2020

TSINGHUA
UNIVERSITY

清华大学
Tsinghua University

Contents

President's Message

This April, the joyful enthusiasm of spring reverberates in anticipation of the 109th anniversary celebration of Tsinghua University. On behalf of the University, I extend my warm greetings and best wishes to all members of the Tsinghua community at home and abroad – the students, alumni, faculty, and staff. I cordially express my appreciation to all friends of Tsinghua for continued support for the development of the University.

From the outset of 2020, we encountered the outbreak of the coronavirus epidemic. Tsinghua has stood steadfastly with the nation and made concerted efforts to tackle this severe challenge. Tsinghua immediately responded with proactive measures to cope with the outbreak while maintaining educational excellence. Through technologies that enable real-time, interactive and remote online teaching, the University delivered 3,923 spring semester courses on schedule, marking the beginning of a profound transformation in teaching methodology. To minimize disruption to the graduating students, the University has extended additional efforts and support.

Tsinghua has shouldered additional responsibilities by expanding its social engagement. Through XuetangX, the University's online education platform, Tsinghua has offered over 1,900 courses free of charge to the public. The University has provided 147 "Clone Classes" to several universities in Wuhan and other areas. Tsinghua partnered with 126 universities in Wuhan to organize a number of recruitment sessions online.

Tsinghua faculty and students have contributed to the fight against COVID-19 with significant scientific and technological achievements, including structural studies of coronavirus-receptor interactions, the development of a nucleic acid detection kit, the creation of an intelligence-assisted diagnosis system, and the efficient isolation of antibodies against the coronavirus.

On March 2nd, President Xi Jinping visited Tsinghua to inspect the University's research on COVID-19, and delivered an inspiring speech. One month later, on April 2nd, Tsinghua established the Vanke School of Public Health, to reinforce the nation's public health emergency management systems. This reaffirmed the University's commitment to safeguard global public health security and improve human health.

Tsinghua continues embracing the world with open arms and confidence. The vision of the university shapes the kindred minds of its talents. In 2019, Tsinghua was re-elected to hold the Asian Universities Alliance (AUA) Presidency. The Global Alliance of Universities on Climate (GAUC) was established by twelve world-leading universities from nine countries, with Tsinghua as its inaugural Chair.

On January 6th, State President Xi Jinping replied with a letter to the GAUC student representatives, expressing his anticipation for the students' joint efforts in playing an active role in taking care of planet Earth. On March 27th, the AUA organized an online forum entitled "Universities Combating COVID-19", which was attended by leaders from fifteen universities worldwide. At this event, Tsinghua announced the launch of the Spring Breeze Fund program to support joint research with international partners on COVID-19. Universities are lighthouses for human civilization. With genuine and tenacious cooperation, universities illuminate the path to making the world better.

Tsinghua continues to pursue innovation and creativity. In the past year, Tsinghua celebrated a range of ground-breaking achievements, including Tianjic, the world's first hybrid AI chip, and the world's first memristor-based computing in memory system that overcame the memory wall. In 2019, Tsinghua received eleven national awards on technology advancement. Serial research on Tsinghua's collection of bamboo slips from the Warring States Period (475 B.C. - 221 B.C.) received the first prize of the Guo Moruo Chinese History Awards. Tsinghua initiated the joint construction and operation of the China Jinping Underground Laboratory (CJPL), the deepest underground lab in the world.

As for the overall academic planning and strategy, the University established two new entities, the Department of Astronomy and the School of Vehicle and Mobility. Tsinghua continues to promote the development of humanities, engineering, and science disciplines through a series of comprehensive implementation plans. Tsinghua launched the International Innovation Center of Tsinghua University in Shanghai to support China's national strategy of integrated development of the Yangtze River Delta. At a new age that presents us with unprecedented opportunities and challenges, innovation is the best course of action.

Year 2020 marks a milestone for the nation, as China approaches the completion of its first centenary goal of building a moderately prosperous society in all respects. For Tsinghua, 2020 marks the conclusion of its third nine-year plan and comprehensive reforms for building a world-class university. In 2020, the University will convene its 18th Research Seminar to formulate the 2030 Innovation Action Plan, in hopes to enhance the academic ethics and evaluation system, and to escalate the building of a modern university governance system. 2021 will witness the 110th anniversary of Tsinghua, which represents the start of a new phase of the University's development.

Year 2020 may well mark a historical watershed in human society. It is an undeniable truth that our thought-processes, decisions and actions will be etched in living memory and collective history. To overcome these unprecedented challenges, people must rely on the spirit of scientific rationality, the power of solidarity, and the belief in victory over challenges great and small that hinder the advancement of humanity worldwide.

Crises generate uncertainties while testing the willpower and beliefs we share as humans. As people across the world join hands in pursuit of the true, the good and the beautiful, mankind will be unstoppable and win this fight against the virus we face today and the challenges we face tomorrow.

The 109th anniversary is a special one in Tsinghua's history. Due to the COVID-19 outbreak, I will miss the in-person participation of the alumni. I hope the online commemorative events will bring the community the same warmth as usual and a memorable experience. Tsinghua will always be the home for our students, faculty and alumni.

Reunion won't be far away. I look forward to meeting you again when the pandemic is behind us. I believe, in the brighter future that awaits us, Tsinghua will be better, China will be better, the world will be better. Thank you!

President, Tsinghua University
President, Tsinghua Alumni Association

Why
Tsinghua

Beautiful Campus

The campus of Tsinghua University is situated in northwest Beijing on the site of the former imperial gardens of the Qing Dynasty, and is surrounded by a number of historical sites.

"The World's Most Beautiful Campus"
— Forbes Magazine

History

Tsinghua University was established in 1911 under the name "Tsing Hua Imperial College", initially as a preparatory school for students who would be sent by the Chinese government to study in the United States. The university section was founded in 1925 and undergraduates were then enrolled. The Academy of Chinese Learning was set up in the same year. The Graduate School was set up in the autumn of 1929 and several research institutes were formed in various departments.

During the War of Resistance against Japanese Aggression, Tsinghua University moved to Changsha in 1937 and merged with Peking University and Nankai University to form the National Changsha Temporary University. It moved to Kunming in 1938, and was renamed the National Southwest Associated University. When the war ended, Tsinghua returned to its original site at Tsinghua Garden in Beijing in 1946. By then, the university had five faculties – humanities, law, science, engineering, and agriculture – and a total of 26 departments. In 1952, Tsinghua became a polytechnic university after the national college reorganization policy was implemented.

Since 1978, Tsinghua has gradually expanded and established more departments in the sciences, economics, management, and the humanities. In 1985, the School of Continuing Education was established. The Central Academy of Arts and Design of China merged with Tsinghua in 1999. In the last decade, the university has made advances in the refinement of academic disciplines, faculty development and research. Tsinghua is now a comprehensive research university, with 20 schools and 59 departments covering disciplines in science, engineering, literature, art, history, philosophy, economics, management, law, education, and medicine.

Among the top research universities in the world

1st
US News Best Global Universities for Computer Science

1st
US News Best Global Universities for Engineering

1st
US News Best Global Universities for Civil Engineering

20th
THE World University Rankings 2021

14th
THE World Reputation Rankings 2019

15th
QS World University Rankings 2021

6th
QS Graduate Employability Rankings 2020 Worldwide

1st
QS Graduate Employability Rankings 2020 in Asia

A Diverse Student Body

Over 4,000 international students from 133 countries are enrolled at Tsinghua University.

Undergraduates **16,037**

Master's Students **18,606**

Doctoral Students **15,751**

Total
50,394
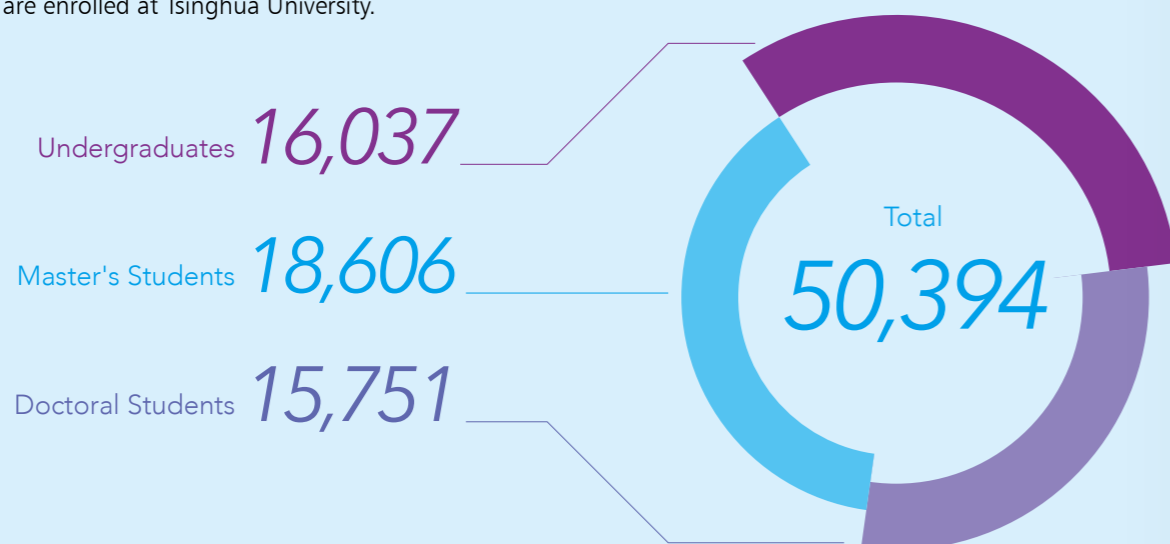
A Global University

Tsinghua has signed exchange agreements and established partnerships with 293 universities from 50 countries.

50
COUNTRIES

293
UNIVERSITIES

3,565
Faculty

54
Members of the Chinese Academy of Sciences

40
Members of the Chinese Academy of Engineering

Global Strategy

Tsinghua University launched its global strategy in 2016. This comprehensive strategy reflects Tsinghua's vision to become a leading global university. Guided by this strategy, Tsinghua aims to foster innovative talents with global competence, serve China and the world through research, and strengthen institutional competitiveness and global impact.

Since the formation of the global strategy, Tsinghua has established new global institutions dedicated to promoting international collaboration and providing students, faculty and staff with overseas opportunities to study, research and undertake internships. 2018 saw the opening of the China-Italy Design Innovation Hub in Italy; the Tsinghua University Southeast Asia Center in Indonesia, and; the Tsinghua University Latin America Center in Chile.

In 2018, Tsinghua founded the Center for Global Competence Development (CGCD), which aims to provide guidance, support and resources for all Tsinghua students on global competence, all the while fostering a more international campus. Through exchange, field trips, summer programs and conferences, Tsinghua students continued to gain overseas experience, embarking on more than 8,500 trips abroad.

Alongside the global strategy is the 2020 initiative. Launched in 2017, it uses a problem-oriented approach to address outstanding issues in administration, teaching, providing of services, facilities management and campus infrastructure. More than 50 specific tasks have been laid out, with major improvements already made in on-campus accommodation, and medical, catering, and financial services.

China-Italy Design Innovation Hub

China-Africa Leadership Development Institute

Tsinghua Southeast Asia Center

Tsinghua Shenzhen International Graduate School

SCHWARZMAN SCHOLARS

Tsinghua University Latin America Center

GLOBAL INNOVATION EXCHANGE

Why Tsinghua

Tsinghua Shenzhen International Graduate School

Tsinghua Shenzhen International Graduate School (Tsinghua SIGS) was launched in March, 2019. As Tsinghua University's only campus outside Beijing, Tsinghua SIGS is a further expansion of the Tsinghua Graduate School at Shenzhen and the Tsinghua-Berkeley Shenzhen Institute.

Tsinghua SIGS aims to bring together world-class faculty and students; tackle global challenges through cutting-edge research, international collaboration and industrial partnerships; and nurture the next generation of global leaders. In building an international, borderless entrepreneurial platform, Tsinghua SIGS is committed to promoting economic and social development in Shenzhen, the Guangdong-Hong Kong-Macau Greater Bay Area, and beyond.

Tsinghua SIGS will offer master's and doctoral degree programs across seven interdisciplinary areas: energy and materials, data science and information technology, health and medicine, marine engineering and technology, future human habitats, environment and ecology, and innovation management.

In 2019, the graduate school continued to work with leading institutions such as UC Berkeley, Imperial College London, the Center for Research and Interdisciplinary (CRI, Paris), and built new partnerships with RWTH Aachen University, Tel Aviv University, Nagoya University and Waseda University to expand its global networks.

Schwarzman College

Designed to inspire the next generation of global leaders, the Schwarzman College enrolled its inaugural class in 2016.

Schwarzman College integrates top educational resources from around the world and actively explores new ways to foster talents and increase dialogue towards mutual understanding. The program aims to build a global network of dynamic leaders who will establish stronger relationships between China and a rapidly changing world and address the most pressing challenges of the 21st century, and to be a pioneer for Chinese and global higher education innovation.

Scholars chosen annually for this highly selective program will earn a master's degree at Tsinghua University. Scholars are selected from all over the world on the basis of their demonstrated leadership and leadership potential, as well as their academic aptitude and intellectual ability. Each year, the program admits up to 200 scholars from around the world and each scholar receives a comprehensive scholarship.

Leadership development is woven throughout the Schwarzman Scholars program, in both its academic and co-curricular programs. The academic program is rigorous and involves several required lecture courses on leadership, global affairs, and China (the core), along with smaller elective courses that provide an opportunity for further in-depth learning on core themes.

China-Africa Leadership Development Institute

Supported by UNESCO, the China-Africa Leadership Development Institute (CALDI) was established by the Institute of Education and the Office of International Affairs of Tsinghua University. CALDI is committed to training African officials, educating young Africans and the human resource of Chinese companies in Africa, and supporting Chinese students' internships in Africa. CALDI will promote the implementation of the Belt and Road Initiative, and provide strong support for the China-Africa comprehensive strategic partnership, to fulfill the needs of UN 2030 agenda for sustainable development.

Global Innovation Exchange Institute (GIX)

In 2015, Tsinghua University collaborated with the University of Washington to establish its first physical presence overseas: the Global Innovation Exchange (GIX) Institute, in Seattle, U.S.A.

Deepening students' knowledge of the development of technology solutions, the GIX Dual Degree Program integrates the Master of Science in Technology Innovation (MSTI) which includes courses in Connected Devices and Robotics from the University of Washington with the Master's of Science in Engineering (Data Science and Information Technology) (MSE(DSIT)) from Tsinghua University.

Students spend the first academic year at Tsinghua University in Beijing and the rest of their dual degree program engaging in the MSTI coursework at the Steve Ballmer Building in Bellevue, Seattle.

Students must meet the degree requirements of both universities, and will be awarded a Master of Engineering in Information Technology from Tsinghua University and a MSTI from the University of Washington.

Since its establishment, GIX has welcomed four cohorts of 65 students from 12 countries. Starting in the fall of 2020, prospective students with innovative mindsets, vision and a sense of responsibility and mission will start their studies in Seattle.

Featuring model learning and real-world application, GIX is a center for innovation where students, scholars and entrepreneurs around the world interact in a project-based learning and research environment to develop leaders in innovation who work collaboratively to solve real challenges.

China-Italy Design Innovation Hub

Initiated in 2017, the China-Italy Design Innovation Hub is a design and innovation platform co-established by Tsinghua University and Politecnico di Milano. The Hub and the Tsinghua Arts and Design Institute in Milan (ADIM) were officially unveiled in Milan, Italy, in 2018. It is Tsinghua's first teaching and research base established in Europe.

Aiming at cultivating individuals who are innovative thinkers with a global perspective and a talent for art and design, ADIM boasts teaching faculty recruited directly from Tsinghua and Politecnico di Milano, as well as talents from around the world, and strives to create a leading global teaching and research institution that is open, inclusive and innovative.

Why Tsinghua

Tsinghua University Latin America Center

The Tsinghua University Latin America Center was established in Santiago, Chile in 2018. The Center will act as a contact and exchange base, with the mission of enhancing exchange and cooperation between China and Latin America, and developing global competency among the students of Tsinghua University. It will work closely with institutions in Chile, and further promote collaboration in science and culture. It will also contribute to the international influence and reputation of Tsinghua, as well as the implementation of the Belt and Road Initiative.

Tsinghua Southeast Asia Center

The ground-breaking ceremony for the Tsinghua Southeast Asia Center (Tsinghua SEA) was held at Kura Kura Island in Bali, Indonesia, in 2018. Being a key component of Tsinghua University's global strategy that focuses on education and cultural exchange, the Tsinghua SEA will emphasize talent training, academic exchange and cooperation in southeast Asia and around the world. It will serve the needs of Indonesia and southeast Asian countries in terms of human capital training in the face of Industry 4.0, and contribute to the Belt and Road Initiative and UN SDGs.

Multi-lateral Engagement

Asian Universities Alliance

The establishment of the Asian Universities Alliance (AUA) marks a significant milestone in Asian higher education. It is a product of the common needs and shared expectation of 15 founding universities. In 2016, Tsinghua University proposed to establish the AUA. With the joint efforts of founding universities, AUA was formally launched at Tsinghua University in 2017. AUA's annual Presidents Forum, student mobility programs, and academic and administrative conferences aim to address regional and global challenges, specifically related to higher education and economic, scientific and technological development. Scholar and staff mobility programs such as the AUA Scholars Award Program and AUA Staff Exchange Program promote cooperation and collaboration in research and university administration across the Asian region. AUA also publishes the annual Asian Higher Education Outlook (AHEO) report. In 2019, Tsinghua was re-elected to hold the AUA Presidency for a second three-year term.

Global Alliance of Universities on Climate

The Global Alliance of Universities on Climate (GAUC) was initiated by Tsinghua University and jointly established by 12 founding universities in 2019. GAUC member universities work together to advance climate change solutions through research, education and public outreach, and partner with industry, non-profit and government organizations to promote rapid implementation from local to global scales. GAUC pursues this mission by promoting exchange and cooperation among member universities and providing leadership of global higher education efforts addressing climate change.

Schools and Departments

Academy of Arts & Design
Department of Art History
Department of Arts & Crafts
Department of Ceramic Design
Department of Environmental Art Design
Department of Industrial Design
Department of Information Art & Design
Department of Painting
Department of Sculpture
Department of Textile and Fashion Design
Department of Visual Communication

Department of Chemical Engineering
Department of Electrical Engineering
Department of Engineering Physics

School of Aerospace Engineering
Department of Aeronautics & Astronautics Engineering
Department of Engineering Mechanics

School of Architecture
Department of Architecture
Department of Building Science
Department of Landscape Architecture
Department of Urban Planning and Design

School of Civil Engineering
Department of Civil Engineering
Department of Construction Management
Department of Hydraulic Engineering

School of Economics and Management
Department of Accounting
Department of Economics
Department of Finance
Department of Innovation, Entrepreneurship and Strategy
Department of Leadership and Organization Management
Department of Management Science and Engineering
Department of Marketing

School of Environment
Department of Environmental Engineering
Department of Environmental Science
Department of Environmental Planning and Management

PBC School of Finance

School of Humanities
Department of Chinese Language and Literature
Department of Foreign Languages and Literatures
Department of History
Department of the History of Science
Department of Philosophy

School of Information Science and Technology
Department of Automation
Department of Computer Science and Technology
Department of Electronic Engineering
Department of Microelectronics and Nanoelectronics / Institute of Microelectronics
Institute for Network Sciences and Cyberspace
School of Software
Research Institute of Information Technology

School of Journalism and Communication
School of Law
School of Life Sciences
School of Marxism
School of Materials Science and Engineering

School of Mechanical Engineering
Department of Energy and Power Engineering
Department of Industrial Engineering
Department of Mechanical Engineering
Department of Precision Instrument
Fundamental Industrial Training Center
School of Vehicle and Mobility

School of Medicine
Department of Basic Medical Sciences
Department of Biomedical Engineering
School of Clinical Medicine
Research Center for Public Health

School of Pharmaceutical Sciences
School of Public Policy and Management

School of Sciences
Department of Astronomy
Department of Chemistry
Department of Earth System Science
Department of Mathematical Sciences
Department of Physics

School of Social Sciences
Department of International Relations
Department of Political Science
Department of Psychology
Department of Sociology
Institute of Economics

Institute for Advanced Study
Institute for Aero Engine
Institute for Interdisciplinary Information Sciences
Institute of Nuclear and New Energy Technology

Center for Arts Education
Division of Sports Science and Physical Education
Global Innovation Exchange Institute
Language Centre of Tsinghua University
Institute of Education
School of Continuing Education
Schwarzman College
Shenzhen International Graduate School
Xinya College

Undergraduate Education

The undergraduate program at Tsinghua University was founded in 1925. Presently, the university has 82 undergraduate majors covering science, engineering, literature, art, history, philosophy, economics, management, law, education, and medicine, as well as 18 second majors. Each year, approximately 3,400 Bachelor's degrees are awarded.

Tsinghua's undergraduate education adheres to a three-dimensional approach including the shaping of values, cultivation of skills and imparting knowledge, aimed at nurturing students' skills of critical thinking, problem solving, effective communication and global competence.

By grouping disciplinary majors into different major tracks and establishing a comprehensive liberal arts education system that covers humanities, arts, social sciences, and technology, Tsinghua's undergraduate education has put the liberal arts education as the core foundation and organically combined it with academic knowledge and professional skills learning.

Against the backdrop of globalization, the undergraduate education at Tsinghua University is committed to cultivating students with a sense of mission and in the pursuit of excellence, to nurture an all-rounded character with innovative thinking abilities, a global perspective and a strong sense of social responsibility.

I love my major even though it can be difficult. Tsinghua's teaching system is also very diversified so I can choose classes that interest me the most. As an international student, I didn't feel excluded from the other students. And during the pandemic, counsellors were always there to answer our questions and make sure that we are all safe. They've been doing an amazing job and I am truely grateful to live in such a caring environment.

Lerong Chen
Undergraduate Student
Deparment of Psychology

Graduate Education

Graduate education at Tsinghua dates back to the 1920s. As the top research university in China, the graduate education at Tsinghua features multidisciplinary and individualized education suitable for students from a broad range of backgrounds; an excellent research platform, and plenty of research funding and resources, enabling students to access specialized academic training; world-class faculty with overseas experiences, adequate number of high-quality curricula delivered in English, and active partnerships with reputable universities of the world; unique practical courses and opportunities for international students to gain professional knowledge and improve their industry skills through internships.

Tsinghua University currently offers 29 full-time English graduate programs, including 19 science and engineering programs and ten humanities and social science programs. In strategic partnerships with top institutions worldwide, 55 joint degree programs have been created.

Across the graduate schools at Tsinghua University, more than 500 courses taught in English are available to all students. In order to enhance the international students' understanding of China, a series of "Understanding China" courses has been set up, covering history, culture, art, philosophy, politics, economics, science and technology, law, society, environment, among other topics.

Each year, over 1,000 international students of over 100 nationalities are admitted to pursue a Master's or Doctoral degrees at Tsinghua. More than 50% of them graduated from world-renowned universities or top universities of their home countries.

Results for the first teaching week

4254 courses scheduled

3519 courses (82.7%) started in week 1

331 courses were postponed or suspended, mainly laboratory courses

76% utilization of the recommended online teaching tools by the university: Rain Classroom (Daily Active Users=17,000 students and teachers)

93.4% attendance in week 1

47% of classes recorded full attendance

Online Education

Founded in 2013, XuetangX has been the first choice for many universities and faculty in China, having accumulated 58 million registered users for both the MOOC platform and the Rain Classroom. It is a smart teaching and learning tool developed by Tsinghua for live broadcast lessons, recorded videos, classroom interactions and learning data collection. As of March 2020, the two platforms saw an increase of 5 million and 21 million registered users, respectively.

Since the outbreak of the COVID-19, Tsinghua has suspended all conventional classes until further notice. By leveraging online learning platforms and techniques, Tsinghua has delivered 3,923 spring semester courses on schedule, marking the beginning of a profound transformation in teaching method.

To ensure the teaching excellency that meets Tsinghua's standards during the COVID-19 control and prevention period, Tsinghua has also expanded its social engagement by offering over 1,600 courses free of charge to the public and has provided 147 "Clone Classes" to several universities in Wuhan and other areas through XuetangX.

Witnessing the unpreceded disruption brought by COVID-19 on the global education, Tsinghua launched the XuetangX International Version on 20th April, which marks the first international online platforms for colleges and universities from China. The international version of XuetangX will be seamlessly connected to the English version of Rain Classroom, and international courses will be authorized for use by overseas Rain Classroom teachers and students. The first batch of 109 courses are expected to be launched on the platform soon, with more courses to follow. In the future, it will focus on identifying courses from the top Chinese universities while continuously adding first-class courses from universities from around the world.

I am excited to be a graduate student at Tsinghua University at a time when China is leading the largest effort in e-learning in world history. This has provoked our exposure to unfamiliar approaches and ideas that will render a quality higher education more inclusive and more accessible. I look forward to developing practical solutions with my peers and contributing to a world that is reborn and remade as we overcome this global health crisis. Thank you to everyone that has helped to make our continued education possible.

Joel Christoph
Master's student
School of Social Sciences

Continuing Education

The School of Continuing Education of Tsinghua University is the first of its kind in continuing educational institutes in China. It is also the only Chinese-based UNESCO Chair in Continuing Engineering Education. Through a fostering relationship and an open dialogue with the top international universities, the School of Continuing Education provides a high-level education based on an experienced international teaching faculty. Integrating the teaching strategies and skill sets of both East and West, the School instills in students a strong sense of global perspective and an open mind by providing the most up-to-date knowledge, and by preparing students with global competence.

The School offers a series of international cooperative education curricula, both outbound and inbound, including international courses on a variety of subjects and an international customized curriculum.

Global Competence Development

Tsinghua is committed to equipping students with global competency - one important goal of Tsinghua's global strategy. In 2018, with a mission to support global competence development for all students, and to facilitate this development as an integral component of undergraduate and graduate education, Tsinghua founded the Center for Global Competence Development (CGCD). The Center provides campus-wide transformative learning experiences with a global focus, leads cutting-edge research and development in the field of global education, facilitates multicultural engagement opportunities for all students and faculty members, and promotes a global competency-based cross-cultural understanding on campus and beyond. With guidance, support and resources provided by the Center, Tsinghua students are better equipped to become the global leaders of tomorrow.

Library

The Tsinghua University Library was established in 1912, and is now composed of the Main Library and six branch libraries including the Humanities and Social Sciences Library, the Art Library, the Finance Library, the Law Library, the Economics & Management Library and the Architecture Library.

The Library system owns more than five million three hundred and eighty thousand books and other printed material and has a comprehensive digital system to ensure convenient access to resources anytime, anywhere.
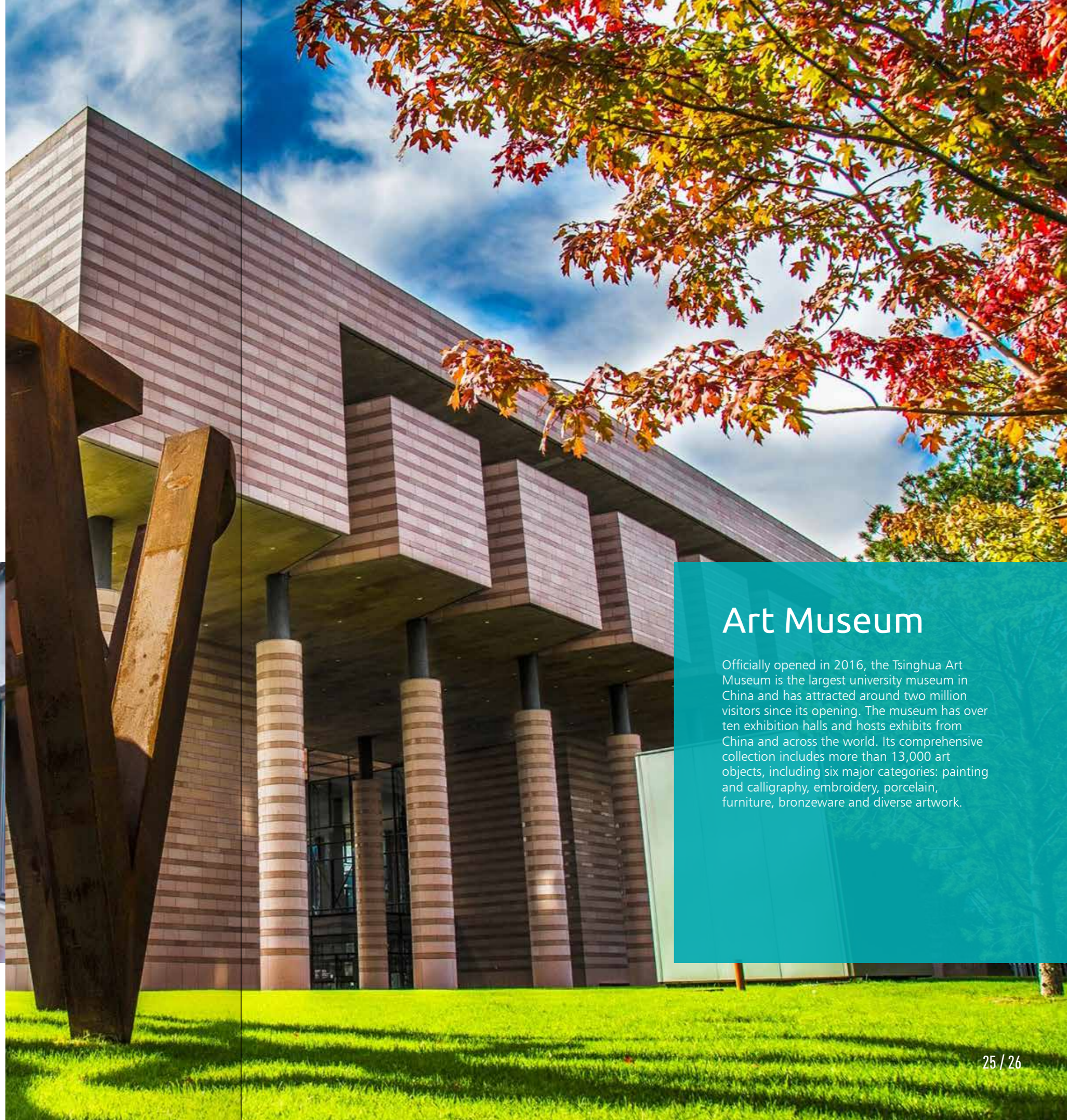
Art Museum

Officially opened in 2016, the Tsinghua Art Museum is the largest university museum in China and has attracted around two million visitors since its opening. The museum has over ten exhibition halls and hosts exhibits from China and across the world. Its comprehensive collection includes more than 13,000 art objects, including six major categories: painting and calligraphy, embroidery, porcelain, furniture, bronzeware and diverse artwork.

Research & Innovation

Fighting COVID-19

As President Xi Jinping said during his inspection at Tsinghua after the outbreak of COVID-19, science and technology are the most powerful weapon in humanity's battle against diseases. Since January 30, 76 COVID-19 related research projects have been initiated at Tsinghua, covering a wide range of scope such as vaccine, medicine, diagnosis, test kits, assisted medical care and monitoring system.

COVID-19 antibody and vaccine

Research teams led by Professor Zhang Linqi from the School of Medicine have been identifying neutralizing antibodies from convalescent patients and developing safe and effective treatments for COVID-19. Together with Professor Wang Xinquan from the School of Life Sciences, Professor Zhang resolved the crystal structure of COVID-19 RBD in complex with receptor ACE2, providing structural insight and identifying the precise target for vaccine design. In collaboration with Dr. Zhang Zheng at the Shenzhen Third People's Hospital, Professor Zhang and his team have isolated several potent human neutralizing monoclonal antibodies from recovered patients, providing promising candidates for antibody-based prophylactic and therapeutic intervention against COVID-19.

Respiratory virus nucleic acid detection kit

Professor Cheng Jing's team worked with the West China Hospital of Sichuan University and CapitalBio Corporation to develop the Respiratory Virus Nucleic Acid Detection Kit (Isothermal Amplification on Disk Chip), the first in the world to detect six types of respiratory virus simultaneously within 1.5 hours.

Research & Innovation

The COVID-19 Intelligent Prevention and Control System

A cross-disciplinary team led by Dr. Dong Jiahong, the executive president of Chinese Medical Doctor Association and Dean of Tsinghua's School of Clinical Medicine, has developed a COVID-19 Intelligent Prevention and Control System, covering community prevention and control, in-hospital management and discharge administration. Integrating key technologies of big data, the Internet of Things, and artificial intelligence with clinical medicine, the system is a comprehensive smart solution with eight inventions:

01 The Self-assessment System
02 The Community Surveillance, Prevention and Control System
03 The Intelligent Triage System
04 Intelligent Assistant Diagnosis System
05 The Wearable and Flexible Multi-Parameter Physiological Wireless Monitoring System
06 The Remote Diagnosis Platform
07 The Sterilized Robot
08 Integrated Caring and Tracking System for Discharged Patients

Target of broad antiviral therapy

Associate Professor Tan Xu from the School of Pharmaceutical Sciences reported the establishment and screening of genome-wide RNAi library and CRISPR library for the model megabat, Pteropus Alecto, providing a resource for systematic inquiry into the genetic underpinnings of bat biology and a potential target for developing broad spectrum antiviral therapy. This study also identified a potential inhibitor of RNA viruses including SARS-CoV-2, the causal agent of COVID-19.

Robotic System for unmanned rapid temperature detection

Professor Liu Xinjun's team from the Department of Mechanical Engineering has developed a robotic system capable of unmanned rapid temperature detection. The accuracy of temperature measurement reaches 0.2℃. This system can complete the temperature detection of the driver and passengers in a vehicle within 20 seconds, and can be applied to various scenarios such as highways, airports, checkpoints, and different entrances.

Medical Robot

Professor Zheng Gangtie from the School of Aerospace Engineering researched a robot that patrols isolation wards, enabling medical professionals to monitor temperature and auscultation remotely, reducing the risk to medical professionals. The robot is in trial use at facilities including Beijing Ditan Hospital.

Electro-magnetic disinfection module

The team of Associate Professor Luo Haiyun from the Department of Electrical Engineering made new progress in the field of air disinfection for buildings. The newly developed electro-magnetic disinfection module can quickly and effectively kill many kinds of bacteria and viruses including COVID-19.

## Nanofiber materials for reusable mask

Li Bo's team from Tsinghua Shenzhen International Graduate School and Wu Hui's team from the School of Materials Science and Engineering developed a reusable mask using nanofiber materials, addressing mask shortages.

ClO₂ Slow-release Air Purification Gel

The Tianjin Research Institute for Advanced Equipment of Tsinghua University developed a novel, safe and slow-release air disinfectant gel that can release ClO_2 continuously for about two months.

Psychological First Aid

Since January 25, Tsinghua's Department of Psychology launched the COVID-19 Psychological First Aid program, providing professional training and guidance for 3,000 volunteers, promoting psychology basics to 720,000 frontline medical workers and citizens, and offering one-on-one counseling for 5,351 people thus far.
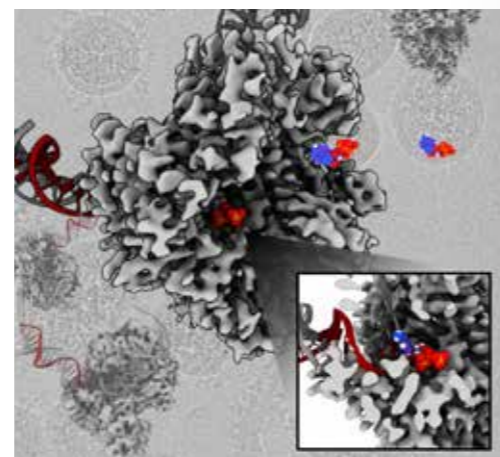
Uncovering COVID-19 replication transcription machinery

Professor Rao Zihe's team and Shanghai Tech University's team were the first in the world to decode the exact architecture of the RdRp-nsp7-nsp8 at the atomic level, uncovering the RNAsynthesis machinery and providing a basis for drug development.

Providing drug discovery capabilities and resources

The Global Health Drug Discovery Institute (GHDDI) and Tsinghua's School of Pharmaceutical Sciences joined forces to provide drug discovery capabilities and resources to all researchers working on COVID-19 treatment, accelerating the process of drug discovery for this deadly viral disease.

The Spring Breeze Fund

Tsinghua University has established the Spring Breeze Fund to promote scientific research on COVID-19 at Tsinghua, as well as improve China's ability to cope with major public health emergencies. The fund has received an initial investment of 50 million RMB from the Tsinghua University Education Foundation, and is expected to have a total endowment of 150 million RMB within three years.

The 18th Symposium on Scientific Research

On March 13th, the 18th Symposium on Scientific Research was launched, focusing on innovation in research models. The Symposium also stressed that COVID-19 research must be taken as a major and pressing task.

Establishing the Vanke School of Public Health

On April 2nd, Tsinghua University and China Vanke Co. Ltd. co-established the Vanke School of Public Health with Dr Margaret Chan, the Emeritus Director-General of WHO, as its inaugural dean. Drawing on Tsinghua's multidisciplinary advantages, the School will adopt new models of interdisciplinary cooperation and education. It is aimed at covering four research fields and is oriented towards graduate education in: preventative medicine, comprehensive healthcare, big data in healthcare, and public health policy and management.

Understanding human adaptive immunity to SARS-CoV-2

Professor Dong Chen's team collaborated with Chui Yang Liu Hospital, which is affiliated with Tsinghua University and the China Academy of Military Medical Sciences, found that both humoral and cellular immunity participate in immune-mediated protection to viral infection. This study lays the theoretical foundation for the diagnosis and traceability of infected patients as well as the development of therapeutic antibody drugs and vaccine research.
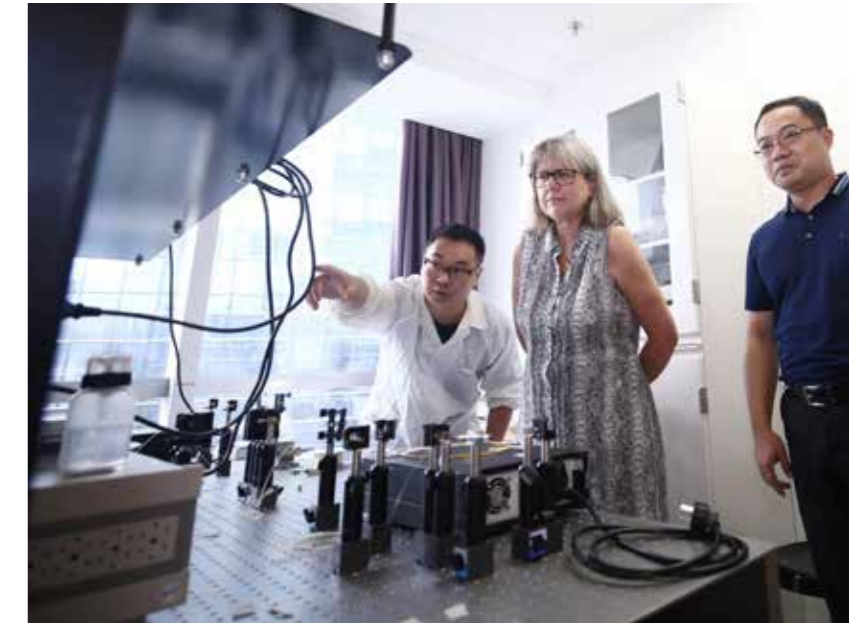
Recognition

In 2019, the faculty of Tsinghua University won 20 national awards, including five State Natural Science Awards, four State Technology Invention Awards, and eleven State Scientific and Technological Progress Awards. In addition, Tsinghua faculty won 34 international awards.

Innovation and Entrepreneurship Education

At Tsinghua, we believe that every student has innovative DNA in them. Adhering to the mission of knowledge transfer, ability cultivation, and value shaping, Tsinghua has built a comprehensive ecosystem to integrate innovation and entrepreneurship education into the talent training system, offering full support, covering students' expenditure of creativity, innovation, and entrepreneurship.

• The Student Future Innovation Group inspires creativity: it encourages students to build teams across different disciplines and grades, while initiating their own innovation projects.

• The iCenter serves technological innovation: it is the largest campus "maker" space in the world.

• The chuangplus and x-lab support entrepreneurship: they help startups gain market resources and help them seek professional guidance from off-campus tutors.

With the goal of conducting fundamental global research and focused on high-impact societal issues, serving core national development needs, and connecting academic research with talent cultivation, Tsinghua University is dedicated to promoting scientific innovation and addressing global challenges.

Laboratories

1 National Research Center
13 State Key Laboratories
11 National Engineering Laboratories
16 Key Laboratories of the Ministry of Education
144 Collaborative research centers

To promote cross-disciplinary and cutting-edge research, Tsinghua University established seven interdisciplinary institutes in various areas, including unmanned systems, the internet of vehicles, flexible electronics, brain and intelligence, big data, artificial intelligence, and medical engineering multidisciplinary studies.

Research & Innovation

Tsinghua Holdings

Tsinghua Holdings Co., Ltd, was established in 2003 as the main platform for Tsinghua University to serve society. Based on Tsinghua's scientific research capability and talent pool, Tsinghua Holdings is characterized by the integrated development of production, teaching and research, promoting the industrialization of technological achievements and cultivating innovative talents. By the end of 2019, Tsinghua Holdings has industrialized 56 major national sci-tech projects and achieved 62 major technological breakthroughs.

Being an important endeavor of Tsinghua Holdings to boost the development of innovation and start-ups, Tsinghua University Science Park (TusPark) was established in 1994. Located in the southeast quarter of the Tsinghua campus, it has developed at a rapid pace and is one of the best science parks in China. Since its opening, more than 1,500 enterprises and organizations have joined the park.

Outreach

Regional Cooperation

Tsinghua University actively promotes the transformation of major scientific and technological achievements, while exploring different ways for research universities to support regional economies and technological innovations.

Research Institute of Tsinghua University in Shenzhen
Beijing Tsinghua Industrial R&D Institute
Institute of Tsinghua University, Hebei
Yangtze Delta Region Institute of Tsinghua University, Zhejiang
Cross-strait Tsinghua Research Institute
Research Institute of Tsinghua, Pearl River Delta
International Innovation Center of Tsinghua University, Shanghai

Tsinghua University Press

Established in 1980, Tsinghua University Press (TUP) is a first-class national publisher and a leader in China's academic and higher education publishing. It publishes about 3,000 new titles in print and digital format every year and dozens of Chinese and English journals. It enjoys high prestige both in China and around the world through close collaboration with hundreds of renowned publishers. In the era of new media, it is committed to rebuild itself as a comprehensive service provider of educational content.

Life at Tsinghua

Student life at Tsinghua extends far beyond academic courses. The university offers a vast arrary of clubs and societies, as well as sports and performing arts activities to foster students' all- round personal development.

Sports

The motto "Without sports, there is no Tsinghua" reflects the exceptional athletic tradition at Tsinghua.

The university established its first sports team in 1912. In 2019, Tsinghua had more than 1,200 student athletes in 53 different sports teams, winning 436 medals in international and domestic events. There are also more than 56 students' sports clubs. So far, seven Tsinghua students have participated in the Olympic Games.

The Department of Sports Science and Physical Education provides nearly 50 different sports courses for students. In addition, the Ma Yuehan Cup, named after Ma Yuehan - a renowned Tsinghua Professor in Sports Science - is the highlight in the annual Tsinghua sports calendar. It is comprised of 40 sports, with more than 10,000 participants from students and faculty.

Having been at Tsinghua for seven years, what I miss most is the water from the swimming pool. Being a swimmer in our school's swimming team, I trained with my teammates every day, and have swum more than 10, 000km over the past few years. For me, the pool contains not only water but tears, laughters and so many memories. It has become a part of my life.

Melody Yu
Alumni, Class of 2019
School of Journalism and Communication

Performing Arts

The performing arts constitute another important aspect of student life at Tsinghua. The Center for Arts Education was established in 1993 and currently offers more than 130 performing arts courses for all students of the University.

The Tsinghua Singing Competition, held annually in December is a very popular event among students across campus. The New Year Gala Night, organized by the International Students & Scholars Center, is a much-awaited annual event to celebrate the New Year, with performances by Chinese and international students.

Clubs & Societies

At Tsinghua, students can choose from more than 260 clubs and societies covering six main areas: sport, culture, arts, innovation, personal development, and social service.

Living on Campus

Life is very convenient and enjoyable on the Tsinghua campus. The campus' dozens of large canteens provide the Tsinghua community with an array of different cuisines. The dormitory area is well equipped with facilities, including sports fields, supermarkets and coffee shops. Across the campus you can find all services for your daily needs, including banks and the hospital. Among its many sporting facilities, Tsinghua has an Olympic standard swimming pool.

Center for Faculty Development

The Center for Faculty Development (CFD) at Tsinghua University was established in July 2017. The purpose of CFD is to provide services and support for faculty development through the integration of available resources. CFD is an organisation that provides training, consultation and research for the advancement of academia.

The mission of CFD is to "Encourage and Support" faculty to improve academic excellence and ethical awareness. We endeavour to construct a comprehensive system for teaching, research and career development.

Since its establishment, CFD has provided "New Faculty Orientation" and consultation services for individual development for more than 400 new faculty members. In total, CFD has organised over 100 ethical awareness and academic research training programmes for faculty members, effectively assisting faculty career development.

International Students & Scholars Center

The International Students & Scholars Center (ISSC) supports and serves international students and scholars throughout their Tsinghua experience. The center is a hub of information and resources for the international community, including for immigration and visas, residency, university services, campus life and cultural activities. ISSC aims to foster an inspired and dynamic international community to help every international student and scholar thrive at Tsinghua. The ISSC staff are dedicated to ensuring that the international community is supported, nurtured and represented at Tsinghua.

Tsinghua Alumni

Outstanding Alumni

Tsinghua University alumni are strong performers across a range of different industries and sectors. They have endeavored to make significant contributions to China's economy, culture, science and technology. With the Belt and Road Initiative, Tsinghua alumni are playing a more important role in global development.

Outstanding alumni include the Nobel Prize winners Yang Chen-Ning and Tsung- Dao Lee; statesmen such as President Xi Jinping, former President Hu Jintao, former Premier Zhu Rongji, and former Chairman of the Standing Committee of the National People's Congress Wu Bangguo, as well as many well-renowned scientists and entrepreneurs.

Tsinghua Alumni Association

The Tsinghua Alumni Association was founded in June 1913. Currently, it has 90 regional associations in China and 55 branch associations in different countries, including the United States, Canada, the United Kingdom, France, Germany, Switzerland, Austria, Spain, Italy, the Netherlands, Australia, New Zealand, Japan, Singapore, Thailand, Cambodia, and Malaysia.
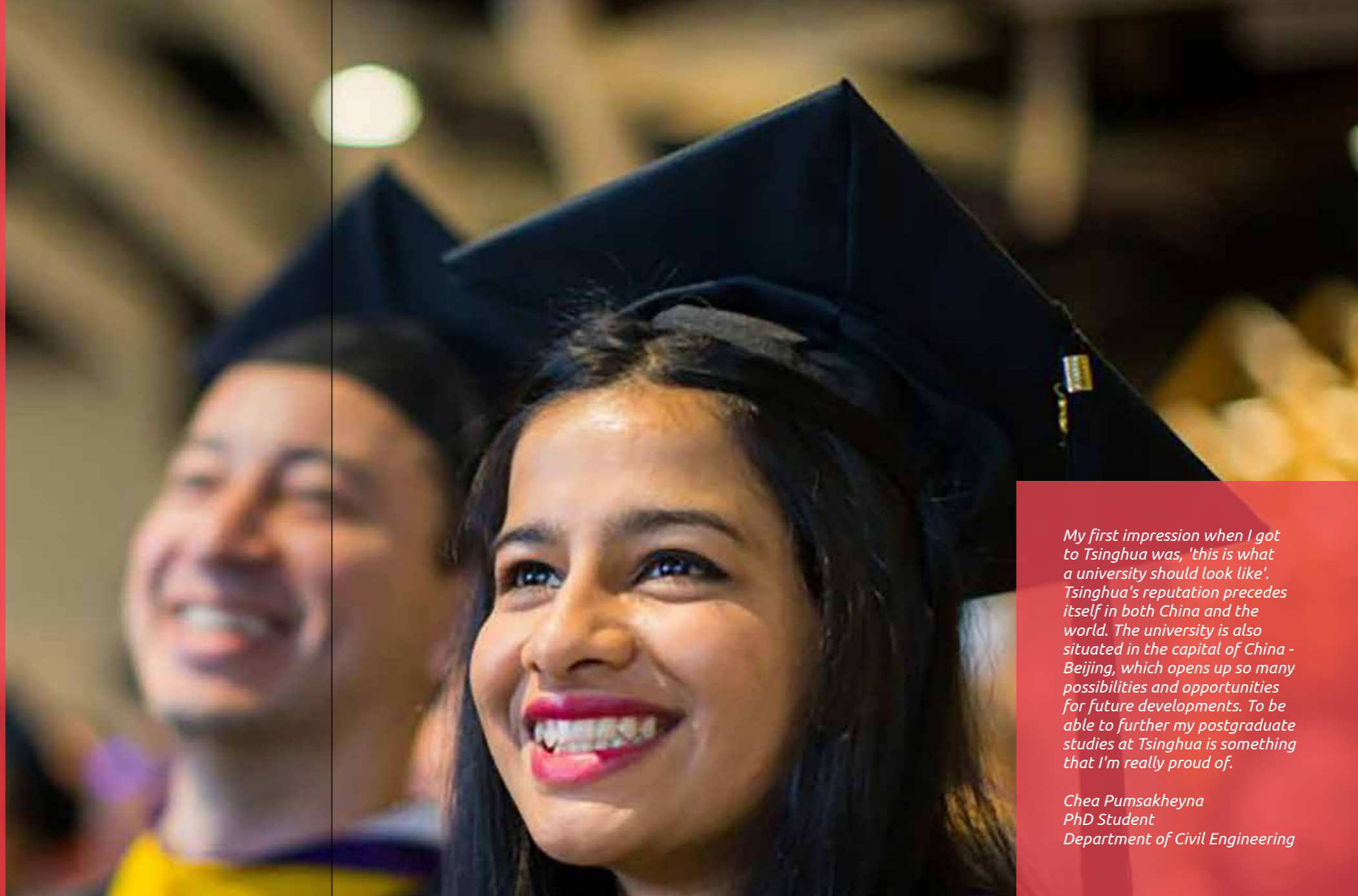
My first impression when I got to Tsinghua was, 'this is what a university should look like'. Tsinghua's reputation precedes itself in both China and the world. The university is also situated in the capital of China - Beijing, which opens up so many possibilities and opportunities for future developments. To be able to further my postgraduate studies at Tsinghua is something that I'm really proud of.

Chea Pumsakheyna
PhD Student
Department of Civil Engineering

Join Tsinghua

Tsinghua's comprehensive admissions process aims to recruit the most talented students and has a diversified scholarship system offering full or partial funding for undergraduate, graduate, and visiting students.

Admissions Office, Tsinghua University

Tel: +86-10-62783100
Email: admissions@tsinghua.edu.cn
Website: http://www.join-tsinghua.edu.cn

Tsinghua University Academy of Arts and Design

Admissions Office
Tel: +86-10-62798170
Email: myzb@tsinghua.edu.cn
Website: http://www.ad.tsinghua.edu.cn

Tsinghua University Graduate Admissions Office

Tel: +86-10-62781380
Email: grad@tsinghua.edu.cn
Website: http://gradadmission.tsinghua.edu.cn

Financial Aid Office, Graduate School

Tel: +86-10-62789660
Email: finaid@tsinghua.edu.cn

Shuimu Tsinghua Scholar

To attract excellent scholars, Tsinghua has launched the Shuimu Tsinghua Scholar Program, a doctoral degree program that aims to support young scholars in their academic career and educate leading researchers across 50 fields.

In 2020, 200 outstanding scholars are expected to join the program. They are entitled to housing support, equal medical plan privileges as Tsinghua faculty, and entry to Tsinghua University's kindergarden and primary schools for their children, among other benefits.

To learn more of the program, please visit: http://postdoctor. tsinghua.edu.cn/column/ldz_