

A Canadian Mom's Love for Yunnan

Dialogue

By BI Weizi & LONG Yun

Rouhieh Tabibzadegan, a Canadian teacher at Yunnan University of Finance and Economics (YUFE), shared her personal experience of China's development, especially the changes and achievements of compulsory education in rural Yunnan, with *Science and Technology Daily* recently. She said that the Chinese path of modernization is a path that unites the strength of all people and creates a new way of human progress. She feels honored and inspired to be a part of China's development and hopes to continue to make her contributions in the future.

A Childhood Dream
"Coming to China has been a dream of mine since I was a child," Tabibzadegan said, adding that China is the love of her life and it is a great gift and honor to live in and serve the country.

In 2003, she made a tour of China with Kunming, the capital city of Yunnan province, as her last stop. She found Yunnan to be a special place because, "There are about 26 ethnic groups here."

Having lived in Yunnan for two decades, Tabibzadegan witnessed the rapid economic development, the improvement of local village schools, and the in-



Rouhieh Tabibzadegan. (COURTESY PHOTO)

creased literacy of people in rural areas. China has achieved the goal of eradicating poverty, but this goal needs to be sustained, she said, adding that, "I would like to be part of that process."

Canadian Mom
Tabibzadegan has been working at YUFE since 2005. Over the years, she has kept up with the university's teaching reform needs by conducting English debates, speech contests, choral competitions, and holiday parties. Her lively teaching style is loved by her students

who affectionately call her "Canadian Mom."

She considers it an honor to be called "Canadian Mom" and is always ready to give her all for her students, sacrificing her own comfort and well-being as mothers do. For Tabibzadegan teaching is not just a job, "What is more important is what is in our hearts and what we want for our students," she said.

In addition, Tabibzadegan uses her free time to teach English in more than

20 primary schools, most of which serve the children of disadvantaged migrant workers and cannot afford foreign teachers. "Doing this volunteer work is actually a gift to me because it allows me to help others," she said, adding that not only focusing on ourselves but also helping those in need makes us human.

A Special Flower
It's commonly believed that Yunnan is geographically remote, but for Tabibzadegan, Yunnan is an important spot on the map of China given its location and connection to other parts of Southeast Asia.

"Every province [in China] is a different flower. And every flower has its own characteristics and needs. Yunnan is a special flower with its unique beauty," she said, noting that only by taking care of each flower can China become a beautiful bouquet of flowers. She is now doing her job to provide as much sunshine and water as possible. This is also what the Chinese government has been doing, rolling out a series of favorable policies that benefit all people and ensure that no place is left behind.

"China is my second hometown," she said, adding that she is happy to realize her childhood dream and is willing to dedicate her whole life to the course of education and helping as many people as possible.

This article is also contributed by YUFE.

Letter to the Editor

China's Favorable Academic Environment

By Ivan Sarafanov

Based on my experience working and studying in China, I can say with full confidence that China has built one of the most favorable academic environments for researchers. There are a lot of opportunities to conduct research in China's universities, and the main reason is that government funding has been abundant and investment in the higher education system has been strong and sustained.

According to a report published by The World Intellectual Property Organization (WIPO), China now files more patents than any country in the world. China's share of the world total patent application has almost doubled, from 24.4 percent in 2011 to 46.6 percent in 2021. China's innovation in sectors like next-generation telecom, AI, quantum computing and green energy cut a dash-

ing figure. Compared to Western countries, where scientists usually are not given financial rewards for publishing their research, the picture in China is completely different. Here, researchers benefit greatly from this kind of reward system, which in turn motivates scientists to publish more high-quality papers in top-ranked academic journals. Also, the publication rate of Chinese scientists in top international journals has improved significantly and steadily. China's overall Field-Weighted Citation Impact rose from 0.89 in 2016 to 1.12 in 2020, meaning that the quality of research published in China is 12 percent above the world average.

Chinese education industry is also spending a significant amount of money in R&D and this is a possible source of funding for academics. As foreign experts, we can also apply for university research grants and funds through the provincial government. If your research is highly relevant and in demand, getting support for it will not be a big problem. Another significant feature is that most Chinese universities have new facilities, including research labs, library, computing and classrooms. This is especially important for scientists who are engaged in research of natural sciences, and for them working here could be a perfect choice to conduct applied research, because labs are often equipped with the most modern tools and machines.

As an economist, I think the quality of the libraries and general availability of leading electronic databases and other resources in Chinese universities are incredible, and it opens up



Dr. Ivan Sarafanov. (COURTESY PHOTO)

many opportunities for conducting fruitful scientific work and research activities.

As for the convenience of living in the country, universities and research institutions offer foreign experts packages that include healthcare, housing expenses, and provide necessary assistance for the education of dependent children, which undoubtedly eases the difficulties of staying in another country. With the advent of new technologies, the process of arranging life in China has become as simple as possible. Almost all key issues can be solved without leaving home from your smartphone.

Nonetheless, it is worth noting that even though today, the level of interaction and cooperation between foreign and Chinese scientific organizations is actively developing, it is still at a relatively low level. That's why creating networking opportunities to enable innovative partnerships and promote a bottom-up approach to China-foreign researchers' and research institutions' collaboration is crucial. This work should be supported by both parties.

Foreign academic institutions should encourage continuous engagement with Chinese partners to deepen and strengthen existing links, build trust and enable the mutual flow of research benefits. In contrast, Chinese institutions may create more international scientific research funds and projects on a pilot basis to support foreign scientists in the process of application and participation in national science and technology programs.

I am sure that with the acceleration of reforms in China, cooperation in various fields will steadily develop and reach new heights in the near future.

Dr. Ivan Sarafanov is a lecturer at the University of International Business and Economics, Beijing.

Expats Activities

From Peanut Butter to Diamonds Exploring the Mysteries of Science

By WANG Xin & LONG Yun

Diamonds have always captivated our imagination with their dazzling brilliance and hardness. Traditionally, they are formed deep in Earth's mantle over billions of years under extreme heat and pressure. However, modern science has found a way to accelerate this process and create diamonds in a laboratory environment.

During a science outreach activity held on May 27, Thomas Meier, a German scientist from the Center for High-Pressure Science & Technology Advanced Research, explained the fascinating process of diamond synthesis. "Diamond synthesis is a well-established method nowadays. It only takes a starting material rich in carbon, for example, peanut butter, and the right pressure and temperature conditions to make diamonds," Meier said when sharing his re-

search results with an on-site audience.

Meier's presentation delved into the origin of high-pressure science, starting from the fantasies of alchemists. Through vivid images, captivating examples, and imaginative metaphors, he explained how high-pressure conditions, similar to those deep within Earth, can help humanity create previously unknown materials. The prospects for future developments in this field are vast and promising. "Science outreach is quite important," Meier told *S&T Daily*, highlighting the significance of inspiring young students to be more innovative and encouraging the generation of new ideas.

"I love exploring the world of science," said Li Ziteng, a fourth-grade student from Beijing Chaoyang Foreign Language School, during an interview with *S&T Daily*. Li noted that Meier's lecture was engaging and helped him to gain

knowledge on the realm of high-pressure science.

On the same day, in another enlightening event held at the Beijing Planetarium, Edgar Perez, an expert from Peru specializing in AI and 5G, unveiled the mysteries of the metaverse. With accessible language, he explained the concept and evolution of the metaverse, the opportunities it brings, the landscapes it can shape, and its future implications. Perez showcased the applications of next-generation AI and metaverse, providing comprehensive insights into the extensive use of digital technology in our lives.

During the lectures, the experts interacted with the students, sparking lively conversations. The abstract and profound scientific knowledge became lively and captivating through the experts' clear explanations. Many parents in the audience expressed their

appreciation for these information-packed lectures, noting their engaging and educational nature. They believed that the talks ignited a passion for science in their children and opened a window to an unknown world full of wonders.

Many foreign experts actively involved in science outreach activities held during China's 12 day Science and Technology Week, which ran from May 20 to 31, were committed to the goal of fostering curiosity and scientific enthusiasm among young students and promoting a broader understanding of cutting-edge technologies.

From peanut butter to the metaverse, these events remind us of the wonders of science and the endless possibilities that lie ahead.

This article is also contributed by Foreign Talent Research Center, MOST.

Traditional Eastern Wisdom

Crossbow: Ancient Chinese Machinery Invention

By BI Weizi

The use of bow and arrow for hunting and warfare dates back to the Paleolithic period in many parts of the world. Thousands of years ago, the crossbow was then invented by Chinese on the basic bow design, expanding the use of mechanical and hand-held weapons, and revolutionizing the battlefield.

Chinese archaeologists believe that crossbows may have been invented as early as 2000 B.C., based on artifacts such as bones, stones, and shells that may have been crossbow triggers. The earliest hand-held crossbow with a bronze trigger was unearthed in a tomb in Qufu, Shandong province, in the ancient Chinese state of Lu during the Spring and Autumn Period (771-476 BC).

The crossbow is composed of three parts: the bow, the tiller and the lock.

The bow, also called the prod, is mounted on the tiller, which is usually the wooden body, and the lock refers to the release mechanism, including the string, sears, trigger lever and casing. When the shooter releases a mechanism, the crossbow fires arrows or bolts propelled by the mechanical energy of the previously taut bowstring.

Developed from the traditional bow, the crossbow is capable of firing multiple arrows with greater power and precision. The locking mechanism allows crossbow shooters to handle more draw weight and maintain the draw with significantly less physical exertion, by limiting the shooter's stamina to pulling the string into the lock and then releasing the shot by depressing the trigger.

The crossbow was an important factor in the success of the Chinese states

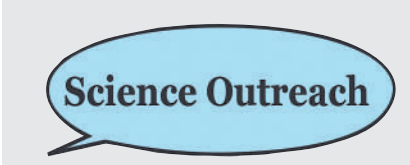
against foreign armies. Western scholars believe that the Chinese crossbow in the Warring States period can be compared with modern rifles, and it is one of the

outstanding achievements of ancient engineering technology, reflecting the excellent scientific and technological level of ancient China.



An ancient crossbow vehicle is displayed on the Ming City Wall in Nanjing, China. (PHOTO: VCG)

Can Astronauts Wear Glasses?



By Staff Reporters

On May 29, three astronauts on Shenzhou - 16, commander Jing Haipeng, flight engineer Zhu Yangzhu and payload expert Gui Haichao, officially met with the public. Gui is a professor at Beihang University, and it came as a surprise to many people who used to believe that exceptional eyesight is a must for those who travel to space, when they saw that he wears glasses.

Yang Liwei, deputy chief designer of China's manned space flight project, said the selection criteria for astronauts have become more scientific. "The selection criteria used to be relatively simple. Astronauts were both pilots and engineers. With the develop-

ment of engineering, the division of labor has become more detailed, scientific experiments have become more specialized, and the selection criteria for different tasks are also different. Though high myopia is not acceptable, low myopia is still possible," he said.

With the development of China's manned space flight project, the operations required to conduct scientific experiments in the space station are becoming more and more professional. Astronauts are usually divided into three categories, one is the space pilot, another is the space engineer, and the third is the payload expert. The selection criteria are different according to different tasks to be conducted, and the scope of selection has also expanded. For example, the astronauts serving as payload experts can come from universities and research institutions, or be multi-industry personnel engaged in space science research and applications.