



ACADEMIC SECURITY AND COUNTER EXPLOITATION PROGRAM

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WHAT XI JINPING'S THIRD TERM MEANS FOR SCIENCE

Smriti Mallapaty | Nature | October 27, 2022

China's ambitions and reliance on science and technology were front and centre at the Communist Party's all-important 20th congress in Beijing, which ended on Sunday. President Xi Jinping said at the opening of the meeting, held every five years, that the country must "regard science and technology as our primary productive force, talent as our primary resource and innovation as our primary driver of growth". On Sunday, he was reinstated as general secretary of the party for a third term, breaking a convention established four decades ago, and there was a major reshuffle of the party's senior leadership. The decision-making body called the Politburo gained several members with qualifications or experience working in science or technology: 6 out of 25 members now have a science background, compared to just one member in the previous Politburo. Nature spoke to science-policy analysts about Xi's opening address, a shortened version of a written report that sets the agenda for the party to 2027 and beyond. Analysts say that China's epic investment in science is likely to continue. In 2021, China spent 2.8 trillion yuan (US\$386 billion) on research and development (R&D), accounting for 2.4% of its gross domestic product (GDP), a measure known as R&D intensity.

Read the full article [here](#).

HOW CHINA VIEWS IT: SINO-AMERICAN TECHNOLOGY COMPETITION

Dan Blumenthal, Gregory Graff, and Christian Curriden | American Enterprise Institute | October 2022

Over the past two administrations, the US government has significantly increased its response to China's now well-known technology transfer efforts, having recognized the importance of maintaining a technological edge against a strategic competitor. The Trump administration's 2017 National Security Strategy began this effort, placing an emphasis on promoting and protecting the "National Security Innovation Base" and ensuring the US remains a science and technology leader.¹⁰ President Joe Biden's recently released Interim National Security Guidance largely maintains continuity, directing that "America must reinvest in retaining our scientific and technological edge and once again lead." When discussing China, it notes, "We will confront unfair and illegal trade practices, cyber theft, and coercive economic practices that . . . undercut our advanced and emerging technologies, and seek to erode our strategic advantage and national competitiveness."¹¹ Both administrations were wrestling with a fundamental strategic challenge: how to preserve America's technology advantage and protect it from China's exploitation. These strategies have been matched with action.

Read the full article [here](#).



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AMERICAN TECHNOLOGY BOOSTS CHINA'S HYPERSONIC MISSILE PROGRAM

Cate Cadell and Ellen Nakashima | The Washington Post | October 17, 2022

Military research groups at the leading edge of China's hypersonics and missile programs — many on a U.S. export blacklist — are purchasing a range of specialized American technology, including products developed by firms that have received millions of dollars in grants and contracts from the Pentagon, a Washington Post investigation has found. The advanced software products are acquired by these military organizations through private Chinese firms that sell them on despite U.S. export controls designed to prevent sales or resales to foreign entities deemed a threat to U.S. national security, the investigation shows. Scientists who work in the sprawling network of Chinese military research academies and the companies that aid them said in interviews that American technology — such as highly specialized aeronautical engineering software — fills critical gaps in domestic technology and is key to advances in Chinese weaponry.

Read the full article [here](#).

BAN ON CHINESE INSTITUTES AT UK UNIVERSITIES DRAWN UP AFTER RISHI SUNAK'S PLEDGE TO SCRAP THEM

Louisa Clarence-Smith | The Telegraph | MSN | October 25, 2022

A ban on controversial Confucius Institutes at British universities is being rapidly drawn up by officials to honour Rishi Sunak's election campaign pledge, The Telegraph understands. The Prime Minister announced during the summer leadership campaign that he would shut down the 30 Chinese culture institutes as he labelled China the "largest threat to Britain and the world's security and prosperity this century." The institutes, which are based at universities across the UK, were set up to deliver culture and language classes to international students. However, they have been accused of being a front for the Chinese Communist Party to clamp down on critical views on China. Liz Truss told MPs prior to her departure this month that she had ordered preparations to be made for a consultation on banning the institutes, The Telegraph has learnt. Now, officials are understood to be continuing that work following Mr Sunak's appointment as Prime Minister as he faces immediate pressure from Conservative China hawks. Sir Iain Duncan-Smith, former Conservative Party leader, said: "We should have done it [banned the institutes] by now. Let's act now and act strongly."

Read the full article [here](#).

US STAGNATION TREND REFLECTS IN LATEST SUBJECT RANKINGS

UWN Reporter | University World News | October 26, 2022

The traditional dominance of the United States in world higher education and research is continuing to wane, according to the results of global university subject rankings released on Tuesday 25 October. The Times Higher Education World University Rankings 2023 by subject indicates that, although the US still tops nine of the 11 subject rankings, the number of US universities in the top 10 of several subject rankings has fallen, including business and economics, and clinical and health. In contrast, the United Kingdom, which tops two of the rankings, increased its representation in the top 10, and Saudi Arabia increased its representation across several subject rankings, including computer science, engineering and physical sciences. The UK's King's College London, for example, joins the top 10 in clinical and health and in psychology, and Saudi Arabia now has five universities in the top 300, up from two last year. By contrast, Johns Hopkins University in the United States fell out of the top 10 in clinical and health (to 11th), and in engineering the US has nine fewer universities in the top 300 (76, down from 85).

Read the full article [here](#).



CHINA'S SECRETIVE STANCE ON HYPERSONICS MAY WEAKEN INNOVATION

Diego Laje | Signal Media - AFCEA International | November 1, 2022

On October 1, 2019, when the People's Liberation Army paraded hypersonic missiles in Tiananmen Square, it was unclear what they were doing. Afterward, some compared the date to October 4, 1957, when the first Russian satellite was launched. But that comparison seemed far-fetched. The Chinese "Sputnik moment" bore no resemblance. For one thing, the Russians launched a satellite on their own. "[The Chinese] built a lot of their work from our work. We did their homework for them," said Mark Lewis, executive director of the National Defense Industrial Association's Emerging Technologies Institute. And Beijing piggy-backed on the United States' efforts by politely asking for the ride. "[China has] taken advantage of our own openness ... back in the early 2000s, the United States did tons and tons of research on hypersonic systems and produced a lot of papers," said Masao Dahlgren, research associate with the Missile Defense Project at the Center for Strategic and International Studies (CSIS). Dahlgren added that another avenue for this technological acquisition was via scholars who received advanced education in the United States and later returned to China.

Read the full article [here](#).

WHAT THE NOBELS TELL US ABOUT SCIENCE AND HIGHER EDUCATION

Philip G. Altbach and Tessa DeLaquil | University World News | October 22, 2022

The 2022 Nobel Prizes in the sciences (physics, chemistry, physiology/medicine and economics), recently awarded, recognise the best in basic research – the kind of research that may seem highly theoretical or esoteric when it is done, often much earlier in the winner's career, but in most cases has important practical impact over time or leads to major rethinking of science and society as we understand it. For example, Svante Pääbo, the winner in physiology/medicine, was recognised for sequencing the genome of the Neanderthal, which led to new insights into human evolution and resulted in the establishment of a new discipline – paleogenomics. Understanding the genetics of Neanderthals as the close relatives of Homo sapiens helps us to better understand human physiology today. John F Clauser, in the physics category, conducted experiments in quantum physics to show how two particles are 'entangled' and seem to act as if they were a single unit.

Read the full article [here](#).

STUDY: FEAR MAKES CHINESE SCIENTISTS LEAVE US

Lia Zhu | China Daily | October 28, 2022

The trend of US-based Chinese researchers leaving the country for China has accelerated in the last four years, especially in engineering and computer science, and the reason for the exodus is fear of investigation by the US government, according to a study. In 2021, nearly 1,500 US-based Chinese scientists left American institutions for Chinese institutions. They mostly work in mathematics and physical sciences, life science, and engineering and computer science, according to the report by Asian American Scholar Forum. The study analyzed more than 2.3 million scientific papers and found a steady increase in the return migration of Chinese-origin scientists from the US back to China. In 2021, the number of both junior and experienced scholars returning to China increased five times compared with 2010, as the authors dropped US affiliations for Chinese affiliations, said Yu Xie, lead author of the study and a professor of sociology at Princeton University. "That trend has increased over time and accelerated in recent years.

Read the full article [here](#).



US-CHINA JOINT VENTURE RADAR

AI-Powered China Intelligence | Datenna | 2022

The US-China Joint Venture Radar is a research initiative that provides transparency on US investments in China. It aims at highlighting trends in US outbound investments in China. The interactive map covers over 9000 American Joint Ventures in China and American Wholly-Foreign-Owned Entities (WFOE) analysing stake proportion, decision making power, and business sector in which these companies are active. In-depth research reveals that most outbound foreign investments by the US in China are done in key sectors that are considered of great importance in China. These sectors are part of major national plans such as Made in China 2025, which aims to reduce China's reliance on foreign technology imports and to invest heavily in its own innovations, and the Military Civil-Fusion strategy, aiming to develop the most technologically advanced military in the world with as few barriers as possible between civilian research and military-industrial sectors.

Read the full article [here](#).

THE BIG HACK: HOW CHINA USED A TINY CHIP TO INFILTRATE U.S. COMPANIES

Jordan Robertson and Michael Riley | Bloomberg | October 4, 2018

In 2015, Amazon.com Inc. began quietly evaluating a startup called Elemental Technologies, a potential acquisition to help with a major expansion of its streaming video service, known today as Amazon Prime Video. Based in Portland, Ore., Elemental made software for compressing massive video files and formatting them for different devices. Its technology had helped stream the Olympic Games online, communicate with the International Space Station, and funnel drone footage to the Central Intelligence Agency. Elemental's national security contracts weren't the main reason for the proposed acquisition, but they fit nicely with Amazon's government businesses, such as the highly secure cloud that Amazon Web Services (AWS) was building for the CIA. To help with due diligence, AWS, which was overseeing the prospective acquisition, hired a third-party company to scrutinize Elemental's security, according to one person familiar with the process.

Read the full article [here](#).

'PUBLISH OR PERISH' CULTURE CONTINUES TO DISTORT RESEARCH

Yojana Sharma | University World News | October 27, 2022

Despite rules brought in two years ago to reduce publishing pressure on postgraduate students in China, severe pressure on research students continues to distort the research environment in the country, a new study has found. A recently published paper* by Hugo Horta, associate professor in the faculty of education at the University of Hong Kong (HKU), and Huan Li, a PhD student at HKU, titled "Nothing but publishing" provides up-to-date evidence of the scale of the overemphasis on publishing papers during doctoral studies in China and its detrimental impact on all other learning and activities. "In each and every interview we conducted [with doctoral students], everything would be reduced to one thing, which was publications," Horta told University World News.

Read the full article [here](#).

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