Former official sentenced to life imprisonment for graft

Yang Zhenchao, former vice governor of east China's Anhui Province, was given a life sentence for accepting bribes, graft and abuse of power on Wednesday.

Yang was also deprived of his political rights for life and all his personal assets were confiscated, according to a statement from the First Intermediate People's Court of Shanghai.

Zhang Qingwei elected Party chief of Heilongjiang

Zhang Qingwei on Wednesday was elected the secretary of Heilongjiang Provincial Committee of the Communist Party of China(CPC).

Zhang was elected to the post at a plenary meeting of the CPC Heilongjiang provincial committee.

Zhang was born in 1961 in Hebei Province. He was formerly the governor of Hebei, and resigned from the post last month.

Lu Hao and Chen Haibo were elected deputy Party chiefs of Heilongjiang.

C919 takes to the skies

China’s first domestically produced passenger plane completes a high-speed taxi test for the first time in Shanghai, April 16, 2017. [Photo/Xinhua]

The much-anticipated C919, a single-aisle homegrown passenger jet, will take to the skies for a debut flight on May 5, 2017. The first-time occasion will occur at the Shanghai Pudong International Airport, according to the Shanghai-based manufacturer of the C919, Commercial Aircraft Corp of China (COMAC).

The C919 is a commercial aircraft, built for medium-haul flights, with up to 174 seats and a twin engine. The aircraft will be expected to compete with the updated Airbus A320neo and the new-generation B737 MAX.

Lin Zhijie, an aviation industry analyst and columnist at Carnoc.com, one of China’s largest civil aviation web portals, estimated the C919 aircraft would be put into operation between 2020 and 2022.

So far, 23 clients of COMAC have placed 570 orders for the C919, including domestic airlines such as Air China, China Southern and China Eastern, and Hainan Airlines and Sichuan Airlines.

Overseas orders also account for about 10 percent of the total, including airlines from Germany and Thailand, and others from the Asia Pacific region and Africa.

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12 trapped in railway tunnel blast

confirmed dead

All of the 12 people trapped in a railway tunnel blast in southwest China's Guizhou Province on Tuesday had been confirmed dead after a 14-hour rescue in the gas-filled tunnel failed to find them.

More than 2,000 rescuers and medical workers braved high carbon monoxide density and dust to search for the trapped workers after the blast ripped through the railway tunnel under construction around 2:50 p.m. in Dafang County, leaving 12 people injured and 12 others trapped.

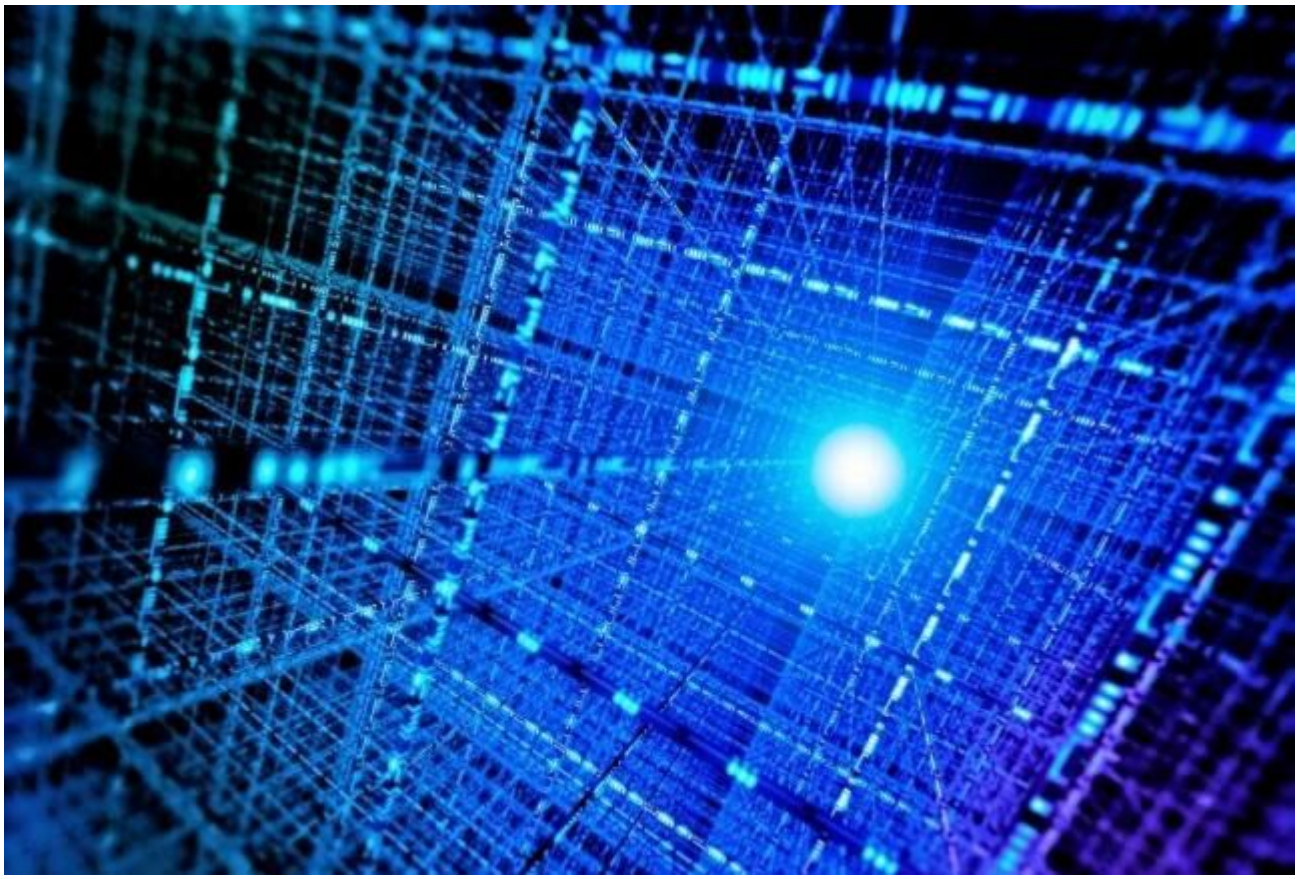
The rescue work ended at 4:45 a.m. Wednesday.

An investigation is still underway. A gas explosion is suspected as the Qishanyan Tunnel under construction is designed to pass through a coal seam.

The 12 injured are in hospital for treatment. None of them has critical injuries.

Chinese scientists make quantum leap in computing

Chinese scientists have built world's first quantum computing machine that goes beyond the early classical – or conventional – computers, paving the way to the ultimate realization of quantum computing beating classical computers.



Chinese scientists have built world's first quantum computing machine that goes beyond the early classical computers. [Photo / chinagate.cn]

Scientists announced their achievement at a press conference in the Shanghai Institute for Advanced Studies of University of Science and Technology of China on Wednesday.

Many scientists believe quantum computing could in some ways dwarf the processing power of today's supercomputers. The manipulation of multi-particle entanglement is the core of quantum computing technology and has been the focus of international competition in quantum computing research.

Recently, Chinese leading quantum physicist Pan Jianwei, an academician of the Chinese Academy of Sciences and his colleagues – Lu Chaoyang and Zhu Xiaobo, of the University of Science and Technology of China, and Wang Haohua, of Zhejiang University – set two international records in quantum control of the maximal numbers of entangled photonic quantum bits and entangled superconducting quantum bits.

Pan said quantum computers could, in principle, solve certain problems faster than classical computers. Despite substantial progress in the past two decades, building quantum machines that can actually outperform classical computers in some specific tasks – an important milestone termed "quantum supremacy" – remains challenging.

In the quest for quantum supremacy, Boson sampling, an intermediate (that is, non-universal) quantum computer model has received considerable attention, as it requires fewer physical resources than building universal optical quantum computers, Pan said.

Last year, Pan and Lu Chaoyang developed the world’s best single photon source based on semiconductor quantum dots. Now, they are using the high-performance single photon source and electronically programmable photonic circuit to build a multi-photon quantum computing prototype to run the Boson sampling task.

The test results show the sampling rate of this prototype is at least 24,000 times faster than international counterparts, according to Pan’s team.

At the same time, the prototype quantum computing machine is 10 to 100 times faster than the first electronic computer, ENIAC, and the first transistor computer, TRADIC, in running the classical algorithm, Pan said.

It is the first quantum computing machine based on single photons that goes beyond the early classical computer, and ultimately paves the way to a quantum computer that can beat classical computers. This achievement was published online in the latest issue of Nature Photonics this week.