

ECNU

Newsletter

—
2019 Review



2020 ISSUE 1



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EAST CHINA NORMAL UNIVERSITY



Chinese New Year greetings from the University

Dear ECNU faculty and staff, students, alumni and friends,

At the time when the Spring Festival is just around the corner, we would like to take this opportunity to express our heart-felt gratitude to you all for your hard work and support in the past year. Meanwhile, we would also like to extend our sincerest wishes to you on behalf of ECNU.

In the past year, with all ECNUers' effort, the university reaped remarkable achievements in teaching and scientific research, cooperation with partners at home and abroad, talent training, social services, and campus enhancement.

In the past year, the university strived to do better through the deepening of reform. We launched reform in undergraduate teaching and a three-year action plan to improve the cultivation of PhD students, which marked a major breakthrough in the university's work on teaching and research. We focused on frontier research and technological innovation that would serve national key strategies. We also worked hard to promote internationalization, hosting the 14th Convention of the International Confederation of Principals and signing or renewing dozens of cooperation agreements and memoranda with foreign universities or research institutions.

In 2019, ECNU had 12 disciplines listed in the top 1% of Essential Science Indicators (ESI) at the global level, ranking 18th among all the universities in the Chinese mainland.

2019 was a fruitful year for us. The university ranked first among all Chinese universities in the total number of approved major projects in humanities and social sciences and made a breakthrough in winning scientific & technological awards. Dozens of ECNU teachers were selected into national and Shanghai talent programs. A large number of ECNU teachers or alumni were conferred the titles of "National Model Teachers" and "China's Most Beautiful Strivers". Dozens of ECNU students won awards in various competitions, notably the "Internet+" Innovation and Entrepreneurship Contest and Challenge Cup College Students' Entrepreneurship Competition. ECNU alumni added glory to the university as well, winning a myriad of honors, including the Mao Dun Literature Prize, "China's top 10 Most Beautiful Teachers" and "Model of The Times".

The past year was also a warm and happy year for us. We improved many of the facilities to beautify the campuses. We carried out a face-lift project and finished renovating more than 9,000 square meters of space by the end of the year. The book bar on the bank of the Liwa River on Zhongbei campus and the Book Waterfall Wall on Minhang campus became the new highlights on campus. The Happiness Study and Promotion Center and the Sakura Grove on Minhang campus brought about more happiness and warmth to all ECNUers.

It was your participation and support that made 2019 so memorable. As an old Chinese saying goes, "Success only favors those who boldly forge ahead." Let's work together wholeheartedly to make 2020 a more splendid year!

Once again, we wish you and your family a happy Spring Festival and good health in the New Year.

Mei Bing

Mei Bing
Chair of the
University Council

Qian Xuhong

Qian Xuhong
President



6,891

students graduated



86

cooperation agreements and Memorandums of Cooperation were signed/renewed with foreign universities and research institutes

180 million

yuan of charitable income



12 disciplines of ECNU were on ESI's

Global Top **1%** list



342



medals won at national & international innovation, technology and competitions



6531

international students

97%



of ECNU graduates found employment or went for further study

72

medals won at national & international sports competitions



5.5 million

More than visits to the university Wechat account



200 million

More than yuan of funds was granted to 224 liberal arts research projects



9,000

More than square meters of campus space was remodeled



11 million

More than visits to the university website



202



monographies were published, including nine in English



525 million

yuan of funds was granted to 688 scientific research projects



284

international partners

Headlines

1. ECNU becomes strategic partner of Huawei

On July 3, a strategic partnership agreement was signed between ECNU and Huawei Technologies, a leading global provider of information and communications technology (ICT) infrastructure and smart devices. Both sides will have in-depth collaborations in scientific research innovation, talent training and exchanges, campus construction of smart technologies and education informatization.

5. Sino-Russian Sports Education Forum hosted at ECNU

On November 28, the 2019 China-Russia Physical Education Forum was held at ECNU. Representatives from 18 universities in the China-Russia Educational University Alliance discussed cooperation in physical education as well as future projects.

This was the first sports education forum held under the framework of the Sino-Russian Educational University Alliance. It was also the first time a bilateral sports education forum was held in China.

2. 164 projects receive grants from NNSFC

In 2019, a total of 176 ECNU projects gained support from the National Natural Science Foundation of China (NNSFC). Totalling at 111 million yuan, the money went to 101 general projects, 54 youth scientific research projects, three key projects and one state-level major scientific research instrument development project, etc.

6. Mei Bing appointed ECNU University Council Chair

On December 11, Mei Bing was appointed Chair of the ECNU University Council by the Ministry of Education.

"Starting from 1985, I have spent 34 years in ECNU, first as a student, then as a professor, and now as the University Council Chair. Every step in my growth mirrors the cultivation and support of this university. No matter what status I have, I will always devote myself wholeheartedly to the realization of the university's development goals," said Mei Bing.

3. 12 disciplines are on ESI's Global Top 1% list

According to 2019 Essential Science Indicators (ESI) statistics, 12 disciplines of ECNU are on ESI's Global Top 1% list. They are chemistry, physics, materials science, environment/ecology, geosciences, engineering, biology & biochemistry, mathematics, plant & animal science, clinical medicine, computer science, and social sciences general.

7. Sino-foreign joint training program launched in cooperation with SAIAS

On September 6, the School of Advanced International and Area Studies (SAIAS) of ECNU teamed up with the Business School of Nord University Nord (NU) in Norway and Moscow State University of International Relations (MGIMO) in Russia to launch a joint master's degree training program in international governance and business. The courses will be taught in English.

The program combines three priority disciplines of the universities, namely international relations (ECNU), international business and management (NU) and international energy and regional governance (MGIMO). It aims to cultivate professionals with strong research capabilities and a global outlook, who can conduct international relation study and policy analysis in foreign affairs agencies, think tanks and large multinational companies.

4. Former Japanese PM visits ECNU

On 17 September, former Japanese Prime Minister Yukio Hatoyama visited ECNU where he and his delegation met with ECNU president and academician Qian Xuhong. In a speech titled "Mission of China and Japan in New Era of Asia", Mr. Hatoyama spoke to the audience about the political affairs in the modern era in relation to the Asian continent.

8. 10 major projects approved by NSSFC

Ten ECNU academic projects appeared on the list of the 2019 approved major projects by the National Social Science Fund of China (NSSFC), ranking third among all Chinese universities for two years in succession.

NSSFC projects are the top-notch and most authoritative humanities and social sciences projects in China that receive the largest amount of financial aid. The number of projects approved is, therefore, a key indicator of a university's scientific research capacity.



Focus

Principals from around the world gather to discuss elementary education

On October 23-25, the 2019 International Confederation of Principals (ICP) Convention was hosted at ECNU, the theme of which was *"Connecting Leaders, Creating the Future"*. 1,500 primary and secondary school principals from more than 50 countries attended the convention.

At the opening ceremony, Alta van Heerden, President of the ICP, said high praise for the Chinese educational system, calling it a progressive system "built on solid research and demonstrating a willingness to face global changes".

Weng Tiehui, Vice Minister of the Ministry of Education in China, emphasized the significance of providing equal access to elementary education for a country, noting that over 99.9% of school-age children in China were able to receive education and that the country had been working on providing quality education for children in impoverished areas in an effort to achieve greater education equity.

"Principals are key to reaching these goals," she said.

In his keynote speech, Ma Yun, former Alibaba Group CEO, also highlighted the role principals play in the education sector. "The world should encourage the most excellent people to be teachers," said he, who is also founder of the Jack Ma Foundation. Ma, who celebrated his retirement in September 2019, also said that he would now dedicate his time and fortune to education and philanthropy.

Other keynote speakers included Zhao Yong, Foundation Distinguished Professor in the School of Education at the University of Kansas; Yuan Zhenguo, Director of the Faculty of Education, ECNU; and Andreas Schleicher, Director of the Organization for Economic Co-operation and Development. About 100 principals presented reports during the event's 12 panel sessions.

Founded in 1990, the International Confederation of Principals organizes annual gatherings for school leaders around the world to network, collaborate and share practices that will initiate positive change and enhance outcomes for students across the globe. This conference is the first ICP event ever held in China.



ECNU's big data project wins national science and technology award

A group of ECNU researchers led a project on big data that won 2019 National Science and Technology Progress Award (Second Class), the highest award for science and technology in China. The award was issued by the State Council.

The ceremony to confer this year's State Science and Technology Awards (SSTA) was held in the Great Hall of the People in Beijing on January 10. President Xi Jinping and other State leaders, including Li Keqiang, Wang Huning and Han Zheng, granted medals and certificates to distinguished scientists and engineers for their outstanding achievements in scientific research.

The award-winning project "Distributed Database System for Internet-scale Mission Critical Applications" was conferred to ECNU professors in the School of Data Science and Engineering, including Zhou Aoying, Qian Weining, Cai Peng, Zhou Xuan, Hu Huiqi, Zhang Rong, Zhang Zhao, Dong Qiwen and Gao Ming. The project was jointly completed with Trueland Information Technology (Shanghai) Co., Ltd.

This project studies the Internet-scale transaction processing technology, whereby the results have revealed a series of innovations, such as elastic and scalable distributed database architecture, consistent and high-available transaction processing methods and distributed query optimization and parallel execution technology. All these techniques contribute to the efficiency and scalability of distributed databases that overcome challenges from phenomenal workload on database in Internet applications.

So far, the project has produced 16 authorized patents, 13 software copyrights and 105 paper publications.

The research results have been successfully applied in various industries — finance, telecommunications, logistics, smart marketing — to assist in and promote their transformation



and upgrading. While adhering to the fundamental concept of "application-driven innovation", the project explores for the way to "upgrade" and "replace" basic software in China.

The SSTA is the highest honor in the People's Republic of China for citizens and organizations that have made remarkable contributions to scientific and technological progress. The awards are conferred by the State Council for outstanding individuals and institutions in the field of science and technology. The State Scientific and Technological Progress Award is one of the categories of the SSTA.

Research

Based on fundamental and interdisciplinary research, ECNUers are coping with some of the biggest challenges today.

Researchers discover new hidden benefit of green tea

Prof. Ye Haifeng and his team members found that green tea contains ingredients that assist the control mechanism for remotely activating cell therapies. The finding was published on October 24 in *Science Translational Medicine* as the journal's cover story. The name of the paper is "A green tea-triggered genetic control system for treating diabetes in mice and monkeys".

ECNU scientists are the first to capture the 'breathing' laser

A research team led by professor Zeng Heping with the State Key Lab of Precision Spectroscopy successfully conducted a new study on ultrafast lasers by generating breathers in a mode-locked fiber laser. The paper about the study, "Breathing dissipative solitons in mode-locked fiber lasers", was published by *Science Advances*, a sub-journal of *Science*.

Researcher discovers new findings on tumor therapy

Prof. Bu Wenbo discovered new results on tumor therapy. The research was published in *Chem*, a sister journal of *Cell*, a top international authoritative academic journal, on July 3, 2019. The title of the work is "Calcium-Overload-Mediated Tumor Therapy by Calcium Peroxide Nanoparticles."

Tree-planting robot developed and tested in Alashan Desert

Guided by Associate Professor Zhang Xinyu, a research team from ECNU's Software Engineering Institute tested out a self-developed tree-planting robot in the uninhabited Alashan Desert in Northern China's Inner Mongolia.

The robot has an in-built twist drill and is powered by photovoltaic solar energy supported by state-of-the-art technologies such as unmanned drivers and AI functions. Small and light, it causes little damage to the vulnerable surface soil in the desert. Besides, it is less costly and easier to be assembled, manufactured and deployed in a large scale than the traditional farm tractor.

Researchers quantify human social interactions for the first time

Prof. Tang Jianwu partnered with domestic and foreign institutions to systematically estimate the blue carbon sequestration capacity of coastal wetlands on U.S. national scale, based on the carbon deposition data of coastal wetlands and abundant survey data of wetlands in the United States. The study was published in *Nature Communications* in a paper titled "Tidal wetland resilience to sea level rise increases their carbon sequestration capacity in United States."

Carbon sink function of coastal wetlands may increase with sea-level rise

Researchers from ECNU and Sichuan University West China Hospital made progress in neurochemical biology study. The finding was jointly made by a research team led by Yang Huaiyu with ECNU School of Life Sciences and another group by Jiang Ruotian, a research fellow with the hospital. The international academic journal *Science Translational Medicine* published the work in a paper titled "Selective activation of TWIK-related acid-sensitive K⁺ 3 subunit-containing channels is analgesic in rodent models".

Research may lead to new analgesics

A research group led by Prof. Kuai Shuguang with the School of Psychology and Cognitive Science made a giant stride towards quantifying human social interactions, combining VR technologies with classical psychophysical methods and proposing a social interaction field model and basic algorithm that can explain the grouping of human social perceptions. The title of the work is "A social interaction field model accurately identifies static and dynamic social groupings." This first-ever study was published in *Nature Human Behavior*.



Researchers discover new hidden benefit of green tea



Researcher discovers new findings on tumor therapy



Tree-planting robot developed and tested in Alashan Desert

New schools and centers

April 7, 2019 →

UNESCO/IOC Regional Training and Research Center on Plastic Marine Debris and Microplastics(RTRC-PMDMP)

The center will be committed to developing the capabilities for the research on marine plastic pollution in the Asia Pacific Region and other parts of the world, through advancements in observation, source and sink progress, and ecological risk assessment and control.

April 20, 2019 →

Biomedical Synthetic Biology Research Center

The establishment of the Biomedical Synthetic Biology Research Center is an important milestone for ECNU in the field of bio-medicines and for upgrading the overall development of biological research at the university.

May 9, 2019 →

The 4th overseas Chinese Studies Center in Melbourne

ECNU and La Trobe University jointly established a research hub in the humanities, social sciences and China-related studies by signing a Memorandum of Understanding (MoU).

July 6, 2019 →

The Faculty of Information Sciences

The School of Computer Sciences and Software Engineering and School of Information Science and Technology were merged into the Faculty of Information Sciences to further promote interdisciplinary integration. The "Intelligence +" Research Institute was also established in the Faculty of Information Sciences.

July 6, 2019 →

The School of Physics and Electrical Science

The School of Physics and Electrical Science is a new school at ECNU with two first-rate disciplines, a dozen outstanding scholars included in the State Talent Program, a state key laboratory and three provincial-level laboratories, by which the schools intends to optimize layouts and resources, collaborate in cross-disciplinary fields, and propel the development of physics and electronics.

October 25, 2019 →

Tan Dun Music Center for the Future

Musician, composer and conductor Tan Dun was chosen as an honorary distinguish professor at ECNU. The university set up a research center in his name - the Tan Dun Music Center for the Future. The center will focus on three research areas: philosophy, technology and movies.

October 30, 2019 →

Postdoctoral Research Station for Marine Sciences and Fine Arts

Two new postdoctoral research stations were set up at ECNU called Marine Sciences and Fine Arts. ECNU now has a total of 26 post-doctoral research stations under its first-level disciplines, of which 90% were authorized to confer doctoral degrees.

November 30, 2019 →

The Academy of Statistics and Interdisciplinary Sciences

The Academy of Statistics and Interdisciplinary Sciences is a new establishment that aims at innovating interdisciplinary theories and methods along with the development of interdisciplinary integration in disciplines such as economics, business administration, public administration and library and information sciences.



Yang Guorong



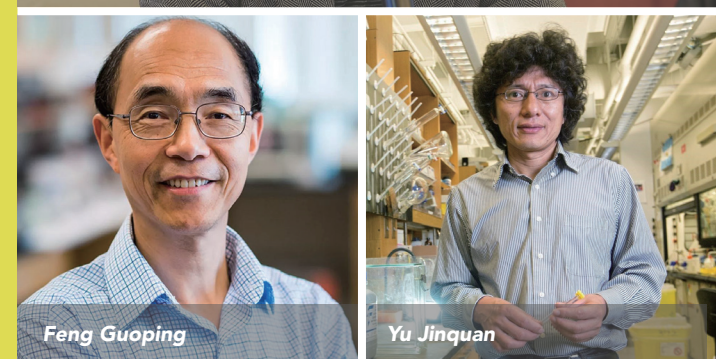
Li Daoji



Song Yongchang



Feng Shaolei



Feng Guoping



Yu Jinquan



He Mingyuan

People

Prof. Yang Guorong was elected President of the International Society of Chinese Philosophy in recognition of his vital contribution to Chinese philosophy.

Prof. Li Daoji was elected to be the UN Environment Program Scientific Advisory Board on Marine Plastic Waste and Micro Plastics for his reputable work in marine sciences. He is currently the only Chinese member on the advisory board.

Prof. Song Yongchang was awarded "Outstanding Contribution Award of Chinese Society of Ecology". He is the only professor in Shanghai who won this award.

Prof. Feng Shaolei received the Valdai Club Award for his work to promote Russian studies, address issues in international affairs, and enhance friendship between China and Russia.

Prof. Feng Guoping and Yu Jinquan were elected to the American Academy of Arts and Sciences, one of the world's most prestigious honors in academics.

Prof. He Mingyuan was conferred the Chinese Molecular Sieve Lifetime Achievement Award at the 20th National Molecular Sieve Academic Conference. He was the second recipient of the award in China.

141 volunteers worked for the 2nd China International Import Expo in Shanghai. Their excellent service, interpersonal communication skills and social manners impressed the Expo visitors.

Campus

PRC's 70th founding anniversary celebrated at ECNU

In 2019, the university hosted colorful activities to mark the 70th anniversary of the founding of the People's Republic of China, such as concerts, lectures, writing competitions, and choruses. They demonstrated ECNUers' deep love of and blessings on the country.

International students embrace ECNU Mini Expo

Every year, the International Cultural Festival serves as a platform for multicultural students to showcase their unique cultures and talents. In November 2019, students from more than 50 countries, including those from other universities in Shanghai, celebrated the 13th edition of this Festival on campus.

Chief scientist of Chang'e program Ouyang Ziyuan hired as class tutor

Ouyang Ziyuan, known as the founding father of China's lunar exploration program, was hired to be the honorary class tutor for the top innovation class in ECNU's Department of Geography. A Chinese cosmochemist, geochemist and space advocate, Ouyang is a research professor at the Institute of Geochemistry of the Chinese Academy of Sciences. He is now the chief scientist of the Chinese Lunar Exploration Program, also known as the Chang'e program.

Sports Day to promote the concept of a healthy life

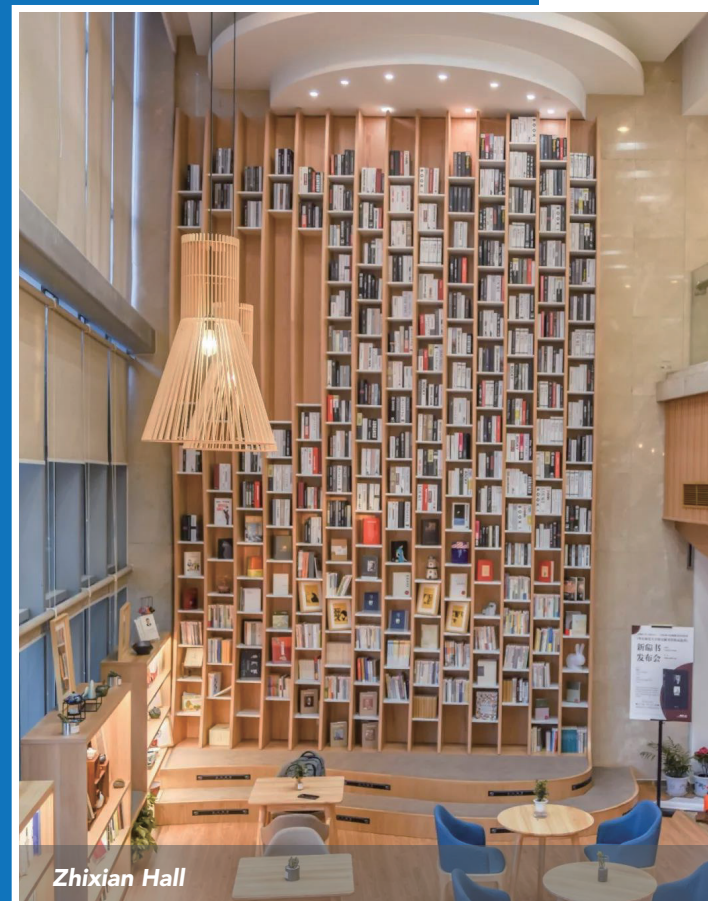
November 6 is the Sports Day of ECNU in 2019. It is aimed at improving the students' physical and mental health. This year, more than 60 activities were held by the university's 30 departments, including a swimming competition, a basketball match, a special sports meeting for minority students, and some mind games (bridge and sudoku). The ECNU Sports Day has been held annually since 2017.

Reading Day becomes popular among students

Since 2017, the university has hosted Reading Day activities on a yearly basis to promote the habit of reading among students. The Reading Day in 2019 fell on April 18. On that day, students participated in various activities, such as discussions, lectures to recommend classic books, films festivals, and book fairs.

Campus has more top-quality facilities

The university has been committed to providing top quality facilities on campuses. In 2019, it upgraded many existing facilities and set up new spaces to provide a better learning environment for ECNUers.



Zhixian Hall



24 Hour Study Center



Campus Book Bar



PRC's 70th Founding Anniversary Celebrated at ECNU



Ouyang Ziyuan



Sports Day



ECNU Mini Expo

The Flower of Happiness Plan

“Flower of Happiness • 2019” in progress at ECNU

East China Normal University (ECNU) strives to be one of the world’s leading contributors on the frontiers of education, ecology, health, artificial intelligence, and internationalization—areas of study that have an important bearing on the university’s long-term and overall development and that conform to the country’s strategic needs. Specifically, it will work hard to raise its capacity for making independent and original innovation through the implementation of the “5+” Action Plan (also known as the Flower of Happiness Plan), so as to produce outstanding results in science and technology and cultivate high-quality innovative personnel.

In the past year, ECNU set up a precursor fund for the Flower of Happiness Plan to better carry out the “5+” Action Plan.

1. “Education+” Action Plan

The “Education+” Action Plan aims to solve long-standing, difficult education issues of major public concern by using prospective and original methods and technologies. It encourages the integration between education and neuro and cognitive sciences, data science, information science and other branches of social sciences.

In 2019, based on its traditional advantages in education, ECNU continued to give support to national education decision-making and its own reform and spared no effort to increase the mental power of Chinese children and teenagers and incubate future industry of educational technology. It funded research projects such as “Computational Education” and “A Research on the Testing and Appraisal of Teenagers’ Social and Emotional Capacity and Its Educational Intervention”, promoted in-depth integration between brain science, data science, and educational science, and increased the visibility, influence, and popularization of Chinese discourses in educational research.

2. “Ecology+” Action Plan

The “Ecology+” Action Plan aims to discover gap-filling, subversive methods and technology that can help China get out of the ecological difficulties arising from its own modernization process. The plan enables ECNU to implement with earnest effort the development concept put forward by President Xi Jinping, i.e. “Clear waters and green mountains are as good as mountains of gold and silver”. It also displays the university’s effort to contribute its own solutions to China’s ecological progress.

In 2019, ECNU continued to provide all-round intellectual support to the construction of the Chongming Island as an international ecological island, engaged itself fully into the national effort for ecological friendly development in the Yangtze River Delta, served the Yangtze River Urban Economic Belt Green Development initiative, and explored the construction of an ecological economic system featuring regional “industrial ecologization” and “ecological industrialization”. Moreover, it funded research projects such as “Genome and Adaptive Evolution of the ‘Living Fossil’ Metasequoia Glyptostroboidea” and “Pollution Characteristics and Control Strategy for Atmospheric Brown Carbon in the Yangtze River Delta Region”.

3. “Health +” Action Plan

The “Health+” Action Plan intends to link up with the national strategies of “A Healthy China” and “the integrated development of the Yangtze River Delta”. Centering around physical health, psychological health, mental health, and environmental health, it probes into scientifically unique technologies, methods, and channels capable of providing optimal solutions for comprehensive health.

In 2019, ECNU continued to promote the transfer and transformation of inno-

vations and achievements in life medicine and worked hard to improve the fitness culture of Shanghai, lead China in reforming curricula of physical education, and advance research in rehabilitation therapy for exceptional children. It designed the layout for the development of medical disciplines and started to set up its own institute of medical health research. It also funded research projects such as “Longitudinal Cohort Study on Child/Adolescent Brain and Cognitive Development” and “Discovery of First-in-class Drugs for Brain Diseases on the Basis of Big Data”.

4. “Intelligence +” Action Plan

The “Intelligence+” Action Plan aims to promote in-depth integration between the preponderant disciplines of ECNU and modern information technologies centering around the internet, cloud computing, big data, and artificial intelligence, and to propel innovative application of artificial intelligence in different social areas, with a view to providing leading and innovative solutions to economic and social development.

In 2019, ECNU continued to promote academic innovation in software and artificial intelligence and worked hard to explore the new technology of intelligent connected vehicle, make breakthroughs in “bottleneck” technologies in network information, build the Chinese version of CS for All, and improve the digital competence of Shanghai teenagers. It also funded research projects such as “Multidimensional Integrated Cognitive System and Its Applications in Intelligent Drive” and “Hardware Neural Networks for Information Identification and Encryption”.

5. “Internationalization +” Action Plan

The “Internationalization+” Action Plan intends to meet the needs of China’s opening up to the outside world and its One Belt One Road initiative, substantially raise the university’s global academic influence through the full use of its advantages in multiple disciplines, explore the knowledge system and modes of education originating from China and applicable to the world in general, and offer Chinese experience and solutions to help solve world problems.

In 2019, ECNU continued to forge top-notch thinks tanks on international relations and regional security, worked on the construction of the Overseas Center for World History, supported the internationalization of Chinese wisdom and Shanghai experience, and joined hands with prestigious universities from all over the world to serve the construction of Shanghai Science and Technology Innovation Center. It also established a center for overseas China studies in Melbourne, Australia, and funded research projects such as “Study on the Change of Water Tower in Asia and the Community of Shared Future in Asian Countries”, “A Research on the Genesis of the Cold War and the Security and Development Strategies of the Soviet Union After the Second World War”, and “A Research on the Dissemination and Acceptability of the Thought of Lao Tzu outside China”.





Creativity
Character
Community

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