

2017, Summer Semester

Instructor & TA Information

- Instructor: 周志遠教授 (Jerry)
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  - Office hour: email for appointment
- TA: 郭柏妤(Tiffany)
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  - Office hour: email for appointment
  - Lecture & Demo for Programming homework

Course Website

- Website: http://lms.nthu.edu.tw/course/30306
  - Announcement
  - Materials (lecture/project slides)
  - Discussion forums

Course Contents

- Introduction to Parallel Computers and Computing
- Programming Languages
  - Message Passing Interface (MPI)
  - Thread Programming: Pthread
  - OpenMP
  - GPU Programming: CUDA
- Parallel Computing Algorithm & Techniques
  - Embarrassingly computing
  - Divide & Conquer
  - Pipeline、Synchronous computing
  - Load balancing

Grading Information

- 4 Programming Assignment: 85%, **individually**
  - Parallel Odd-Even Transposition Sort (MPI): 25%
  - Mandelbrot Set (MPI + OpenMP): 25%
  - Roller-coaster (Pthread): 10%
  - Blocked All-Pairs Shortest Path (CUDA): 25%
- 6 Labs: 15%, **individually**
  - **Computer room (EECS323)**
- **0** will be given to **cheater (copying code)**
  - but, discussion on code is encouraged
- Any late submission can only receive 60% of the points
  - But 3 days is given for correction after demo

Reminder

- It will be in a FAST pace
  - **5 weeks** to cover the load of a whole semester
  - Learn by **doing**
- It will be dynamic
  - Pay attention to the announcement for the time of our **lectures**, **labs**, and **demo**
  - In principal, **morning session 9am-noon, afternoon session 1:30pm-4:30pm**