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香港版
HONG KONG

CHINA DAILY

中国日报

THURSDAY, November 9, 2023

www.chinadailyhk.com HK **$10**

Xi: Take cyberspace to new level

Bringing benefits of internet to all nations stressed

By XU WEI in Beijing, **CHENG YU** and **MA SI** in Wuzhen, Zhejiang

President Xi Jinping called on Wednesday for joint efforts to take forward the building of a community with a shared future in cyberspace to enable the internet to better benefit people of all countries.

He made the remark while addressing the opening ceremony of the 2023 World Internet Conference Wuzhen Summit via video link.

The three-day conference, being held for the 10th consecutive year in Wuzhen, an ancient water town in Zhejiang province, has brought together top executives from global tech enterprises and leading Chinese internet companies.

In his speech, Xi mentioned the proposal he made during the conference in 2015, when he called for the building of a community of shared future in cyberspace. His proposal has since garnered broad international recognition and positive responses.

Amid intertwining major changes and chaos in the world, addressing development deficits, resolving security challenges and enhancing cultural exchanges are the common challenges of our time, he said.

The internet is increasingly becoming a new driving force for development, a new domain for safeguarding security, and a new platform for cultural exchange, Xi added.

He called on the international community to deepen exchanges and pragmatic cooperation in order to jointly advance to a new stage the building of a community with a shared future in cyberspace.

"We advocate prioritizing development and building a more inclusive and prosperous cyberspace," he said.

This involves deepening international exchanges and cooperation in the digital domain and accelerating the commercial application of science and technology outcomes, Xi said.

He highlighted the need to expand the availability of information technology services, narrow the digital divide, and better ensure public well-being through the development of the internet, and to enable more countries and people to share the fruits of internet development.

"We advocate shared security and peace, aiming to build a more peaceful and secure cyberspace," the president said.

It is important to respect cyber sovereignty as well as the development paths and governance models chosen by each country, abide by international rules governing cyberspace, reject cyber hegemony and oppose cyber confrontations and an arms race in cyberspace, he said.

Xi made an appeal for various sides to deepen practical cooperation in cybersecurity, combat cybercrimes effectively, strengthen data security and personal information protection, and properly handle rule conflicts, social risks and ethical challenges brought about by technological development.

China is willing to work with all parties to implement the Global AI Governance Initiative and promote the secure development of artificial intelligence, he said.

"We advocate cultural exchange and mutual learning to build a more equal and inclusive cyberspace," he said.

This involves enhancing online communication and dialogue, helping people from different countries understand each other, promoting the inclusiveness and coexistence of different civilizations, and better carrying forward the common values of mankind, Xi added.

The Chinese president's remarks inspired business leaders attending the conference.

Luigi Gambardella, president of ChinaEU, an association that promotes digital and high-tech cooperation between Europe and China, said Xi's remarks reaffirmed Beijing's resolve in leading the development of an inclusive and secure internet and allowing more countries and people to share the fruit of the internet economy.

He noted that the call for prioritizing development and ensuring a more inclusive and prosperous cyberspace aligns with European values of solidarity and equal opportunities.

Guo Kaitian, senior vice-president of internet giant Tencent Holdings, said that the company was inspired to "take more responsibilities in driving economic development, safeguarding cybersecurity and promoting cultural development".

Zhou Yuan, founder and CEO of knowledge-sharing platform Zhihu, said his company has been inspired by the call from the top leadership to build a community with a shared future in cyberspace.

"It also inspires us to drive future internet development through technological innovation, and to make technological innovation a force that is able to promote social inclusiveness, universal benefit and industrial resilience," he said.

Contact the writers at xuwei@chinadaily.com.cn



President Xi Jinping addresses the opening ceremony of the 2023 World Internet Conference Wuzhen Summit via video link on Tuesday. The three-day summit has brought together top executives from global tech enterprises and leading Chinese internet companies. LIU BIN / XINHUA

Former Iraqi president calls for peace and stability

By CAO DESHENG
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After witnessing years of war, internal strife and terrorism in Iraq, Barham Salih, the former Iraqi president, today aspires for peace and stability in the whole of the Middle East. He called for an end to the ongoing Palestine-Israel conflict and praised China's stance on the Palestinian situation.

Salih, who was president of Iraq from October 2018 to October 2022, made the remarks in an exclusive interview with China Daily.

Speaking about the current situation in Palestine, the former president said the mindless violence and brutal conflict must stop. Targeting civilians and infrastructure was unacceptable, constituting a gross violation of international humanitarian laws, he said.

"We are heartened by China's position advocating the end of this war, and China's stance at the United Nations Security Council is commendable," Salih said.

He stressed the importance of China's consultations with the Arab world and partners in the international community.



Barham Salih

Stating that the situation is extremely dangerous and could escalate further, Salih called on the international community to work together to stop the conflict and prevent further escalation, as that could be devastating for the entire Middle East and wider global security.

Salih hailed the development of Iraq-China ties in recent years, saying that cooperation between the two countries reached an unprecedented level last year, with bilateral trade amounting to $53 billion. China has become a major trading partner for Iraq, and Iraq is the third-largest supplier of crude oil to China, he said.

Salih, who has held several senior positions in the Iraqi government, including deputy prime minister for economic affairs, minister of planning and head of the economic committee, knows how important it is for the Iraqi people to improve economic conditions.

"Now we are prioritizing economic reconstruction and regeneration, reforming our economy in a structural way so that we can deal with the many challenges that we have, including alleviating poverty, providing services and jobs for our young people, and also dealing with the environmental challenges that our country is afflicted with," he said.

"Iraq needs infrastructure. China is a partner, and we look forward to working together on this matter," he added.

In 2015, China and Iraq signed a cooperation document on joint construction of the Belt and Road. Noting that the China-proposed Belt and Road Initiative is very significant, Salih said that Chinese companies have already begun participating in Iraq's economic reconstruction by operating oilfields and building schools.

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HK, MACAO ADD THRUST TO NATION'S SPACE EXPLORATION

Both cities make significant contributions to research

By OASIS HU in Hong Kong
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indepth

Many people gazing at the moon shining brightly in the night sky wonder what secrets the Earth's satellite holds.

However, few of them have the chance to access lunar soil and study it to unlock such mysteries, unlike Qian Yuqi.

At the start of this year, Qian, a postdoctoral fellow from the Department of Earth Sciences at the University of Hong Kong, or HKU, applied to access lunar soil samples from the China National Space Administration. His application was approved in June.

It was the first time Hong Kong had secured lunar soil samples for study.

Although he is only 28, Qian, a geologist who wears dark glasses and sports a flat haircut, has been studying the moon for nearly a decade.

His enthusiasm for all things lunar runs deep. His computer desktop boasts a screen saver showing the moon. He carries a backpack displaying the Chinese characters for "moon exploration", and a model of the moon sits on his office desk. Qian also repeatedly emphasizes just how interesting his lunar studies are.

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INSIDE
Snow leopard protection a success
Going Green, page 7

Forest guardians 'migrate' with the birds

By LI YINGQING in Kunming and **ZOU SHUO**

Along with the birds flying over the Ailao Mountains in Yunnan province, a forest police team has likewise been "migrating" since September and will stay in the mountains until March to prevent poaching and other wildlife crimes.

Nicknamed the "migratory police station", the seven officers with the forest police station of Hongtupo, Nanhua county, in the Chuxiong Yi autonomous prefecture, carry extra clothing, quilts and daily necessities while "migrating" in the forests on an annual mission to safeguard the avian travelers.

Zhang Yueping, who has worked at the station for 17 years and now heads it, said the Ailao Mountains, which are rich in biodiversity, are located along an important route for 430 kinds of migratory birds.

Established in 1984, the station, which is at the foot of a mountain, initially had neither running water nor phone service, but it evolved into a small apartment in 2010, he said. "We now have bunk beds instead of living in tents."

According to Zhang, some local villagers who used to live in extreme poverty hunted birds for food or as a source of income, which resulted in a "silent mountain" where no birds were twittering.

Inspections usually occur at night, when "we brave the darkness and bumpy mountain road with no torchlight to catch poachers," according to Officer Yang Zhengqiang.



Forest police team members patrol in the Ailao Mountains in Yunnan province on Feb 9. HOU WEIJING / FOR CHINA DAILY

Sometimes, when the officers have to go far, they carry a tent in case they can't return to the apartment in time.

Officer Liu Yan, who once worked at the station, said winter was the toughest time, because her quilt was never dry due to the high humidity in the mountains. "Once I strayed away from my companions, and I can't describe the feeling of loneliness."

Despite the hardships, officers said their work is worthwhile, with the number of birds as well as the number of species in the forests increasing over the years.

To facilitate the effort, the local public security bureau has worked with the Ailao Mountains National Nature Reserve to set up bird and plant monitoring stations. Infrared monitoring devices are also used to help prevent poaching.

Due to the combination of officers and technology, all kinds of animals and plants have returned to the reserve.

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Vol. 27 — No. 8272

ANN ASIA NEWS NETWORK
A member of the Asia News Network

4 893663 000014

ADDRESS: 18/F, HING WAI CENTRE, 7 TIN WAN PRAYA ROAD, ABERDEEN, HONG KONG · Tel: (852) 2518-5111 · Fax: (852) 2554-7704 · Email: editor@chinadailyhk.com · HK Edition website: www.chinadailyhk.com · Printed by: Joint Printing Company Limited, 2-3/F Hing Wai Centre, 7 Tin Wan Praya Road, Aberdeen, Hong Kong

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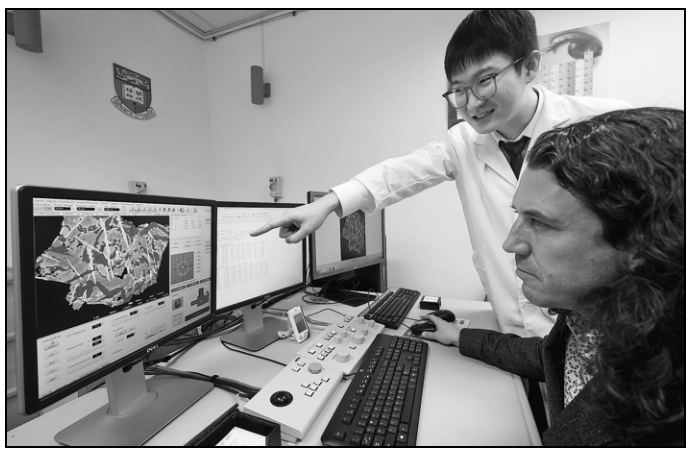


Lunar soil samples collected by the Chang'e 5 probe are displayed at the University of Hong Kong. CALVIN NG / CHINA DAILY

MOON: LUNAR SAMPLES SECURED FOR STUDY







Top: Visitors view replicas of Chinese rockets at an aerospace exhibition in Wuhan, Hubei province. PROVIDED TO CHINA DAILY
Above left: Geoscientist Qian Yuqi inspects a model of the Earth. FLORENCE LI / CHINA DAILY **Above right:** Qian and fellow geoscientist Joseph Michalski examine an image of the lunar soil. CALVIN NG / CHINA DAILY

From page 1

GBA FACES

Qian's interest in space dates to his childhood. While immersing himself in science fiction films and novels, he noticed that these stories were always set in space, with geologists playing significant roles.

After passing the college entrance examination in 2013, Qian pursued a degree in geology at China University of Geosciences (Wuhan) in Hubei province. He could only choose a major centered on the Earth's geology, as no undergraduate programs on the mainland at that time were specifically focused on planetary science or deep space exploration, he said.

Qian worked hard, as he knew that studying the Earth's geology could lay a solid foundation for exploring other planets. His opportunity soon arrived, with China's lunar exploration program gaining significant momentum.

In 2004, China officially launched the Chang'e project to explore the moon in three phases to fulfill three aims: unmanned lunar exploration, a manned lunar landing, and establishing a lunar base.

The unmanned lunar exploration, or the Chinese Lunar Exploration Program, also consists of three phases: orbiting, landing and returning.

The orbiting phase, which began in 2004, involved Chang'e 1 in 2007 and Chang'e 2 in 2010 exploring the lunar surface from orbit. The landing phase involved Chang'e 3 in 2013 and Chang'e 4 in 2018 landing on the moon's surface for detailed exploration. The returning phase included the Chang'e 5 mission in 2020, which collected lunar samples for a return to Earth.

When the Chang'e project started, many mainland university researchers switched their research focus to the moon and became involved in these missions.

Research role

In May 2011, Qian's university established the Planetary Science Institute, with the aim of spearheading research in lunar and planetary science.

The institute organized a lecture at the university to present its research findings. Qian attended the lecture, finding it deeply interesting. That night, he wrote a letter to a senior professor at the institute, stating that he wanted to contribute to furthering China's space endeavors.

Impressed by Qian's ability and enthusiasm, the professor accepted him as his research student — giving Qian access to national lunar research.

Under his mentor's guidance, Qian conducted a lot of research based on data collected by Chang'e 3 and Chang'e 4. He also supported a prelaunch study for Chang'e 5.

The Chang'e 5 mission team aimed to select the best landing site from a 50,000-square-kilometer preselected zone.

Qian remained in his laboratory for many days, extensively reviewing remote sensing archives of the moon's surface captured by satellites. He discovered the eastern region of the preselected zone may contain basalts that are about 2 billion years old — potentially making subsequent soil collections younger than any previous samples secured by other nations, such as the United States and the former Soviet Union.

Such samples could provide insights into the moon's formative history. Given the similarities between early lunar and Earth environments, this could also help scientists unravel the secrets of the Earth's early history.

Qian released a paper suggesting the landing site for Chang'e 5, stimulating extensive discussion among scientists and the mission team.

Chang'e 5 was due to launch in 2017. However, in July that year, the project experienced a significant setback when the Long March 5 large carrier rocket, which is the main booster of Chang'e 5, failed to lift off.

Engineers swiftly launched an emergency investigation into the cause of the failure.

This was also a distressing time for Qian. "As the Long March 5 was a critical project, the problem had to be tackled quickly. However, the timeline was uncertain, and I found this deeply worrying," he said.

While closely following news reports about the Long March 5 and Chang'e 5, Qian continued his doctorate research at his university, while remaining focused on lunar studies.

The Long March 5 was finally launched in November 2020, taking Chang'e 5 skyward.

The probe landed precisely where Qian recommended, collecting 1,731 grams of samples. In addition, analysis of the soil confirmed Qian's research. The soil is nearly 1 billion years younger than any previous lunar volcanic deposits returned to Earth.

Rental opportunities

Since July 2021, the China National Space Administration, or CNSA, Lunar Exploration and Space Engineering Center has granted eligible organizations the opportunity to rent lunar research samples for related research.

Asked by his mentor to research some soil samples, Qian quickly wrote several papers about them.

In December, Qian completed his doctorate with flying colors. In recognition of his exemplary work, he received the Li Siguang Outstanding Ph.D. Student Award early this year, one of the highest awards for geoscience students in China.

Qian next decided to further his lunar research through a postdoctoral position in HKU's Department of Earth Sciences.

Deep space missions such as lunar exploration demand significant financial and technological capabilities — typically the preserve of nations such as China and the United States, and the European Space Agency.

"Doing research in Hong Kong offers me the opportunity to remain engaged in a national project, further contributing to the country," Qian said.

Researching lunar geology in Hong Kong can also stimulate development of related local industries, inspire young people in the city to take part in this field, and enhance cooperation between Hong Kong and the mainland on deep space exploration, Qian said.

Scholars in Hong Kong studying the moon's geography mostly rely on remote sensing data, rather than direct analysis of lunar soil. "I can use my abilities to fill a gap in this respect," Qian said.

After joining HKU in March — becoming the first at the institution to engage in lunar research — Qian soon started to apply for lunar soil for his work.

Early this year, the CNSA again began accepting applications for lunar samples, and Qian spent a month preparing a proposal, submitting it before the deadline.

A few weeks later, the CNSA phoned him to say his proposal had passed the initial review and would now require an oral defense.

At the end of May, Qian defended his proposal in Beijing, introducing his research ideas, team members, equipment for experiments, and sample storage conditions at his university to the panel of judges.

During the application process, Qian found that lunar science in the country is progressing swiftly. Many top universities now offer undergraduate programs to cultivate expertise in deep space and planetary domains. Their faculty and students, along with researchers from key institutions, are applying to study lunar soil for purposes beyond Qian's volcanology research.

List approved

In June, the CNSA issued the final approved list for borrowing lunar research samples. A total of 60 applications from 23 individuals at 16 research institutions were endorsed. In all, just over 12,328 milligrams of samples have been distributed.

Qian was among the successful applicants — obtaining four lunar samples with a total weight of 822.6 mg. He can borrow them for one year.

At the end of July, Qian traveled to Beijing to collect the samples, but his trip coincided with the arrival of Typhoon Doksuri.

Despite heavy rain caused by the typhoon, the CNSA prepared the samples on time for scholars — preventing any delays in research for those throughout the country who traveled to collect them.

As Qian sat on the train heading back to Hong Kong, rain poured relentlessly, obscuring the view beyond his window. As he continued his journey, he read news on his phone of the escalating casualties caused by the severe downpours.

However, he had no time to worry about his safety, as his attention was firmly focused on the lunar samples. He carefully secured the container inside his backpack in shock-absorbing foam. He held the backpack tightly to try to protect the samples from every vibration and sway of the train.

He finally relaxed only after his 11-hour journey ended and he was back in Hong Kong safely.

"Securing these samples is a dream come true for ourselves and Hong Kong's space science community," Qian said, adding that such acquisition also reflects the central government's commitment to supporting the city.

By granting his request, the central authorities also demonstrated their desire to see Hong Kong develop capabilities in the field of space and keep pace with advances made on the mainland, Qian added.

In the coming year, Qian said he will use the lunar samples to unlock mysteries of the moon's volcanic history, try to provide insights into its geological past, and its connection to the formation and evolution of planetary bodies in the solar system.

Furthermore, he hopes his application will help establish a comprehensive mechanism at HKU for storing lunar samples and conducting research, thus enhancing the city's capacity to take part in future national lunar exploration missions.

First milestone

Qian said the moon is the first milestone on humankind's journey to exploring the cosmos, adding that China has many lunar exploration plans for the immediate future.

Chang'e 6, scheduled for launch sometime next year, is set to become the first probe to retrieve samples from the dark side of the moon.

In 2026, China plans to launch Chang'e 7 to investigate water resources at the moon's south pole. After this, the nation envisions establishing small bases on the moon. Furthermore, China is aiming for a manned landing on the moon before 2030.

Qian, who is researching the landing site for Chang'e 6, plans to continue obtaining soil samples brought back by the probe. He said he will also try his best to become involved in future national space missions.

Many people in Hong Kong and Macao, such as Qian, are actively contributing to the nation's space exploration efforts.

For example, Macau University of Science and Technology, or MUST, has been involved in data analysis and scientific research for the Chang'e project since 2005. It is the first university in the Guangdong-Hong Kong-Macao Greater Bay Area, or GBA, to be involved in the nation's lunar project.

At the end of 2019, the CNSA announced the establishment of a space exploration and science center at the Macao university to improve the deep level of cooperation between the GBA and international research institutes by using Macao's advantages. In addition, Macao Science 1, the first space science satellite jointly developed by the mainland and Macao, was launched this year.

Meanwhile, Hong Kong Polytechnic University, or PolyU, has made noteworthy contributions to developing hardware to support national space exploration efforts.

In 2013, PolyU collaborated with experts from the China Academy of Space Technology to develop the Camera Pointing System. Despite operating in challenging conditions, this navigation camera was landed on the moon by Chang'e 3 to capture images of the lunar landscape.

The camera was later updated and used again during the Chang'e 4 mission in 2018.

Furthermore, the PolyU team was responsible for developing the device used to sample lunar soil collected by the Chang'e 5 probe in 2020.

That year, PolyU further successfully developed and manufactured the Mars Landing Surveillance Camera, one of the key instruments aboard the spacecraft taking part in the Tianwen 1 mission — the nation's first to the Red Planet.

PolyU also conducted a detailed analysis of the geology and topography of the landing zones for the Chang'e 3 and Chang'e 4 missions, supporting the two probes to find suitable landing sites.

At least three universities in Hong Kong offer undergraduate and master's degree programs for training aerospace personnel, with 100 graduates specializing in aerospace technology each year.

In 2020, selection of the nation's fourth batch of astronauts started, with the process open to applicants from Hong Kong and Macao for the first time. This month, the process reached the final stage, and included several candidates from both cities.

Qian said: "While public attention often focuses on immediate concerns, scientists look farther into the future. Events such as wars, pandemics, climate crises, or outbreaks of superviruses could render Earth inhospitable to life someday, and today's scientific endeavors will contribute to securing humanity's home in the future."



Visitors to an exhibition in Hefei, Anhui province, take photographs of an engine retrieved from a Long March 2E rocket. HUANG BOHAN / XINHUA