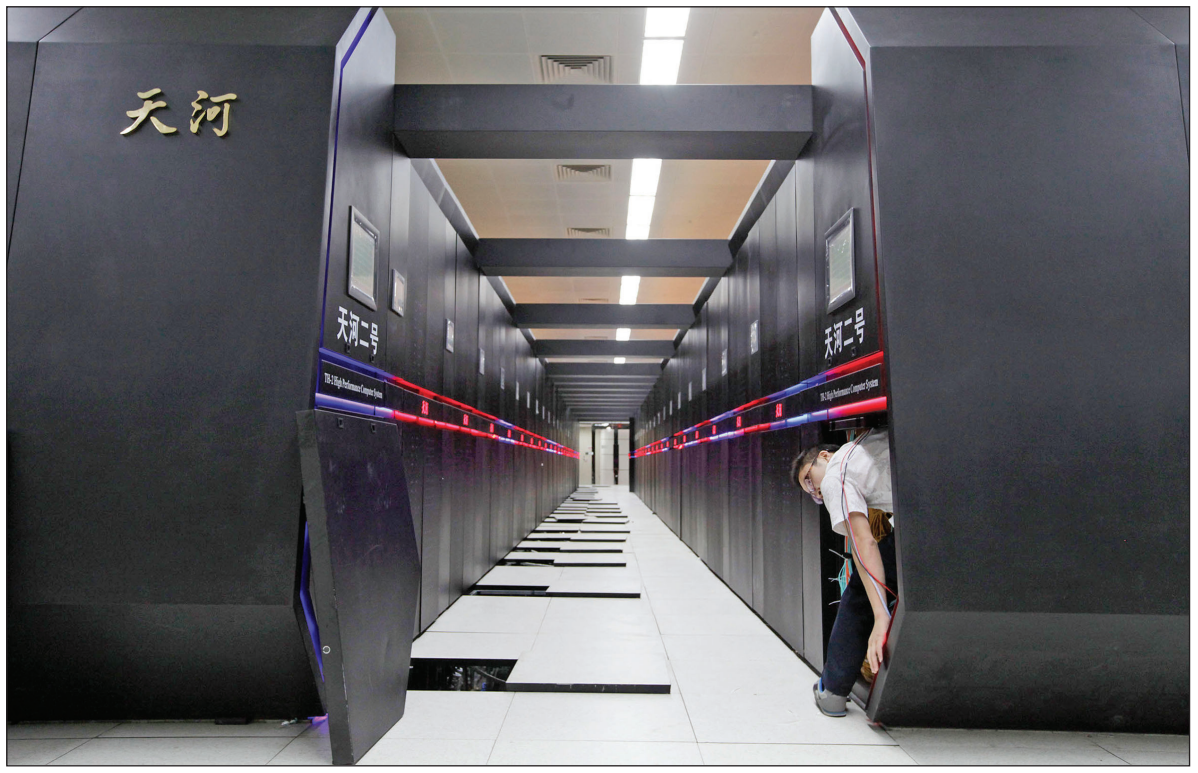
Next generation supercomputer a speed demon



A TECHNICIAN works on a Tianhe-2 supercomputer in Guangzhou in 2013. TAN QINGJU / SOUTHERN METROPOLIS DAILY

Scientists are developing a next-generation supercomputer capable of performing 1 quintillion (a billion times a billion) calculations per second, which, if successful, will further enhance China's leading position in the field.

Tianjin's National Supercomputer Center is working with the National University of Defense Technology in Changsha, Hunan province, to develop the super scale computer.

Meng Xiangfei, assistant director of the center, says the aim is to make the computer by 2020, with all hardware and software developed by Chinese engineers.

Once complete, the machine will be 200 times faster than China's Tianhe-1 supercomputer, as well as some of the world's most powerful supercomputers, he says.

Sunway TaihuLight is currently the world's fastest system, capable of 93 quadrillion calculations a second, according to the TOP500 rankings released in June at the 2016 International Supercomputing Conference in Germany.

Researchers say Sunway TaihuLight is twice as fast and three times as efficient as Tianhe-2, which held the top spot in six consecutive TOP500 rankings from June 2013.

Talking about the new system's development schedule, Meng says a prototype could be finished as early as 2017, and it will be used to demonstrate large-scale computing technologies.

Once complete, the superfast computing system will mark a huge advancement in terms of intensity of calculation, capacity of single chips, and the rate of data transmission, he says.

In 2010, China put into service the Tianhe-1, its first "petaflop" supercomputer, capable of at least 1 quadrillion (a million times a billion) calculations a second. Since then, Tianhe-1 has been supporting various industries including oil exploration, high-end equipment manufacturing, biological medicine and animation.

China is the world's No 1 owner and operator of supercomputers, with 167 systems included in the June TOP500 rankings. The United States has 165.

In addition to supercomputers, China is also working to bolster the robot industry to serve public, commercial and military purposes.

Robots have been widely used in manufacturing sectors in China. More than 68,000 industrial robots were sold to Chinese enterprises last year, which means the nation has continued to be the biggest user of industrial robots in the world since 2013, when it surpassed Japan.

In April, the central government issued a five-year development plan for the robot industry, aiming to help Chinese institutes and companies catch up with leading foreign competitors in terms of key parts such as servomotor, and sensors.

In the military field, robots are no longer uncommon equipment for the People's Liberation Army, as an increasing number of units have started to use tracked robots to carry out patrols, reconnaissance and bomb disposal.

Chinese engineers have also developed various walking robots that can relieve soldiers from the burden of heavy equipment and large backpacks.

Chengdu special

Food festival serves up special cultural feast

Event aims to help Chengdu become an internationally-renowned city

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The 13th Chengdu Food and Tourism Festival was held in Chengdu, capital of Southwest China's Sichuan province, from Sept 26 to Oct 8.

This year's event was held at one main venue and nine satellite venues across the city.

The main venue was the Eastern Suburb Memory, a former TV cathode tube factory converted into an art and leisure park in the east of the city.

The branch venues include Wide and Narrow Alleys, Wenshufang Cultural Block, Kuixinglou Street and Jiuyanqiao Bridge, all of which are famous tourist spots or blocks featuring typical Sichuan food culture.

The 13-day event attracted 2.28 million visitors, generating a total revenue of 72.5 million yuan ($10.9 million, 9.7 million euros), according to the event's organizing committee.

A wide range of traditional cuisine and drinks from both Sichuan and other provinces were on offer at the event.

"In a departure from previous sessions, this year's event focused more on cultural creativity," said Li Chuan, president of Chengdu Radio and Television and deputy director of the event organizing committee.

He said big data analysis indicates that people care more about the art and entertainment aspect of the event than the food.

A range of different activities were held at the venues, including a creative bazaar, cooking contests and cultural exhibitions.

A food forum was also held during the event, at which experts discussed how food connects to design, architecture, literature and technology.

A newly developed smart catering car was also unveiled during the event.

The car allows customers to locate it through WeChat or a special app, and order meals online.

They can then either go to the catering car in person to get their food or have it delivered to them.

Yang Junming, manager of Chengdu Zhengyuan Yonghe Trading Co Ltd, the company that developed the catering car, said the car's technology can ensure food safety through its ability to trace every link in the supply chain.

It also receives online evaluations from customers.

The food and tourism festival was a hot topic online, with statistics from sina.com showing that 6.26 million people viewed topics and threads related to the event. Two live broadcasts from the festival received 238,000 likes on Sina Weibo.

In addition, more than 5 million people from Europe, North America and Oceania viewed festival-related topics and videos via international platforms such as Google, YouTube and Twitter.

"Through the combination of Chengdu's food and creative cultures, the event aims to help the city become a center of cultural creativity in western China, as well as a world-renowned city of culture," Li said.

Chengdu was awarded the title "City of Gastronomy" by UNESCO in 2010, making it the first Asian city to win such an honor.

LEFT: VENDORS display Pineapple rice at the 13th Chengdu Food and Tourism Festival which concluded on Oct 8. **TOP RIGHT: HOTPOT DISHES** are ready for cooking. **ABOVE RIGHT: SPICY CRAYFISH** is a popular dish in Sichuan.
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