Chinese students take top honors in supercomputer competition

Singapore's Nanyang Technological University and China's Tsinghua University finished 1-2 in the 11th annual highly competitive Student Cluster Competition (SCC) at the Super Computer Conference (SC17) this week in Denver in the U.S. state of Colorado.

SCC was introduced in 2007 to expose undergraduate and high school students to high performance computing.

Over the past few months, six-person student teams designed and built small clusters with hardware and software vendor partners, learned designated scientific applications, and applied optimization techniques for their chosen architectures.

In the final days, students competed in a non-stop, 48-hour "mystery" challenge at the SC17 conference — to complete a real-world scientific work challenge.

A total of 16 teams competed in the 2017 competition, hailing from China, Germany, Poland, Singapore, the United States and China's Taiwan province.

The event is considered the penultimate student supercomputer competition in the world.

Tsinghua narrowly missed winning its third straight international computer competition of 2017 — edged out by a Singapore team comprised of all Mainland Chinese students.

"I was a little surprised we won," admitted modest Nanyang Technical University team co-leader Siyuan Liu from Hebei Province, whose team was considered a long shot by industry experts.

"We are very excited to finish ahead of such strong teams," the other co-leader Yiyang Shao told Xinhua, who also said they knew the team to beat was Tsinghua.

The favored Tsinghua team was having a phenomenal 2017 — taking top honors on April 17 at ASC17 in Wuxi, China, and on June 17 at ISC17 in Frankfurt, Germany, and were nudged out in a photo finish by a mere three points at SC17 in America's Mile High City.

"I thought they were going to win," SCC Chairman Stephen Harrell told Xinhua, of the favored Tsinghua team.

Harrell, a computer technical expect from Purdue University was given the difficult task of compiling results from a panel of judges who ranked the diverse international field.

"No one's a loser in this competition," Harrell emphasized, as he met with, and complimented all of the teams after the top honor was announced.

"All of these students will be very successful in life and in the HPC field," he said.

Harrell, who emphasized the integrity displayed by the Chinese students from both teams, said that interviews and a poster competition also factored into the decision-making.

This year's all decisive "mystery" question dealt with the migration of carbon dioxide around the world, and students were asked to simulate the flow of carbon dioxide in the Earth's atmosphere using calculations and creating an algorithm.

"It was exhausting," Tsinghua team leader Beichen Li told Xinhua of the final two-day, no-sleep element of competition that began Nov. 13.

"The memories and the experience of being in this competition far outweighs the paper given out here," Harrell noted.

Tsinghua University professor Jidong Zhai was gracious in finishing behind Singapore's team, and had nothing but praise for his young superstars.

"Although we finished second, the team members did a very good job," advisor Zhai told Xinhua. "They were very impressive, and I was very happy to work with such a group of smart guys."

"We will come back next year," team leader Beichen Li said with a smile.