

Dialogue

Empower the Public with Science

By LONG Yun & BI Weizi

Dr. Oluwarotimi Williams Samuel is an associate professor at the Center for Neural Engineering at the Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences (CAS).

The Nigerian scientist's research is focused on developing simple yet efficient AI-based data-driven solutions for real-life problems in the field of cyber-physical systems, including rehabilitation robotics and related intelligent systems.

Providing optimal care for patients

After investigating a number of confounding issues limiting the clinical and commercial success of intelligent upper limb rehabilitation robots, Samuel has developed computationally efficient AI-driven solutions to address these issues. His work in this area is critical, as it helps ensure optimal care provided for patients who need it.

Additionally, Samuel has developed AI-driven clinical decision support systems that enable efficient analysis of vast amounts of medical data. These systems minimize human error and facilitate healthcare teams' decision-making in terms of disease prediction, diagnosis, and treatment options. The importance of such systems in healthcare cannot be overstated, as they play a crucial role in ensuring that the correct diagnosis is made, and the proper treatment is provided.

Samuel's research work is commendable, as he is designing AI-driven tools that work well with different levels of data quality and are user-friendly,



Dr. Oluwarotimi Williams Samuel. (COURTESY PHOTO)

which is essential in realizing the full benefits of the technology.

Bringing science to the public in simple terms

His contributions to the scientific community are not limited to academic research. In a recent interview with *Science and Technology Daily*, Samuel said that science outreach work bridges the gap between the scientific community and the general public.

He emphasized the need for scientists to explain their work in more straightforward terms that are easily understandable to ordinary people. He suggests that scientists should have an aspect of their work that demonstrates their research findings to the public in a more accessible way. This is particu-

larly important for those who will use the technologies that come out of scientific research.

In his view, making scientific research findings more accessible to the public not only helps the public gain more confidence in technology but also empowers them to understand how to use these technologies. He is adamant that technology users should have a clearer understanding of what technology entails, what it will cost to deploy it, and how it compares to other existing technologies.

Diversity sparks better ideas

Samuel had always been interested in studying abroad and experiencing education in different parts of the world.

In 2014, he joined SIAT via a fully

funded PhD sponsorship of the CAS-TWAS President's Fellowship Award. His experience at SIAT has allowed him to scale up his academic research capability and expertise.

When asked about his views on China, Samuel describes it as a very progressive country with a lot of opportunities. He lauded the government's efforts in providing support and funding for underdeveloped countries and regions.

From his point of view, international cooperation is essential with its power to provide different perspectives to a single problem, resulting in better solutions for society. He believes that the essence of science is to address problems and make society better for all.

Samuel emphasizes that cultural backgrounds and environments can affect people's perspectives, but international cooperation can provide more clarification and understanding. By communicating with people from different cultures, one can gain a global perspective and get the information delivered to the public in a much more precise way, build better cities, and promote scientific progress.

He said that different parties should join hands to unlock and maximize the value of international cooperation. As a critical player in boosting international cooperation, governments should understand the benefits of international collaboration and develop policies that scale up their level of international cooperation.

This article is also contributed by ZHANG Xiaomin.

Microcosmic Beauty of Classical Gardens of Suzhou

Traditional Eastern Wisdom

By BI Weizi

The Classical Gardens located in the city of Suzhou, Jiangsu province, date back to the Spring and Autumn Period (770 to 476 BC) and are known for its miniature recreations of nature, reflecting the Chinese people's passion for integrating natural beauty into garden design.

Inspired by the hunting gardens built by the kings of the state of Wu, garden architects began designing private gardens around the 6th century, reaching a peak around the Ming and Qing dynasties. Today, there are more than 50 such gardens, nine of which have been inscribed on the UNESCO World Heritage List for "representing the development of Chinese landscape garden design over more than two thousand years."

Master gardeners of all dynasties have honed their skills in artistically simulating nature by adapting and utilizing the limited space given to them.

Classical Suzhou gardens, confined to the space of a single dwelling, were designed to be miniatures of nature. They incorporate elements such as water, stone, plants, and various types of architecture with literary and poetic significance, creating unique designs that had a profound impact on the development of garden art in both the East and the West.

These garden ensembles of architecture, rock formations, calligraphy, furniture and artistic decorations are a showcase of the highest artistic achievement in the eastern Yangtze River Delta, and they embody the essence of traditional Chinese culture.



An aerial view of Humble Administrator's Garden. (PHOTO: VCG)

Global Medical Exchanges Through HBCN's Interpreter Team

Service Info

By YANG Fan & JIA Xiaoxiao

Hebei Children's Hospital (HBCH) has long recognized the value of international cooperation and exchanges, and created opportunities through inviting highly skilled foreign experts to participate in academic exchanges and international teleconsultations. In order to improve communication efficiency and quality, HBCH has stepped up efforts in fostering a team of interpreters and leveraging their expertise in practical activities.

Diverse activities aimed at strengthening the competence of their expert team in medical science and promoting

innovative progression in diagnosis, such as international conferences, international exchange training, and English speech contests, and more. Notably, HBCH has also implemented a groundbreaking project of "online training for pediatricians" utilizing simultaneous interpretation facilities. This allows participants in online training to choose "interpretation" to listen to simultaneous Chinese translation. HBCN's efforts are facilitating international cooperation and exchanges, establishing an outstanding children's hospital with international standards in Hebei province and promoting Hebei culture to the world.

This article is contributed by HBCH. The authors are from the International Liaison Office of HBCH.

Expats Activities

Foreign Experts' Tour to Baoding

By Staff Reporters

Foreign experts have long played an important role in China, contributing their passion, expertise and knowledge to help the country make significant advancements in many fields. The Chinese government and people value foreign expert's contributions.

From March 29 to March 31, the Department of Science and Technology Talent and Popularization of MOST organized a series of themed activities in Baoding, Hebei province, for senior foreign experts.

Foreign experts who participated in the activities

were able to appreciate and experience the charm of China. A local cultural tour was organized to help experts comprehend Baoding's history, culture, and traditional customs. In addition, an ecological agriculture experience activity was held in Xingrui Agricultural Science and Technology Park to assist foreign experts in deciphering ecological agriculture, soilless cultivation, and other agricultural technologies.

One of the trip's highlights was the unveiling of the Dr. Shafick George Hatem memorial statue at the Medical Science Center of Hebei University in Baoding, formerly known as the Hebei Medical College for Workers.

China has officially eradicated Leprosy or Hansen's disease thanks partly to the efforts of an American physician, Shafick George Hatem, who became the first foreign expert to obtain Chinese citizenship.

From 1983 to 1988, Dr. Hatem served as honorary president of the medical college. Dr. Hatem's son, Zhou Youma, delivered a moving eulogy at the unveiling of the bronze statue, recalling his father's commitment to serving the people. After the unveiling ceremony, Zhou and the delegation visited the exhibition dedicated to promoting Dr. Hatem's spiritual legacy.

The delegation also visited Hebei Dermatology Prevention and Control Hospital, where Dr. Hatem led a group of medical professionals in the early 1950s to fight for leprosy prevention and control work.

The foreign experts were impressed by the arrange-



Foreign experts visit the Xingrui Agricultural Science and Technology Park. Mr. Michael Crook (first from the right) explains the details of ecological agriculture. (PHOTO: The Department of Science and Technology Talent and Popularization of MOST)

ments and opportunity to strengthen their friendships, recognizing China's economic and social achievements in the new era. They hoped that more themed cultural activities will be organized so that a broader range of audiences can gain a deeper understanding of China and contribute to the promotion of international cooperation.

Source: the Department of Science and Technology Talent and Popularization of MOST



Mr. Zhou Youma (first from the right) takes photo with the memorial statue of Dr. Shafick George Hatem. (PHOTO: The Department of Science and Technology Talent and Popularization of MOST)

Expats Experience Charm of Shanghai

By Staff Reporters

In an effort to create a more welcoming environment for foreign experts working in the city, the Science and Technology Commission of Shanghai Municipality (STCSM) held a themed event in Shanghai on April 8, which included a city tour and a salon discus-

sion. Around 20 foreign experts and their families from more than 10 countries attend the event.

Shanghai is considered one of the top places to live and work for foreign experts in China. The city will continue to hold the "Foreign Talents in Shanghai" lecture series and salon events, creating a more inclusive and supportive

environment for foreign talent in the city.

Deputy Director of STCSM Huang Hong attended the event and delivered a welcoming speech. Huang emphasized the city's commitment to attracting more foreign talent by innovating policies and improving services.

The discussion was lively and en-

gaging, with foreign experts sharing their experiences working and living in Shanghai and offering valuable perspectives for improving services and support for foreign experts.

Following the salon discussion, the group visited various cultural sites in the Hongkou district. Through this activity, foreign experts could gain insights into the rich cultural heritage of the district and the city's development over the past century.

Source: STCSM

Suggestions for Quality Sleep

Science Outreach

By Staff Reporters

Recently, the "4-hour sleep schedule" has sparked discussion among netizens. Is it scientific? How much sleep is appropriate for an average adult? How to fall asleep quickly? A sleep expert talked to *Science Popularization Times* to answer these questions.

Is the "4-hour sleep schedule" reliable?

The "4-hour sleep schedule" is not reliable because it is not efficient and cannot meet the body's needs for physical and mental recovery, said Dong Xiaosong, chief physician of the Department of Respiratory Sleep Medicine at Peking University People's Hospital.

"The brain goes through a natural cycle of activity during sleep, with non-REM sleep occurring first and REM sleep occurring about an hour after falling asleep. A complete sleep cycle lasts about 90 to 110 minutes. Four hours of sleep is not enough for a good night's rest," Dr. Dong said,

noting the importance of six to eight hours of sleep a night for adults.

Does it make sense to catch up on sleep after staying up late?

According to the 2023 China Sleep Research Report, staying up late has become the norm for college students. Some youth believe you can make up for the sleep deficit by getting more sleep during the rest of the day.

Sleep deprivation causes damage to brain cells that cannot be repaired by sleeping a few more hours during the day, said Dr. Dong. She also noted that long-term sleep debt will lead to a decline in immunity and disruption of the body's metabolism, adding that you should try to go to bed before 11 p.m.

How to fall asleep quickly and ensure quality sleep?

Dr. Dong said that the key to ensuring good sleep is to keep your bedtime and wake up schedule consistent.

Anxiety and depression, work stress, jet lag, and other factors can make it difficult to fall asleep. She suggested not using a phone or computer an hour before bedtime, reducing blue light stimulation, avoiding strenuous exercise. She added that listening to soothing music, practicing yoga and reading books are effective ways to relax the mind and help you fall asleep.