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THE MINUTES

The Official Newsletter of Peking University



北京大学
PEKING UNIVERSITY

Issue 3

March, 2020

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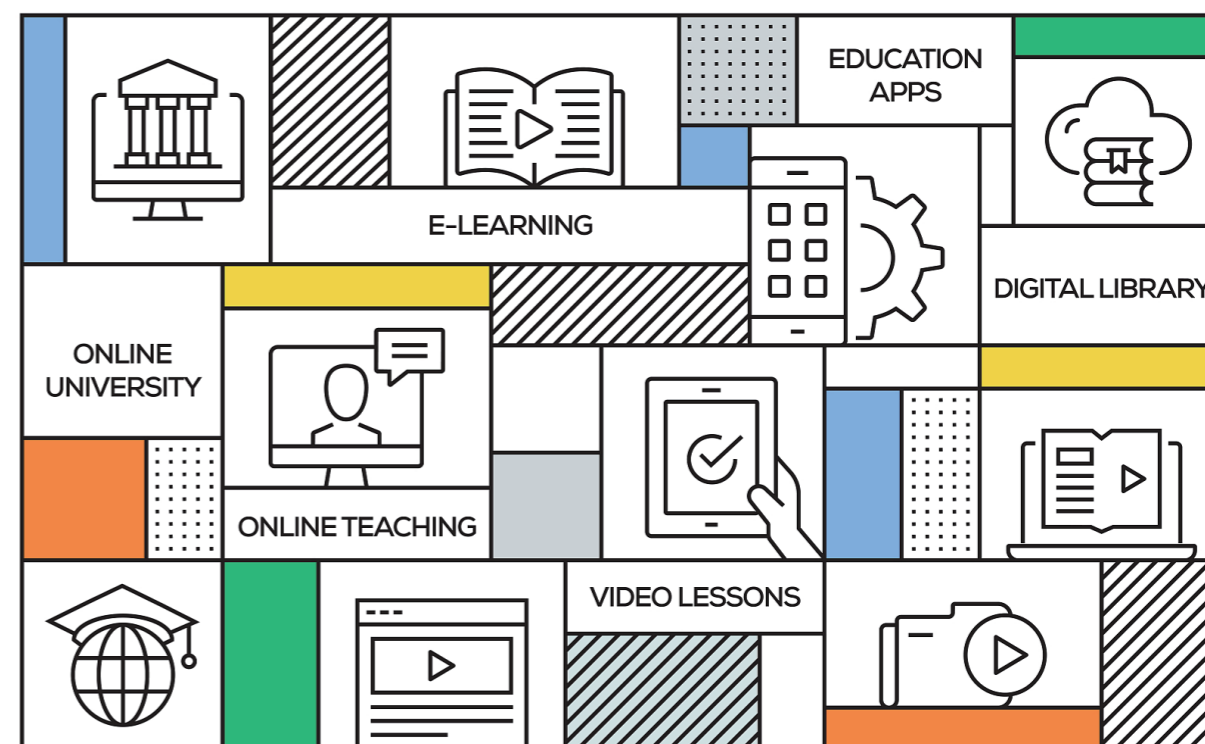
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PKU Guanghua School of Management holds the first academic webinar in the new semester



The Guanghua School of Management at Peking University has accelerated the pace of adopting digital transformation into business education.

On February 26, the Guanghua School of Management held the first academic webinar in the new semester of 2020. Xiong Wei, a professor at Princeton University in the United States and co-editor of the top international journal *Journal of Finance*, was invited to share his insights. Nearly 60 scholars from all over the world, including Princeton University in

the United States and the University of Toronto in Canada, "gathered in Guanghua" through the Internet. This webinar was hosted by the Finance Department at the Guanghua School of Management.

This is another attempt of the Guanghua School of Management to make full use of communication technology to promote the reform of teaching and researching. It's also a response to Peking University's recent call for online learning and online research amid the COVID-19 outbreak. With the beginning of

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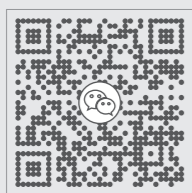
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Peking University's spring semester in 2020, Guanghai's undergraduate and MBA programs have been launched online, bringing a whole new experience to students.

Through online conference software, the webinar allowed participants to engage in an online discussion as effective as offline from all over the world. As the organizer, Professor Liu Xiaolei, dean of the Finance Department at the Guanghai School of Management, said that webinars offer incomparable advantages over traditional offline seminars. Webinars can break the limits of time and space, allowing overseas guests to join the discussion despite their busy schedules. Students and faculty members can also benefit from this kind of international exchanges.

Professor Xiong Wei joined the webinar from the United States and gave a lecture titled "China's Model of Managing the Financial

System". Through the lecture, he explained his academic views and discussed with scholars from various countries. Xiong Wei analyzed the relationship between government policy and market stability. He incorporated the government mechanism into the existing western macro-financial model and introduced "market noise", which can reach different levels of equilibrium.

During the webinar that lasted one and a half hours, scholars "raised their hands" to ask questions concerning issues such as the uniqueness of Chinese financial markets, assumptions of models, rational government choices, and market effectiveness.

In the future, the Guanghai School of Management will invite more scholars from home and abroad to meet online to communicate and share their insights. 📌



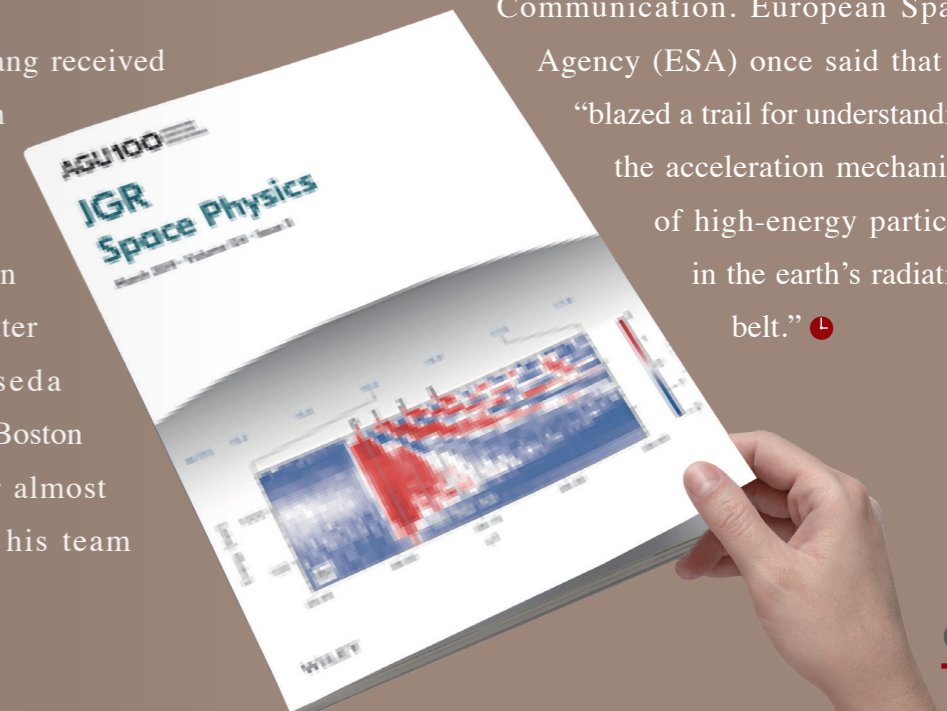
Professor Zong Qiugang elected editor-in-chief of Journal of Geophysical Research—Space Physics

Professor Zong Qiugang from School of Earth and Space Sciences (SESS), Peking University, was recently elected as editor-in-chief of Journal of Geophysical Research (JGR)—Space Physics for four years (2020-2024). JGR, established in 1896, is a flagship journal of American Geophysical Union. It has 7 subsidiary serials, each covering a different field, including space physics, solid geophysics, and atmospheric science. Every year, about 3,000 top-class papers are published in JGR, which is ranked among the top academic journals owing to its high quality, wide coverage and large quantity of papers.

Professor Zong Qiugang received his Ph.D. degree from Max Planck Institute and Brunswick Technical University in Germany in 1999. Later he worked for Waseda University, Japan and Boston university, USA. For almost a decade, Zong and his team

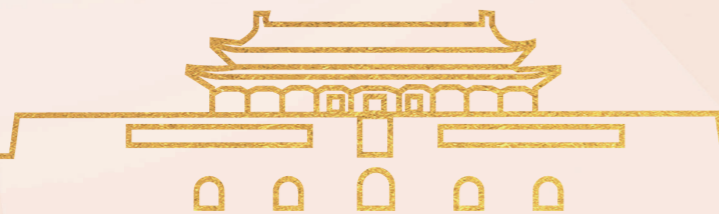
have been conducting research on ULF waves and the interaction of charged particles in the magnetosphere. He also leads his team to make a series of breakthroughs in ULF waves' excitation mechanism, time evolution, spatial distribution, and its resonance theory of interaction with electrons and ions. His work has systematically advanced the academics' understanding of magnetospheric particle dynamics.

Zong has published more than 300 SCI papers in leading academic journals of space physics at home and abroad, like JGR, GRL, and Nature Communication. European Space Agency (ESA) once said that he "blazed a trail for understanding the acceleration mechanism of high-energy particles in the earth's radiation belt." 📌





President Xi replies to letter from Peking University young medics fighting COVID-19 in Hubei



President Xi Jinping has encouraged young medics who are fighting the novel coronavirus disease (COVID-19) on the front line to make their contributions in places where the people need them most. In the letter, Xi extended his regards to the young medics and all youth fighting the epidemic in various fields.

Commending their fearless contribution to the containment of the virus, Xi said they had demonstrated with their deeds that the Chinese youth of the new era could be entrusted with great missions.

Xi said that a nation will be full of hope and a country will have a great tomorrow when younger generations have ideals,

a nation will be full of hope and a country will have a great tomorrow when younger generations have ideals, ability and a strong sense of responsibility

Medical teams from PKU-affiliated hospitals have been dispatched to Wuhan soon after the outbreak of COVID-19, among which 34 out of 453 medical workers are post-90s Party members. Their letter to Chinese President Xi Jinping was replied on March 15.



Members of a medical team from Peking University First Hospital pose for group photos before setting out to Hubei Province in Beijing





||| Members of a medical team from Peking University First Hospital head to the airport in Beijing

ability and a strong sense of responsibility. He urged young people to grow while serving the people, temper themselves through arduous work, increase their abilities in practice and continue to fight at their posts saving people's lives. He called on the young medics to continue their work in saving more patients and motivate their fellow youth to shoulder greater responsibilities.

In their letter, the medics reported their work on the front line, and expressed determination to continue to fully play their roles as Party members in winning the battle.

Young medical workers' effort

Among the over 42,000 medical workers who went to assist in epidemic control in Hubei, more than 12,000 were born in the 1990s, some in the latter part of the decade, so were the 34 medics who wrote the letter to Xi. The 1990s generation, raised in an affluent and rising China, is often stereotyped as childish and

naive.

Wang Ben, secretary of the fourth temporary Party branch of a medical team sent to Wuhan by Peking University, was one of the lead writers of the letter sent to Xi on Wednesday, a day after Xi's trip to Wuhan.

"It was unexpected that we would receive a letter in reply, and within such a short period," the 26-year-old said.

Wang said the original purpose of their letter was to tell Xi as well as the whole nation that China's 1990s generation has grown up and is no longer a generation that needs protection or extra care.

"Now we're capable of shouldering social responsibilities and making contributions to the country with our own efforts," he said, vowing to win the final battle against the coronavirus in Wuhan. 📌



||| This Feb 5, 2020 file photo shows nurses in their 20s preparing to work in the newly built Jiangnan Makeshift Hospital in Wuhan



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COVID-19 Webinar

What does Peking University share with Qatar University?

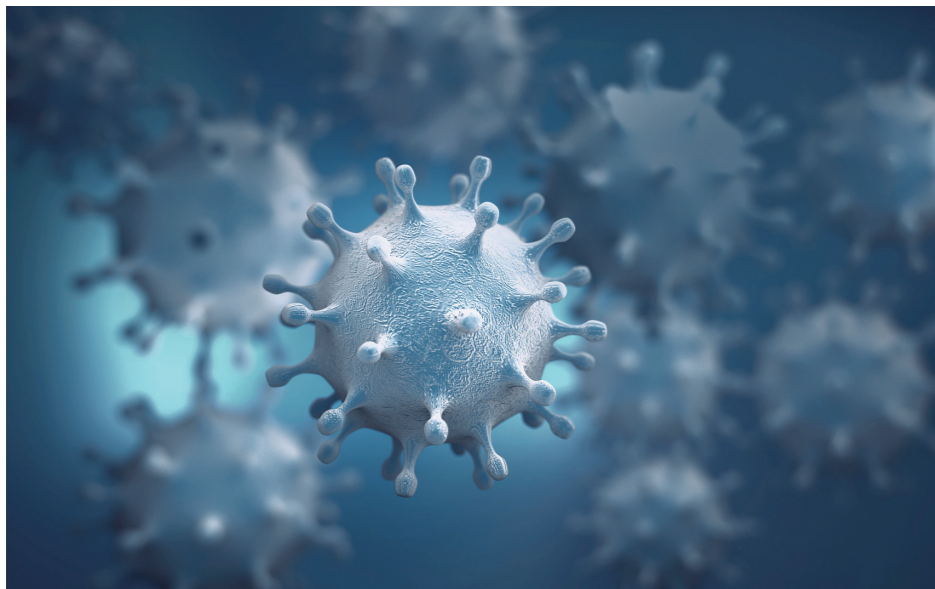
Medical experts and faculty members from Peking University (PKU) participated in a video conference with peers from Qatar University (QU) on March 19, sharing their expertise and experience with fighting against COVID-19. The two sides also updated each other on the latest situation on the pandemic in China and Qatar.

Prior to the knowledge-sharing session, Peking University President Hao Ping delivered the opening remarks, emphasizing that PKU is glad to offer help and to share our experience and practices learned from fighting against COVID-19. Hao has been aware of the rapid growth of COVID-19 cases in Qatar, so he hopes that the online meeting will be a platform for our two universities to overcome the common challenges brought by the novel coronavirus. Hao also mentioned the warm

assistance from Qatar to China during these difficult times and reiterated that both sides would stand by and support each other.

Hassan Rashid Al-Derham, president of QU, said it's a great honor to have such a close partnership with Peking University, adding that PKU's enthusiasm and efforts are what QU expects from a partner. Speaking highly of PKU's efforts in the prevention and control of COVID-19, Al-Derham noted that PKU's valuable experience is needed for QU's attempts to support its local community.

Zhan Qimin, executive vice president of PKU and president of the Peking University Health Science Center, presided over the webinar. Zhan began by elaborating on the significant role of Peking University in the national anti-epidemic battle, including dispatching medical teams



to aid Wuhan in combating the coronavirus, carrying out research on different facets of COVID-19, and making suggestions to the Chinese government for policymaking.

Additionally, medical experts from PKU highlighted the importance of taking drastic measures to protect students from contracting the coronavirus. The safety of each student is the top priority, so PKU made an announcement soon after the outbreak of COVID-19, asking students to receive online education at home and not to enter the campus until further notice. While some are doubtful whether students can adapt to online learning, faculty members from PKU saw that students became accustomed to it much faster than they expected, so the alteration would not be an obstacle for students but more likely to be a challenge for teachers who were not tech-savvy.

In response to what causes the sudden surge

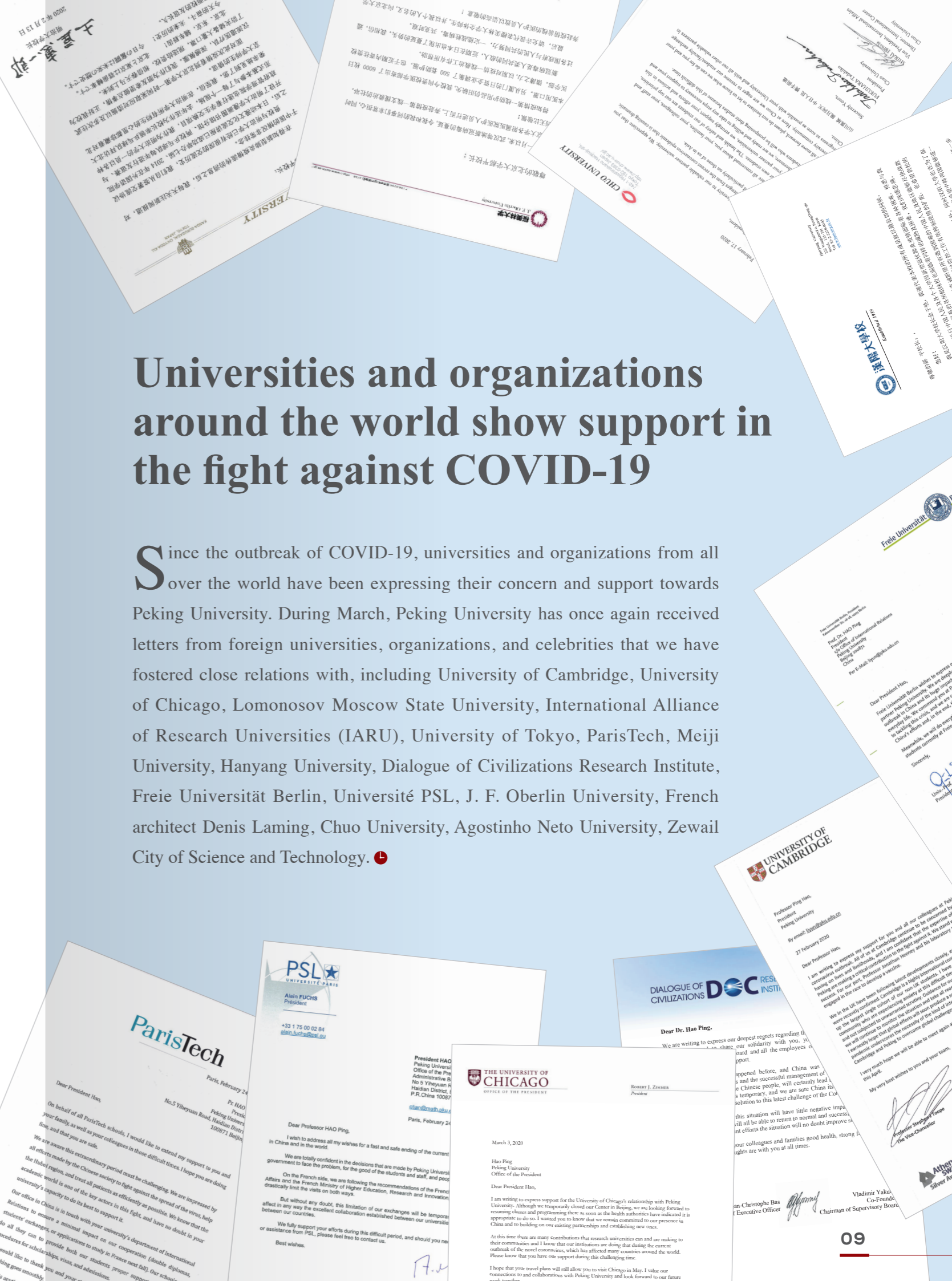
of mortality rate in countries like Italy, experts revealed that one of the reasons might be the lack of medical resources. The situation is similar to Wuhan, the worst-hit city in China, during the initial stage, but it was brought under control as a considerable number

of medical workers rushed to the front line along with more medical supplies. Speaking of the growing number of imported cases in China, experts believe that China will not seal off the entire country considering the demand of sending Chinese medical teams abroad to help the fight against COVID-19 and offer China's solutions to the global public health crisis. Nevertheless, some measures have been adopted to contain the rise of imported infections, such as the tighter border control and a mandatory 14-day quarantine for people arriving in Beijing.

While many questions concerning the novel coronavirus remain unresolved, both sides expressed the willingness to strengthen bilateral exchanges and share research findings in the future. In the meantime, PKU made a commitment that the university would continue to offer help and support amid the global outbreak of novel coronavirus. 📌

Universities and organizations around the world show support in the fight against COVID-19

Since the outbreak of COVID-19, universities and organizations from all over the world have been expressing their concern and support towards Peking University. During March, Peking University has once again received letters from foreign universities, organizations, and celebrities that we have fostered close relations with, including University of Cambridge, University of Chicago, Lomonosov Moscow State University, International Alliance of Research Universities (IARU), University of Tokyo, ParisTech, Meiji University, Hanyang University, Dialogue of Civilizations Research Institute, Freie Universität Berlin, Université PSL, J. F. Oberlin University, French architect Denis Laming, Chuo University, Agostinho Neto University, Zewail City of Science and Technology. 📌





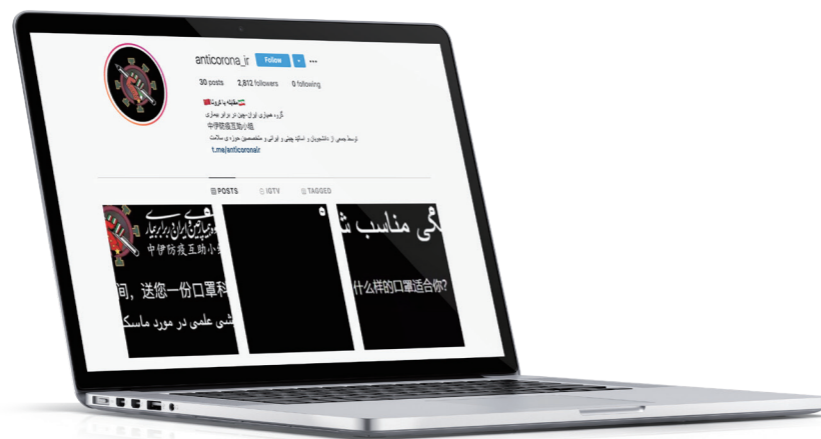
PKU Ph.D. student connects China & Iran in the fight against COVID-19

During March, more than 200 volunteers from China, Iran and Afghanistan have teamed up online to fight the COVID-19 by translating China's anti-epidemic knowledge and experience into Persian and sharing it with Iranians via social media platforms like Twitter and Instagram.

The campaign, known as "China-Iran Epidemic Prevention Mutual Assistance Team" in Chinese, was launched on February 24 by Chen Binbin, who once taught Chinese in Tehran, and now is a Ph.D. candidate at the Department of Chinese, Peking University, in China's capital Beijing.

According to Chen, she learned that many Iranians still lacked anti-epidemic knowledge when the COVID-19 broke out in Iran and founded the team to help.

She said she hoped that through their efforts, the latest Chinese epidemic-related information, as well as China's experience in fighting with the



A screenshot of the Instagram user account where online volunteers support the COVID-19 fight by translating China's anti-epidemic knowledge and experience into Persian and sharing it with Iranians on social media. /@anticorona_ir

disease, could be introduced to the Iranian people and help the country pull through the current situation.

From 20 to 200

"In the beginning, I just wanted to find 20 or 30 persons, but the number exceeded 100 very soon," said Chen. "I've never thought that it would be such a large scale."

Today, the team consists of over 200 members from different countries and regions, including Iran's capital Tehran, China's Xinjiang Uygur Autonomous Region and Guangdong and Henan provinces, and Berlin in Germany.

About three-fifths of the team are Chinese; two-fifths are Iranians, and two are from Afghanistan, according to Chen. They collect the scientific articles about epidemic prevention every day, make short videos with Persian subtitles using the information and post them on their social media account @anticorona_ir.

A volunteer in Yining, northwest China's Xinjiang Uygur Autonomous Region, translates Chinese information into Persian, March 3, 2020. /Xinhua

The team is divided into several groups: data collection, translation, proofreading, video production and promotion. They posted the first video four days after the team-up and update every day with a clear division of work.

Chen said they plan to finish about 90 videos within a month, and the following work will depend on the epidemic situation.

The videos they posted online have drawn wide attention and are popular among Iranian netizens. Chinese Ambassador to Iran Chang Hua often retweets their videos on his Twitter page.

The official IRNA news agency reported the team's efforts to help Iranians battle against the COVID-19, saying that Iranian nurses particularly welcome their videos, which help raise public awareness of the prevention of the disease in the Middle Eastern country.



Fighting hand in hand

The volunteers designed a logo depicting a hand with both the Chinese and Iranian national flags holding a pencil on the backdrop of what appears to be a representation of the coronavirus, symbolizing that China and Iran would work hand in hand to fight COVID-19 with scientific knowledge.

"Thanks to this volunteer activity, I made many Chinese and Iranian friends," said an Iranian student, who gave his Chinese name Zhuang Zhiyuan and is a junior in the department of Chinese at Peking University.

Fluent in Chinese, he is also a vlogger on leading Chinese video-sharing platform Bilibili and adept at video editing, so his primary contribution is adding Persian subtitles and video production.

"They (the team members) work very hard.



||| The staff of Iran's Ministry of Health and Medical Education arranges boxes of masks donated by China in Tehran, Iran, February 25, 2020. /Xinhua



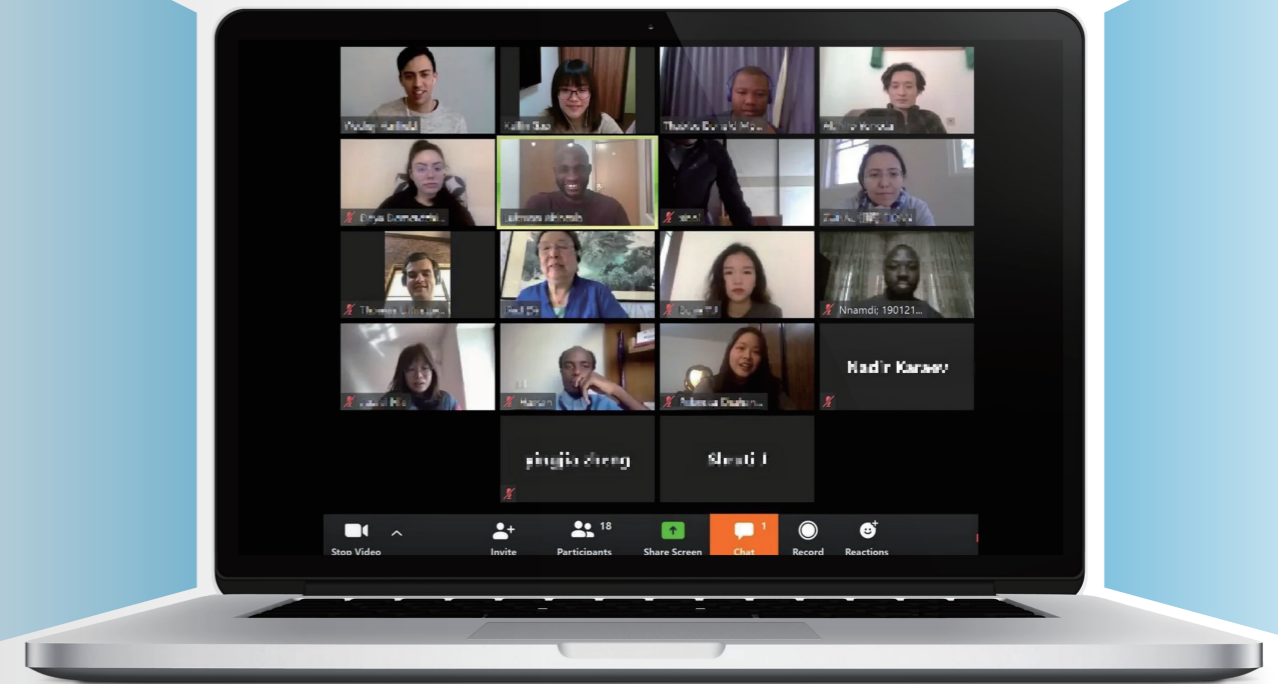
— Chinese Ambassador to Iran Chang Hua often retweets the voluntary team's videos on his Twitter page. /@AmbChangHua

Some of them stay up late to do the things, and some of them learned to video edit specially for this purpose," the Iranian student said. "I want to express thanks to all of our team members and for the support from Chinese people and government."

"I hope that we can get through all the difficulties soon and hope that the friendship between our two countries will last forever," he said in a video from Xinhua News Agency.

According to Iran's Ministry of Health and Medical Education, at least 354 people have died from novel coronavirus infection as of Wednesday.

A total of 9,000 people have been affected by the disease, of whom 2,959 have recovered, the IRNA quoted Kianush Jahanpur, head of Public Relations and Information Center of the ministry, as saying. 📌



Learning worldwide! A glimpse of Peking University online teaching strategies

After having online classes for four weeks, during March, the international students of Peking University have found their ways to deal with the time difference.

The Yenching Academy of Peking University has students from nearly 40 countries around the globe, most of which have delayed their return to school due to the coronavirus. Starting from February 17, the students began to learn on the "cloud classroom".

At 3 p.m. Beijing time on February 18, the

online teaching of "Contemporary Chinese Public Policy" began as scheduled. Federico Verly, a student far away in Buenos Aires, Argentina, has been making preparations in advance.

As a teaching assistant of this course, Verly turned on his laptop 15 minutes beforehand, logged in to the Zoom video conference platform, uploaded course materials on Canvas, and began to greet the students attending the course online.

Due to the time difference, many students abroad have started to struggle with their studies. Savannah Billman, a freshman at home in Pennsylvania, USA, has this feeling. She said, "Now because of the time difference, most of my classes are held in the evening, and one of them starts at 1:00 in the morning." Billman is trying to adjust her schedule so that she can stay focused in the evening and actively participate in class discussions.

Teachers will also adjust their teaching methods according to the students' current situations, like offering recorded live broadcast videos. Verly's course is just like this. He is very grateful to the teachers for recording the course video, so that he can prepare in advance, organize online discussion, and facilitate some students with difficulties to participate in the course at other times.

A new way of using Bilibili

"General Theory of Business Law" and "Bankruptcy Law" are taught by Xu Defeng of Peking University Law School. "Tencent Meeting" platform is used for live broadcast of the two courses above, and the ClassIn platform is used for backup. For recorded class videos, Xu selected the Bilibili, a Chinese video sharing website.

A new attempt of combining recorded lectures with online discussion for "mega-classes"

There are at least 200 students who choose the course "Exploring Space" every year. Seeing as the network might not be able to handle so many students in a live broadcast, Xie Lun from the School of Earth and Space Sciences chose to record the course and upload it online.



Recorded lectures are more meticulous and thoughtful, in which teachers tend to express more clearly and students can study and think repeatedly after class despite the lack of interaction; Live streamed lectures are livelier, but they are more casual and can be restricted by the internet connection. The combination of the two forms can maximize the advantages of online teaching.



Students are required to watch the video in advance, and at the same time, the teacher would also put forward questions to be discussed in the course WeChat group for online interaction during class time.

In last week's online interaction, the students all participated actively. Every time a student asked a question, many other students immediately answered and held timely discussions with each other. The students who take this course come from various schools and majors of Peking University. They have a wide range of knowledge, unique perspectives and wonderful questions.

Learning P.E. on "cloud"

This semester, the Department of P.E. has arranged a total of 258 compulsory courses, all of which rely on online teaching. Formerly relying on specific training venues, P.E. classes now have found a new way of recording various home-based exercises for students to learn.

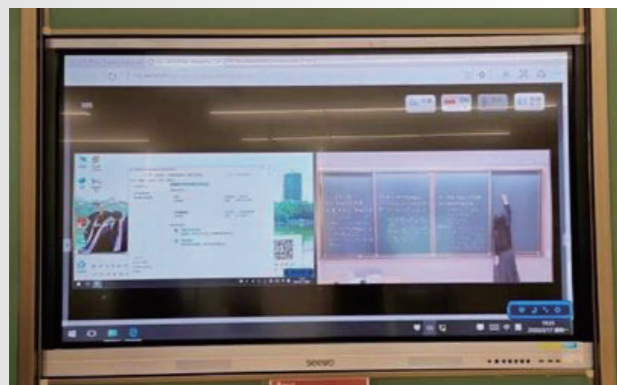
Recently, the Department of P.E. and PKU TV have worked together to broadcast the first live Tai Chi class. According to statistics, a total of 439,000 people watched the course. Some parents also expressed their hope that they could study together, improve their physique, strengthen their immunity, and adjust their psychological state.

At the same time, Zhang Rui, a faculty member from the Department of P.E., designed a set of simple and easy-to-learn exercises for students to improve their cardiopulmonary function and enhance their immunity during their stay at home. She has also taken short videos and made them into a WeChat article for students to learn and exercise.

The use of smart classrooms

In the Geology Building, Zhao Yufeng from the School of Mathematical Sciences is teaching. What's different, though, is that there are no students sitting in the classroom. Teachers teach their classes in this "smart classroom" and broadcast them live online for students to watch at the same time.





“Advanced Algebra” is a fundamental course in mathematics, so many different mathematical formulas are used, and mathematical logic derivation is emphasized. “Using presentation slides or other online meeting platforms such as Zoom and Tencent will not produce very good results,” Zhao said. “The smart classroom developed by the Computer Center can let those who need to use the blackboard continue to teach during this special period of time.”

WeChat group & email Group

“When I was preparing to teach online, I first considered using MOOC resources. But I discovered that this wasn’t suitable for this class, so I chose a more reliable way to carry out teaching,” said Li Xiaoming from the School of Electronics Engineering and Computer Science.

In this course, Li Xiaoming arranges a certain time with students to interact and communicate on WeChat and email. Sending out questionnaires in the WeChat group can create a lively atmosphere and the unique opinions of students are almost always more than 200 words.

Through the email group, each student can see questions sent by the teacher and the discussion with other students.

"It's a way for teachers to focus on teaching rather than technology," Li said. "It looks a little bit 'conventional', but it's practical."

Alternating between different teaching methods

In the first week of this semester, the Department of Sociology conducted online teaching in various forms for 40 undergraduate courses and 31 postgraduate courses. ClassIn was the most popular choice for most teachers, and platforms like Tencent and Zoom also played an important role.



In the face of the challenges of online teaching, the Department of Sociology adjusted the allocation method of teaching assistants, providing one teaching assistant for each course, and two teaching assistants for courses with more than 100 students.

While teaching, teachers may find that the course is not suitable for the original teaching form, so it is critical to alternate and adjust flexibly between the different teaching

methods, from WeChat group communication and Tencent Meeting to smart classroom live broadcasts and ClassIn. Between the transformation of teaching methods, teachers are also constantly exploring and accumulating online teaching experience.

From “learning on cloud” to “discussing on cloud”

On February 26, an online academic seminar of Guanghua School of Management brought nearly 60 scholars from Princeton University, the University of Toronto, and other countries together through the Internet.

The lecture adopted the form of online discussion. Participants can enter through

the network system, listen to the lecture and participate in the discussion, just like the scene of an offline lecture.

Director of the Department of Finance in the Guanghua School of Management Liu Xiaolei said that academic lectures are different from class lectures. Participants and keynote speakers need to be able to fully communicate. Online lectures break the limitation of time and space, and can solve the problem of overseas guests being too busy to travel to Beijing. In addition, they can also invite other experts and scholars in the same field from around the world to participate in exchanges, which is the effect that traditional offline academic lectures cannot achieve. 📌



PKU Institute of Examination Research launches free STEM lessons with MIT

Due to the outbreak of COVID-19, online courses have become important learning resources for students. The Massachusetts Institute of Technology BLOSSOMS Initiative (MIT_BLOSSOMS) and Institute of Examination Research, Peking University have teamed up to offer 32 Mandarin-language interactive STEM video lessons to high school students in China, which is one of the ten partner countries of MIT_BLOSSOMS. Through this cooperation, the video lessons are available on the Chinese website, PKU AC Courses and WeChat, which can be accessed anytime using mobile devices.

The “PKU-MIT BLOSSOMS Lesson Sharing for High School Students” was made possible by the joint efforts of Professor Qin Chunhua, director of the Institute of Examination Research, and Professor Richard C. Larson, principal investigator of MIT_BLOSSOMS Initiative. On

March 10, a report titled “MIT_BLOSSOMS and Peking University Team up to Offer STEM Education to At-Home Students” has been published in MIT Learning News.

Supported by MIT, MIT_BLOSSOMS is a series of free online interactive video lessons designed to inspire students’ interest in Science, technology, engineering and Math (STEM) and improve their critical thinking and interdisciplinary research ability. In 2004, founders of BLOSSOMS came up with the idea inspired by a visit to Ningxia, China. To help students with their study during the COVID-19 outbreak, MIT_BLOSSOMS worked with Institute of Examination Research, Peking University to establish a platform specifically for Chinese students, i.e.

“PKU-MIT BLOSSOMS Lesson Sharing for High School Students”, which offers free Mandarin-language lessons and some English-language lessons to high school students in China. 📍



Dr. Qiao Jie shares anti-epidemic lessons and knowledge at CGTN

While COVID-19 cases are in decline across China, several other countries, such as South Korea, Iran and Italy, have reported a spike in cases.

CGTN conducted an one-on-one interview with Dr. Qiao Jie, President of Peking University No. 3 Hospital. Dr. Qiao has been working on the front line in Wuhan, the epicenter of the COVID-19 outbreak, for over a month.

Dr. Qiao shared the lessons and knowledge that China gained from its fight against the virus, in the hope her global counterparts would benefit from what she had learned.

Over 40,000 doctors and nurses from across China are in central Hubei Province, and its provincial capital Wuhan, to help fight the coronavirus. So far no infection has been reported among them, according to a press conference held by the State Council Information Office.

Dr. Qiao said proper training for medical staff



is important, since most of them did not have experience dealing with infectious diseases.

The training should include how to protect themselves while putting on the protective clothing and taking it off, as well as preparing much-needed equipment ready for both invasive and non-invasive treatment.

Pregnant women are often particularly susceptible to respiratory infections. As an obstetrician-gynecologist, Dr. Qiao pointed out that fortunately, according to the accumulated data, pregnant women always have mild symptoms.

Qiao added that so far there was no evidence of vertical transmission from mother to child. 📍

The power of women in the fight against COVID-19

On March 8, the 110th International Women's Day, we reached out to six female PKUers to honor the contributions of women to defeat the coronavirus. With masks on, they are doctors, student hall monitors, professors, canteen staff, researchers and managers; with masks off, they are daughters, mothers or wives; and they are doing their duties with all their heart and soul. We want to share their stories with you so all of us can witness the power of women during this challenging time.



Wuhan, Wuhan! With support from every corner of the country, nothing will stop the coming of the spring, and we will never retreat until you are fully healed!

Dr. Yuan Xiaoning, leader of a team of 137 medical workers who rushed to Wuhan on the second day of the Spring Festival, also fought on the front lines during the SARS outbreak in 2003. Her colleagues like to call her "Mama Yuan", since she has always been the one to take care of everyone, teach them how to properly wear protective suits and help them avoid getting infected. Before leaving home, Dr. Yuan joked with her son, telling him to practice the famous saxophone melody Going Home, which she wanted him to play as a parting song. "But, he immediately refused," she laughed.

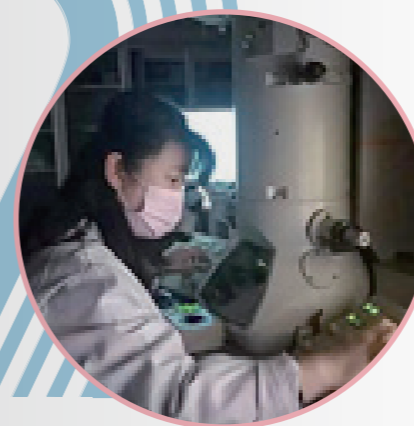


Yuan Xiaoning

Deputy Director of the Nosocomial Infection Management Department at the PKU Third Hospital



I look forward to meeting my students in the Transmission Electron Microscopy Room at the Analytical Instrumentation Center once again when the pandemic ends.



Yuan Xiaoning

Deputy Director of the Nosocomial Infection Management Department at the PKU Third Hospital

The outbreak of COVID-19 has affected the work of Ms. Jia Yunling a great deal. Most students are staying at home and taking online courses, reducing the work load in her Transmission Electron Microscopy (TEM) room by four fifths. It gives her much more time to do work on her own projects and learn new theories in her field. Ms. Jia mostly spends her days on a Chinese MOOC platform, obtaining new knowledge on crystallography and TEM-related topics.



Seeing that students in my class can still meet 'face to face' even though they are located across 11 countries and regions right now really makes me feel relieved. We are not on campus, but we are never going to stop learning and researching!

Professor He was informed a week before the start of the 2020 spring semester that, due to the outbreak of the coronavirus, classes would be moved online for some time. To make sure that all professors and lecturers could understand how to conduct online courses with only a week to spare, the PKU Center for Excellent Teaching and Learning carried out training sessions that always lasted until midnight answering various questions of teachers. Professor He Shu, awardee of PKU Most Popular Professors (2011), is teaching English News Reading this semester, which appears to be a pretty special class as it has 18 international students joining from 11 countries and regions. Life is a bit different for her when compared with others, as she has to take the mask off while working as a screencaster at home.



He Shu

Associate Professor at the
PKU School of Journalism &
Communication



I hope this pandemic ends soon, and I will be waiting here for these lovely young faces coming in with their friends and saying 'This one! That one! And a bowl of rice please~'.

Every morning at 6:20, Ms. Hu Yanhong arrives at the Canteen and starts her day of work with a body temperature check and thorough disinfection. In the face of the coronavirus, Ms. Hu believes that we are all fighting our own battles in each of our different positions. At the moment, PKU canteens offer more than 100 kinds of fresh dishes each day to the over 2,000 students and staff still on campus. To ensure the safety of Pekingers, Ms. Hu and her colleagues disinfect the entire dining hall three times a day while also conducting regular localized disinfections.



Hu Yanhong

PKU Nongyuan Canteen Staff



The students living in this dorm are just about the same age as my own child. Every time I tell them to practice proper personal sanitation, I think of my own kid.

Ms. Yan inspected the entire building five times today, walking up and down over 16,000 steps and helping to water plants and pick up parcels for students who haven't yet returned to campus. There are currently 18 boys staying in Dormitory #28. Because of the outbreak of COVID-19, Ms. Yan has to check body temperatures and hand out masks to them every day, which she says brings her closer to the boys and makes her more mindful of her own sanitation. After work, she also serves as a volunteer for COVID-19 control around her neighborhood. Although her family didn't understand her decision at the very beginning, Ms. Yan was glad that they now fully support her on this.



Yan Dongmei

Monitor of PKU Student
Dormitory #28



The tasks are urgent; the changes are many; the expectations are high — this is how I feel at work. Each task requires meticulousness and thoughtfulness.

The 9 buildings of PKU Global Village have a total of 462 residents between them at present, and Ms. Mu and her team serve them 24/7. On February 24, Global Village launched a new service providing fresh vegetables for sale, and Ms. Mu was put in charge of this program. She manages up to 60 transactions on average each day the service is running. Like many of her colleagues, she chose to temporarily live on campus instead of returning home after work so that they can better focus on their work and reduce the risk of bringing the coronavirus into the community. 📍



He Shu

Associate Professor at the
PKU School of Journalism &
Communication

Miyazaki Kazuki

A Japanese Student's Middle Kingdom Adventure

At the end of January 2020, an article lauding Japanese efforts and encouragement to the Chinese people made the rounds on social media. In this article, a Japanese youngster shared his impressions of Wuhan and encouraged viewers to visit this dynamic and captivating city when the epidemic is over.

The creator of this video is Miyazaki Kazuki, who completed his undergraduate studies at Waseda University. Currently, Kazuki is part of the 2018 Yenching Scholars cohort at Peking University, with a research concentration in Politics and International Relations. Like many other Japanese people, Kazuki is interested in Chinese classics like Records of the Three Kingdoms and Records of the Grand Historian. Moreover, Kazuki is also passionate about Chinese tourism. Before the outbreak of COVID-19, Kazuki

was travelling throughout China, immersing himself in its history and culture.

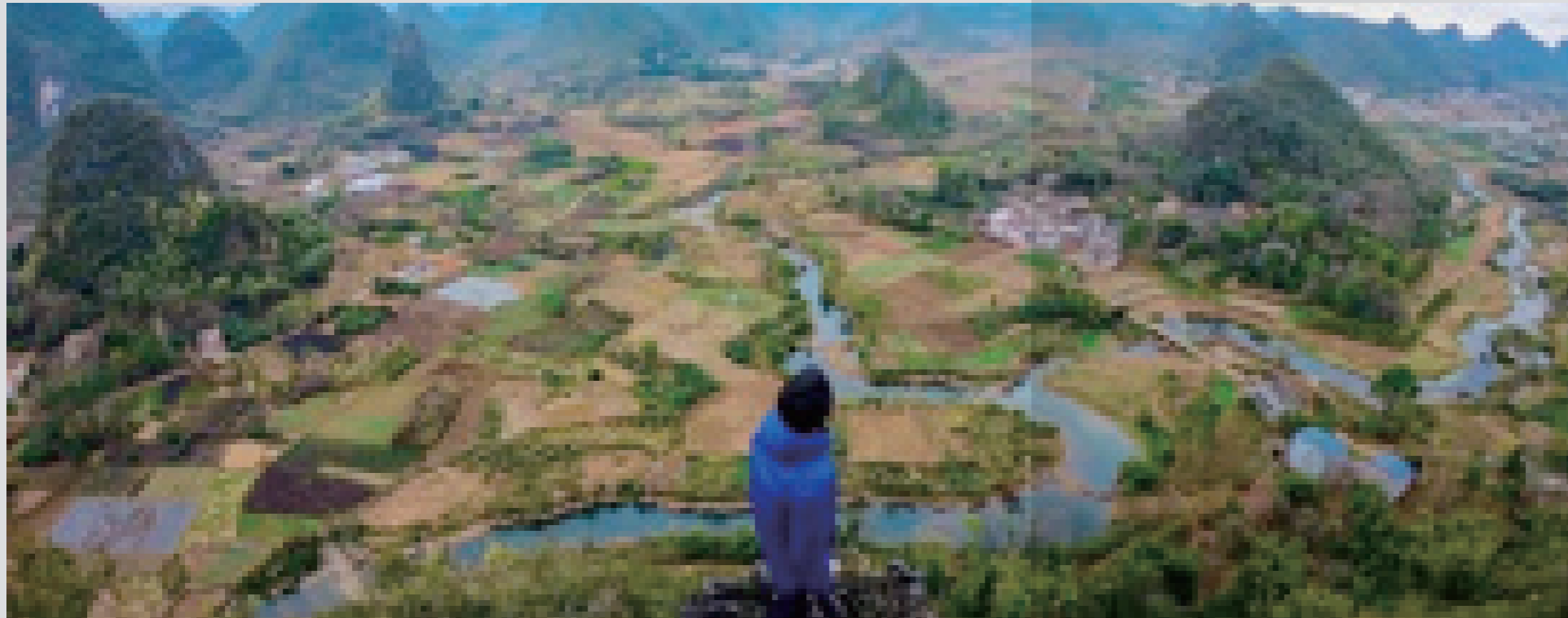
Kazuki has noticed the growing importance of China in the international arena. Having researched China from Japan, United States and other parts of the world, he argues that "There is a gap between the China I study in China and the China I study in other countries." He believes that with China's increasing clout, it is imperative to understand China and the Chinese and hence the importance of studying in China cannot be underestimated. In the

winter of 2015, Kazuki started to learn Mandarin in the hopes of becoming able to directly interact with Chinese people and to be able to understand first-hand information from the Chinese media, Chinese books and Chinese lectures.

On August 25, 2018, before he officially began his studies in China, Kazuki wrote a lengthy blog post in response to questions and doubts regarding his decision. On top of the seven

well-substantiated reasons listed below, he concluded by stating that whether you like it or not, China will become an important country in the global arena.

Over the past year and then some, Kazuki has learned a great deal from the lectures and field trips at Yenching Academy of Peking University. He believes that even with the Internet and the increased global communication, there are still biases present and this is where he sees the increasing need for face-to-face communication in order to better understand one another. As a scholar under the Asian Future Leaders Scholarship Program (sponsored by the Bai Xian Asia Institute), he has vast opportunities to network and interact with other East Asian youth. Not only do they attend academic discussions, they also get the chance to participate in on-site field trips that



help them better understand China and the rest of the world.

To improve Sino-Japanese relations and dispel stereotypes, Kazuki launched a project dubbed "Middle Kingdom Adventure" on his website and social media such as YouTube and Instagram in 2019. He hopes to build a sustainable peace between the two nations by attracting more Japanese people to visit China through his contents.

Be it on foot, by bike or by car, Kazuki has travelled to various places in China, from the stately Mountain Resort in Chengde to the ancient Grottes in Gobi Desert or from ruins of old empire in the grassland of Inner Mongolia

to beautiful waters in the deep mountains of Sichuan. On top of these stunning shots, Kazuki also reflects on the growth story of China by trying to capture the drastic transformation of Shenzhen from a fishing village to a technological powerhouse or Guizhou from an impoverished province to a big-data center of China.

Despite some difficulties in his journey like lack of information, difficult transportation, and inclement weather, Kazuki is persistent in showcasing China to the world. He said, "The more I learn about China, the more I can't understand China" given its vast size and diversity. In fact, it is precisely this thought that

keeps him exploring China.

The unexpected epidemic scuttled his travel plans and Kazuki decided to stay in China to witness for himself what was actually happening given the sensational headlines often used by foreign news outlets. On the contrary, watching from the frontlines has allowed him to see the calm response from the Chinese citizens. In fact, he has experienced warm hospitality from the hotel owner as they had allowed him to stay on despite having to shut the business down due to COVID-19.

While Kazuki understands the fear that some people may have towards the virus, he believes

that "It's not about nationality, but people." The only way out is to deal with this epidemic rationally instead of falling into the trap of racism.

Kazuki is passionate about forging stronger Sino-Japanese ties and acknowledges that "A journey of a thousand miles begins with a single step." With every step that he takes, he becomes more clear-eyed about his objective as he gains a deeper understanding and appreciation of the diversity in China. He is confident that more youth from around the world will take this leap of faith, just as he had done, and to embark on this journey together. 🇯🇵

Discovery of zero-energy bound states at both ends of a one-dimensional atomic line defect

In recent years, the development of quantum computers beyond the capability of classical computers has become a new frontier in science and technology and a key direction to realize quantum supremacy. However, conventional quantum computing has a serious challenge due to quantum decoherence effect and requires a significant amount of error correction in scaling quantum qubits. Therefore, the exploration of fault-tolerant quantum computation using quantum states topologically protected against local environmental perturbations is an important endeavor of both fundamental value and technological significance for realizing large-scale quantum computation.

Majorana zero-energy bound states (ZEBSs) in condensed matter systems such as superconductors are such rare quantum states with topological protection against local

perturbations. These so called Majorana zero modes (MZMs) are charge neutral and obey non-abelian exchange statistics and serve as the building block of topological qubits. MZMs are theoretically predicted to exist in the vortex core of p-wave topological superconductors or at the ends of one-dimensional (1D) topological superconductors. Being a ZEBS, one of the main characteristics of the MZM is the differential conductance peaks for tunneling at zero bias voltage. Experimentally, the current Majorana platforms include the following. One is using a three-dimensional (3D) topological insulator proximity-coupling to an s-wave superconductor to realize the superconducting topological surface states and detect the vortex states by applying a magnetic field. The other one is using a 1D spin-orbit coupling nanowire proximity-coupling to an s-wave superconductor to detect zero-bias conductance peaks at the ends under an external magnetic field. However, the

complicated fabrication of the hybrid structures, the extremely low temperature and the applied magnetic field required for observation present great challenges to the possible application of MZMs.

Recently, Professor Wang Jian's group at Peking University, in collaboration with Professor Wang Ziqiang's group at Boston College, discovered MZMs at both ends of 1D atomic line defects in two-dimensional (2D) iron-based high-temperature superconductors and provided a promising platform to detect topological zero-energy excitations at a higher operating temperature and under zero external magnetic field. Wang Jian's group successfully grew large-area and high-quality one-unit-cell-thick FeTe_{0.5}Se_{0.5} films on SrTiO₃(001) substrates by molecular beam epitaxy (MBE) technique, which show T_c (~62 K) much higher than that (~14.5 K) in bulk Fe(Te,Se). By in situ low-temperature (4.2 K) scanning tunneling microscopy/spectroscopy (STM/STS), the 1D atomic line defects formed by the missing topmost Te/Se atoms can be clearly identified on the monolayer FeTe_{0.5}Se_{0.5} films. The ZEBSs are detected at both ends of the 1D atomic line defect (Figure 1), while the tunneling spectra in the middle of the line defect recover to the fully gapped superconducting states. As the temperature increases, the ZEBS reduces in intensity, and finally vanishes at a temperature (around 20 K) far below T_c . The ZEBS does not split with increasing tunneling

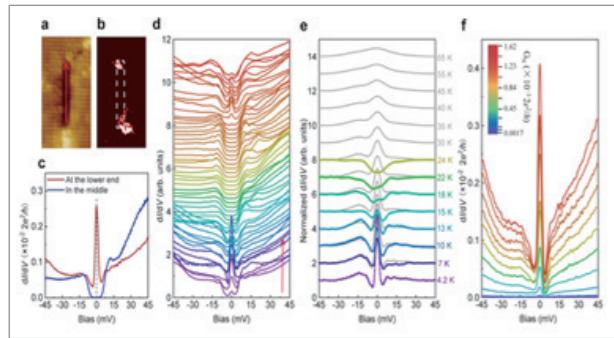
barrier conductance and becomes sharper and higher as the tip approaches the film, showing the robust property. Moreover, on the shorter defect chain, the coupling between the ZEBSs at both ends leads to reduced zero-bias conductance peaks even in the middle section of the atomic line defect chain (Figure 2). The positive correlation between the zero-bias conductance and line defect lengths can be deduced from the statistics. The spectroscopic properties of the ZEBSs, including the evolution of the peak height and width with temperature, the disappearing temperature of ZEBS, the tunneling spectra in tip-approaching-sample process, as well as unsplit property are found to be consistent with the MZMs interpretation. Other possibilities such as Kondo effect, conventional impurity states or the Andreev zero-energy bound states in nodal high-temperature superconductors can be excluded in general.

Professor Wang Ziqiang's group at Boston College proposed a possible theoretical explanation by extending the band theory of the Shockley surface state to the case of superconductors. Due to the large spin-orbit coupling, the 1D atomic line defect in monolayer FeTe_{0.5}Se_{0.5} film may become an emergent 1D topological superconductor and a Kramers pair of MZMs appearing at the ends of the line defect protected by time-reversal symmetry. Even without time-reversal symmetry along the line defect, the 1D

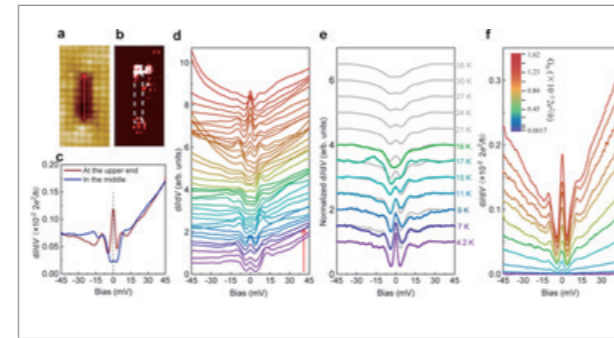
topological superconductor can also be realized with a single MZM located at each end of the chain. This work, for the first time, reveals a class of topological zero-energy excitations at both ends of 1D atomic line defects in 2D high-temperature superconducting monolayer FeTe_{0.5}Se_{0.5} films, which show the advantages of being a single material, higher operating temperature and zero external magnetic field, and may offer a new platform for future realizations of applicable topological qubits.

The paper was published online by Nature Physics on March 9, 2020 (DOI: 10.1038/s41567-020-0813-0). Links to the paper:

<https://www.nature.com/articles/s41567-020-0813-0>. Professor Wang Jian at Peking University is the corresponding author and Chen Cheng at Peking University is the first author of this paper. Professor Wang Ziqiang's group at Boston College are theoretical collaborators. This work is supported by the National Natural Science Foundation of China, the National Key Research and Development Program of China, Collaborative Innovation Center of Quantum Matter, the Strategic Priority Research Program of Chinese Academy of Sciences, Beijing Natural Science Foundation, and the US Department of Energy, Basic Energy Sciences. 📄

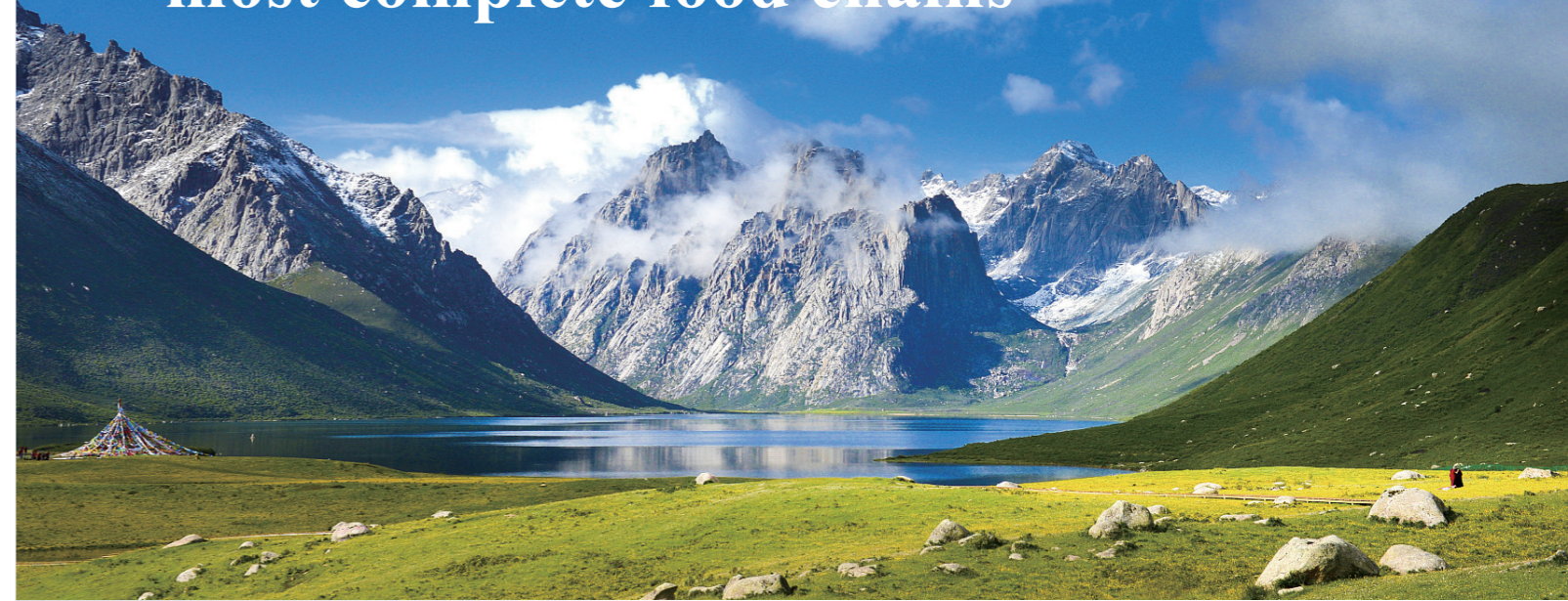


||| Figure 1. ZEBSs at the ends of a long atomic line defect (about 15 Te/Se atoms in length). a, An STM topographic image of the long 1D atomic line defect. b, Spatial zero-energy mapping. c, Tunnelling spectra measured at the lower end and in the middle of the atomic line defect. d, Tunnelling spectra taken along the red arrow direction in a. e, The temperature evolution of the ZEBS at the bottom end of the line defect. The coloured curves are normalized tunnelling spectra and the grey curves are the 4.2-K spectra convoluted by the Fermi-Dirac distribution function at higher temperatures. f, The tunnelling barrier dependence of the ZEBS at the bottom end of the line defect.



||| Figure 2. ZEBSs at the ends of a short atomic line defect (about 8 Te/Se atoms in length). a, An STM topographic image of the short 1D atomic line defect. b, Spatial zero-energy mapping. c, Tunnelling spectra measured at the upper end and in the middle of the atomic line defect. d, Tunnelling spectra taken along the red arrow direction in a. e, The temperature evolution of the ZEBS at the top end of the line defect. The coloured curves are normalized tunnelling spectra and the grey curves are the 4.2-K spectra convoluted by the Fermi-Dirac distribution function at higher temperatures. f, The tunnelling barrier dependence of the ZEBS at the top end of the line defect.

Northwest China has one of world's most complete food chains



Sanjiangyuan, meaning "the source of three rivers," in northwest China is one of the regions with the most complete food chain in the world, according to a research conducted by Peking University in March.

Researchers from the university's School of Life Science reached the conclusion after analyzing hundreds of thousands of photos and surveillance videos filmed in recent years. Also, the Qinghai-Tibet Plateau, where the three-river-source area lies, enjoys rich biodiversity with large carnivores species, according to the research.

Marmot used to be a target of culling on the plateau due its habit of gnawing and digging holes on meadow. But the holes created by marmot have been important for other animals such as desert cats, Tibetan fox, manul and even some birds to hide and breed.

Marmot is also an important source of food for more than a dozen



||| A marmot. /VCG



— A Pika. /CCTV

large carnivores. Another small animal with similar features is pika. Pika, once culled for being a meadow destroyer, plays an important role in the ecological system on the plateau.

"There are over 30 species feeding on pika or at least consuming pika as part of their food, including birds such as hawk, owl, buteo and golden eagle. So without pika, animals at the top of the food chain won't survive," said Lyu.

According to experts, today's meadow administration prefers to deal with these animals by introducing their natural enemies rather than culling, as from the perspective of maintaining the harmony of the plateau's ecological chain, it is a better and more effective way to ensure that the nature strikes a balance by itself.

The research also shows that eight species of large carnivores are living on the Qinghai-Tibet Plateau, namely gray wolf, jackal, snow leopard, clouded leopard, leopard, lynx, brown bear and Asian black bear. Six of them have been caught on surveillance cameras in the three-river-source area.

"The Qinghai-Tibet Plateau has the richest varieties of large carnivores in the world, eight at least. In Africa, there are many lions and leopards, but there are only seven species, less than what we have in Qinghai-Tibet Plateau," said Lyu. 📌

"Marmot is the engineer of Qinghai-Tibet Plateau. They build houses, and many animals enjoy the space they create," said Lyu Zhi, professor at the School of Life Science in Peking University.



Peking University research team 'deletes' memories in rats

The research team from the Neuroscience Research Institute of Peking University has achieved "deleting" specific memories of rats in laboratory recently through a genome editing technique, and published a paper on the findings on the Science Advances website.

The research team adopted the genome editing technique based on clustered regularly interspaced short palindromic repeats, or CRISPR, to successfully wipe off fear memory of rats in the experiment.

Yi Ming, a researcher in the experiment and co-author of the paper, said that the success would provide new thought in curing refractory pathological memories, such as chronic pain and addiction.

The memory of negative emotions is of great significance for survival, but such memory would become a burden when it cannot be forgotten, which might cause pathological diseases, such as post-traumatic stress syndrome, Yi said.

In essence, chronic pain, drug addiction and chronic stress belong to pathological memories that are long-standing and difficult to be cleared, and it is hard to know the specific mechanism and offer effective treatment, Yi said.

The experiment on editing the distinct neuronal subpopulations in a rat's brain to fulfill the removal of negative memories will be helpful in treating chronic diseases with traditional pharmacology. 📌

Zero-energy bound states in high-temperature superconductors at two-dimensional limit

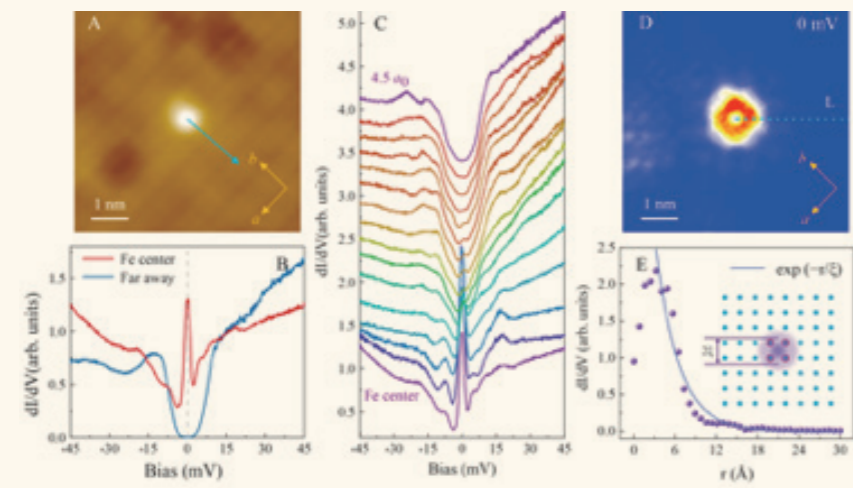


Figure 1. A, B, Isolated Fe adatom and the tunneling spectra on single-layer FeSe. C, Tunneling spectra collected along the arrow in A. D, Zero-bias conductance imaging for the adatom in A. E, Exponential fit to the linecut L in D.

Recently, Wang Jian group at Peking University, in collaboration with Professor Wang Ziqiang at Boston College and Professor Hu Jiangping at Institute of Physics, Chinese Academy of Sciences, detected novel ZEBs resembling the characteristics of MZMs in interstitial Fe adatoms deposited on the high-temperature superconducting thin films at two-dimensional limit. The work was published in *Science Advances* on March 25.

By ultrahigh vacuum molecular beam epitaxy, Wang Jian group successfully prepared the macro-scale, single-layer-thick (thickness < 1 nm) high-temperature superconductors FeSe and FeTe_{0.5}Se_{0.5} single crystal thin films on SrTiO₃ substrates, showing transition

temperature T_c of about 60 K. Previously, by using in situ scanning tunneling microscopy/spectroscopy, Wang Jian group has studied their superconducting pairing mechanisms [PRL 123, 036801 (2019); Nano Letters 19, 3464 (2019); Nano Letters 20, 2056 (2020)]. On this basis, Wang Jian group deposited Fe adatoms on the surface of single-layer FeSe and FeTe_{0.5}Se_{0.5} films by molecular beam epitaxy (substrate temperature: ~143-155 K; adatom coverage: ~0.002-0.003 layer). In situ scanning tunneling microscopy observations show that the deposited Fe adatoms are located at the interstitial hollow site of four adjacent Te/Se atoms in the upper sub-layers of the films. Due to the ultralow adatom deposition density, the Fe adatoms exist as isolated individual

adsorbed atoms without neighboring Fe adatom clusters nearby. Systematic experiment of in situ ultrahigh vacuum (~10–10 mbar) scanning tunneling spectroscopy reveals that, for specific coupling strength between adatoms [amounting to ~13% (~15%)] and single-layer FeSe (FeTe_{0.5}Se_{0.5}), sharp ZBCPs can be observed on the Fe adatoms (Figure 1). The ZBCP is closely distributed near the adatom site with decay length of ~3 Å, and unsplit when moving away from the adatom center. Temperature-dependent experiments show that the ZBCP disappears far below the superconducting transition temperature, which can preliminarily exclude the interpretations based on Kondo effect and conventional impurity scattering states (Figure 2A and Figure 2B). Further control experiments and analyses indicate that, the ZBCP: a) shows the full-width at half maximum strictly limited by temperature and instrumental broadenings, b) does not split in Fe adatom dimer, and c) obeys the Majorana scaling equation. All these characteristics resemble the phenomenological signatures of MZM (Figures 2C-2G). Basically, the Fe adatoms deposited on single-layer FeSe and FeTe_{0.5}Se_{0.5} films share nearly the same spectroscopic results. The statistical results suggest that, compared with the case in single-layer FeSe, the Fe adatoms on single-layer FeTe_{0.5}Se_{0.5} show higher ZEBs probability and stronger ZEBs signal.

Professor Wang Ziqiang and collaborators

have theoretically proposed that, in the absence of an external magnetic field, the interstitial magnetic impurities in strong spin-orbit coupling s-wave superconductors can generate quantum anomalous vortices. In theory, if single-layer FeSe and FeTe_{0.5}Se_{0.5} have strong Rashba spin-orbit coupling due to inversion symmetry breaking, and the magnetic moments of Fe atoms locally break the time-reversal symmetry, the quantum anomalous vortices can support MZMs. Some theories also predict the existence of topologically nontrivial phases in single-layer FeSe and FeTe_{0.5}Se_{0.5}. In a two-dimensional topological superconductor, the MZM can also arise in a quantum anomalous vortex nucleated at an Fe adatom. Therefore, the ZBCP observed in our experiment can be attributed to the emergence of quantum anomalous vortices at the Fe adatoms. A deeper and more detailed understanding would need further experimental and theoretical explorations. This work extends the superconducting materials for MZM explorations from three-dimension to two-dimension, and from low-temperature to $T_c > 40$ K high-temperature superconductors. Additionally, no external magnetic field is needed for inducing the ZEBs, and the ZEBs can be manipulated in principle, and the ‘surviving’ temperature is also significantly increased, which provide possible solutions for the realization of applicable topological qubits in the future.📌



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