

National Tsing Hua University Taiwan

Advisor: Prof. Jerry Chou

Computer Science Department



國立清華大學
National Tsing Hua University

History at SCC

- Participation (7 times)
 - 2007~2008, 2010~2012, 2014~2015
- Advisors
 - Prof. Yeh-Chi Chung: since 2007
 - Prof. Che-Rung Lee: since 2010
 - Prof. Jerry Chou: since 2012
- Award
 - 2007, 2008, 2014 HPL champion
 - 2010, 2011 overall champion
- Other competitions
 - ASC (Asia) 2013~2015
 - TSCC (Taiwan) 2012~2015

Why Join the Competitions?

- Education:
 - Training not just for HPC, but for computer systems in general
 - Hands-on experience outside textbooks
 - Global view and language communication skills
- Research
 - Draw boarder interests from under-graduate students
 - Search and develop potential graduate students
 - Raise the reputations of our school and faculty members
 - Make connection and setup research collaboration with domestic industry

Support & Funding

- It is the ***BIGGEST*** challenge
- Computer equipment is supported by vendors
 - Relatively easier in Taiwan
 - But it still require customization & technician supports
 - Equipment could be donated or lent
- Travel funding comes from multiple sources
 - Vendors & company sponsors
 - Research projects
 - School & department
- How we managed?
 - Connection with the domestic companies from previous research collaborations
 - Honorable records and reputations
 - Provide supports to companies like demo, promotion, and consultant.

Changes on Education

- How to train students?
 - Students take the **course credit of “special project”**
 - Past team members act as the **coaches** to provide training
- **As faculty:**
 - Achieve the main goal of developing and finding **potential students for future research**
- **As students:**
 - Obtain course credits, knowledge, experiences and records for **advancing their study**
- **We didn't change** our curriculum; we take advantage of the competitions to provide **a better way for education**

Changes on Research

- More research collaboration with company
 - Companies have more interests to **setup collaborations** because of our reputation in HPC
 - Companies **provide opportunities** for inviting students to assist their product activities like demons and posters
- More research resources
 - Computer **equipment donated** from the competitions can be used for research
 - Opportunities to **use and study the latest HPC technologies**, devices and software
- Growing interests and activates in HPC
 - **TSCC is hosted by NCHC** (National Center for High-performance Computing) since 2012 in Taiwan
 - Students are more aware of the topic of HPC
 - More **faculties across schools** join the HPC actives

Conclusion

- It is a vast investment to participate in these competitions
 - Especially in terms of **funding and equipment**
 - Inevitable **pressures to obtain good results** from the competitions
- But in return, we also receive irreplaceable values
 - Developing and recruiting top potential **graduate students**
 - **Reputations** and experiences in HPC
 - Tighter **connection and relationship** with companies and industry
- Therefore
 - The competition is well **aligned to our goals** for research and education, and it **further fortress our approaches**
 - We are able to **develop systematic approach** and **leverage our experiences** to reduce overhead

Feedback

- Competition shouldn't be just about winning, but we should have a **discussion session after the contest**
 - To have **better understanding of the results**
 - To receive **feedback** from judges
 - To help students understand what they can **improve**
 - To **share knowledge** and learn from each other